The Principal Network:

A Model of Peer Collaboration Around Critical

Case Studies of Practice

by

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ABSTRACT

This action research study explored what would happen if a principal network was created to provide time for collaboration about critical case studies of practice. The participants in this study were novice and experienced principals in an elementary school district in Arizona. Based on the underpinnings of the Wallace Foundation principal support programs, the study was designed to combat the limited professional development offerings for in-service principals. Modeling the use of cases from the legal and medical professions, this study utilized case studies as the base for peer collaboration to extend the principals' critical thinking skills of relevance, breadth, and depth.

The study design aligned with adult learning theory and focused on authentic problem solving. Participants read case studies, completed individual case analysis, collaborated, and wrote reflections. The cases were intentionally selected to match current problems of practice for the participants. This mixed methods study followed a sequential analysis process beginning with qualitative analysis using a grounded theory approach and moving to quantitative analysis.

The results of this study indicated that the participants' ability to think critically about the problem (relevance) and its complexity (breadth and depth) increased over time. The data also showed that the principals gained an increased awareness and appreciation for multiple perspectives. Lastly, the participants valued the time to collaborate together, gain insight from one another and reduce feelings of isolation in their role as administrators. Future research should continue to explore the use of critical case studies of practice as a in participatory action research with in-service principals.

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Context and Rationale

"When the principal sneezes, the whole school catches a cold. This is neither good nor bad; it is just the truth. Our impact is significant; our focus becomes the school's focus." (Whitaker, 2003, p.30)

Research has indicated a strong correlation between effective principals and student achievement (Hallinger & Heck, 1996; Leithwood & Jantzi, 2008; Leithwood, Patten, & Jantzi, 2010). In the last twenty years, both qualitative and quantitative data have pointed to the impact of the principal had on classroom instruction and student achievement (Fullan, 2001; Hallinger & Heck: Leithwood & Jantzi, 2008). According to a six year study, the principal role was a factor in a quarter of all student achievement, which was second only to the classroom teacher (Leithwood & Mascall, 2008; Mitgang, 2012). Principal longevity was one key to student success. Fuller, Young and Shoho (2010) found a link between student achievement and the school administrator longevity. Schools with new principals showed a decline or stagnation in scores versus those schools where the principal was in place two or more years (Fuller et al., 2010). The research demonstrated the value of supporting principals to create sustainability. Darling-Hammond et al., (2007) posited, “it is the principal who is in a position to ensure that good teaching and learning spreads beyond single classrooms, and that ineffective practices aren’t simply allowed to fester” (p. 1). While the goal of supporting principals was a worthy one, it was a complex task. Supporting principals meant learning more about the role, which has been increasingly complicated as more educational accountability has been mandated.

Confronted with massive policy changes and consistent pressures for accountability, the role of the principal shifted from manager, to instructional leader, to leader of change (Fullan, 2001). Principals in the early 1950s through late 1980s were managers of schools (Woolsey, 2010). In recent years, management represented a smaller portion of an elementary school principal's time, while a larger portion was devoted to leadership work. "Facing pressure to have all children meet high standards, states and districts increasingly recognized that successful school reform depended on having principals well prepared to change schools and improve instruction, not just manage buildings and budgets" (Mitgang, 2012, p. 5) In this No Child Left Behind era, principals felt the burdens of national and state-wide accountability measures and often shouldered the weight of responsibility for failing schools. Some principals lost their jobs based on state testing results. Texas, Maryland, and Florida created state policies regarding the removal of principals from schools labeled in the lowest performance category (Nichols & Berliner, 2007). "Local school districts and schoolhouses… continue to be where the rubber of education policy meets the road of school improvement" (Spillane & Kenney, 2012 p. 546). The principal, as the leader of the school, was often considered by those both inside and outside of education as the engine for the school improvement and reform machine.

With the introduction of the Common Core and the looming Partnership for Assessment of Readiness for College and Careers (PARCC), sustainable leadership is vital to supporting our nation's schools (Spillane & Kenney, 2012). According to the National Association for Secondary School Principals (NASSP), the average age of current principals is 50.1 years (Woolsey, 2010). In the next ten years, over half of the principal population will retire, making way for a crop of new school administrators. The new and current principals need more than the management skills of their counterparts from the 1950s to navigate the ever-changing landscape of education. Principals are now largely involved in the work of school reform, which requires strong relationship building skills and organizational structures. Duncan, Range, and Scherz (2011) classified the skills principals need into two categories: structural and cultural. Structural skills were considered technical skills such as data analysis, instructional content and pedagogy. Cultural skills are defined as interpersonal and relationship building skills.

Successful principals use the cultural skills classified by Duncan et al. (2011) to balance the multiple needs of stakeholders including teachers, students, district officials, and parents. This is a tall order. Increasingly, schools and districts turned toward shared leadership organizational structures such as professional learning communities. Developed by Robert DuFour, the professional learning community structure mobilized a school into small content teams focused on increasing levels of student learning (DuFour & Eaker, 1998). The introduction of professional learning communities into education defined the role of leader of change as coined by Fullan (2001). According to the work of DuFour and Eaker, professional learning communities shifted the role of administrator to a leader of change who empowers teachers to make instructional decisions based on data (Fullan, 2001; DuFour & Eaker, 1998). "These policy initiatives have increasingly put pressure on school leaders to adapt their organization to meet new demands from the institutional environment" (Spillane & Kenney, 2012 p. 546). Thus, organizational structures, like professional learning communities, hinge on the strong leadership of the school principal.

Many multi-state and organizational programs focused on the support and development of principals to build skills and sustainability. National programs such as the Wallace Foundation's Principal Pipeline project (Turnbull, Riley, Arcaira, Anderson, & Macfarlane, 2013) utilized a dual layered support system for pre-service, novice and in-service principals. Principals in the project attended regular collegial learning sessions to network and received individualized coaching at their schools. The Wallace Foundation's Pipeline Project was the basis for several state and local principal preparation and development programs. In the Stanford study entitled, *Preparing School Leaders for a Changing World: Lessons from Exemplary Leadership Development Programs*, Darling-Hammond et al. (2007) outlined exemplar programs founded on the Wallace design including New York City's Leadership Academy, Hartford (Connecticut), Jefferson County (Kentucky), and San Diego's Excellence in Leadership Academy. These programs helped principals become critical problem solvers, able to address the complex needs in schools through case study analysis, problem-based learning, and journaling to encourage continuous reflection about the connections between theory and practice (Darling-Hammond et al., 2007). The Arizona Department of Education received a Wallace Foundation grant to participate in the project, promoting individual involvement by the various districts across the state. While Arizona did not mandate a formal support structure for principals in all districts, Arizona State University's iLead AZ pre-service program mirrored the Wallace Foundation's design (K. Coleman, personal communication, March 3, 2014).

Local Context

This study took place in the Power Elementary School District (pseudonym) with a free or reduced lunch population averaging 75%. Located in the west valley of Phoenix, Arizona, the district possessed ten schools enrolling approximately 5,500 students annually. Each school had its own principal; those schools with populations above 700 also retained an assistant principal. While new teachers to the district were part of an extensive training program, novice principals did not have any specific professional development.

Novice principals received the same training as their experienced peers. Training sessions were based on the current district initiatives and goals. The twice-monthly principal meetings addressed structural skills, focusing on management and immediate issues. Time was a huge barrier for district administrators and school principals. Given the sheer number of required programs by the state and the intense pressure to raise test scores, there was little time set aside for principal's leadership development. The limited principal professional development opportunities at Power Elementary School District were consistent with experiences of principals around the country. Research indicated that time constraints were a common barrier for principal support programs (Crow, 2007; Darling-Hammond, 2007; Woolsey, 2010). Research also stated that strong principal support programs take time and resources (Wallace Foundation, 2008). Principals need opportunities for time to work together to solve common problems of practice.

Role of the Researcher

As the Director of Exceptional Student Services, I managed school supports for special education, counseling, health, and related services. This role allowed for regular collaboration with individual school principals and required attendance at all principal meetings. In addition, completing my internship with the superintendent provided opportunities to study how principals were supported. The observations showed that the administrators closely monitored the early performance of novice principals and redirected behaviors when necessary; however, the nature of the interactions were reactive versus proactive.

In a previous research cycle, data were collected to determine skills that were valued in principals through interviews with two superintendents and a focus group of experienced and novice principals. The information gathered showed a pattern of responses about the importance of developing cultural skills including relationship building and problem solving. The data gathered in the interviews and focus group aligned with the research. District leadership and new principals cited struggles with helping novice principals address complex problems in schools today.

The current action research study is based on the underpinnings of the Wallace Foundation principal support programs. It was designed to create a space for principals to collaborate in a network of peers around critical case studies of practice. This study utilized the definition of collaboration from Camarinha-Matos and Afsarmanesh's (2008) work on collaborative networks. Collaboration was defined as mutual engagement of participants to solve a problem together. In this study, the problems were presented in the form of case studies that aligned to current issues in the participants' contexts.

The purpose of this action research study was to explore what happened when a Principal Network of novice and experienced principals was created to promote collaboration around case study analysis. Specifically, the following research questions were explored:

1. In what ways were principals' use of case studies in the Principal Network conducive to helping them understand the complexity of educational problems from multiple perspectives?
2. In what ways did the principals apply their understanding of the complexity of the problems from multiple perspectives to their own contexts?
3. In what ways did the principals find value in collaborating during the Principal Network?

Chapter 2

Literature Review

Chapter 1 established the impact of school principals have on student achievement data and the importance of the principal support programs principals to build sustainability. As new principals advanced into their positions, it was increasingly important to take steps to ensure they are supported. Over the last ten years, principal succession programs have emerged to prepare prospective and novice principals for the many responsibilities and challenges they would face in the role. (Corcoran, Schwartz, & Weinstein, 2012; Crow, 2006; Mitgang, 2012; Wallace Foundation, 2008; Woolsey, 2010).

The Shifting Role of School Principals

In order to better understand the complex nature of the principalship, it was useful to further explore the history of the principal role. Earliest records of the role of principal appeared in 1920 as a "head teacher" position. Originally, the head teacher ordered supplies and removed unwanted animals from the schoolhouse (Kafka, 2009). In the 1950s, the role of principal transitioned into a manager; the principal's primary role was keeping a school running smoothly in high priority areas such as the cafeteria and school grounds with little conflict. Student discipline represented a large portion of the principal's time. With the introduction of school accountability, the principalship shifted toward a leader of change (Fullan, 2001). A leader of change, as defined by Fullan (2001), transformed a school through shared leadership focused on student achievement. Multiple federal and state guidelines in the last twenty years greatly impacted the role and responsibilities of the modern principal. No Child Left Behind (NCLB) ushered in an era of accountability that altered the landscape of schools. The federal mandate established regulations in how states could distribute funds for education based upon student performance on standardized tests (Nichols & Berliner, 2007). In some states, like Texas, Maryland, and California, school ratings on student achievement were ranked, publicized in the media, and the principals of those schools with the lowest scores were removed (Nichols & Berliner, 2007). The focus of the principal shifted from managing a school toward earning higher scores on achievement tests, which meant principals devoted more time and energy to classroom instruction. The term "instructional leadership," first coined by Edmonds in 1979, referred to the specific practices principals used to influence classroom instruction (Neumerski, 2012). During this time period, literature surfaced identifying effective methods for improving classroom instruction (Harris & Spillane, 2008; Spillane & Kenney, 2012; Waters, Marzano, & Mcnulty, 2003). With the additional pressure of student achievement, principals' expected knowledge base extended beyond managerial tasks into curriculum and pedagogy as their list of responsibilities grew longer.

The Challenges of a Principal

Methods for sharing leadership within the school developed with the increased responsibilities of principals (Harris & Spillane, 2008). In 1998, DuFour and Eaker published *Professional Learning Communities: Doing What Works* describing a model of shared leadership. According to DuFour and Eaker (1998), small content and grade specific teacher teams could design curriculum, plan instruction, and assess student learning. Professional learning communities sprouted up across the nation and principal duties transformed again. The instructional leadership role for principals stretched to include guiding teacher teams, preparing new grade level leaders to manage their teams, and coordinating communication between the various teams on the school site (Spillane & Kenney, 2012). Schools instituted continuous reform processes to evaluate and modify instructional practices on a regular basis. A focus on data driven decisions based on the pressures for increased student achievement results led to the reform process. Fullan (2001) established the term "leader of change" to describe the actions of the principal in a continuous reform model. Educational reform and continuous school improvement were synonymous terms to describe a cycle of evaluating school practices through data collection, analysis, and modifications to continually revisit the effectiveness of the identified practice (Fullan, 2002). Orchestrating high levels of collaboration and guiding teachers through a continuous improvement model required a different set of skills. The principals' knowledge and skills included school law, human resources, finance, management, curriculum, pedagogy, and the ability to be a leader of change (Darling-Hammond, LaPointe, Meyerson, Orr, & Cohen, 2007; Fullan, 2001; Hausman, Crow, & Sperry, 2000; Peterson, 2002; Duncan et al., 2011; Turnbull et al., 2013).

Being a leader of change and managing the operation of a school was a professional challenge due to the diverse set of responsibilities, and it could evoke a sense of loneliness. Walker and Qian (2006) used the analogy of climbing to the top of a greasy pole to describe the principal's challenging and increasingly public position. The image was clear. The person at the top of the pole expended much energy and effort to be at the top, but upon reaching the apex, he or she was alone in a precarious position. Research has indicated that some principals described a feeling of isolation (Duncan et al., 2011; Wildy & Clarke, 2008; Woolsey, 2010; Zellner, et al., 2002). In a study about principal support programs and mentoring, one principal expressed the isolation and doubt that he felt in his first years as a principal, “I never know whether I’m doing the right things. You are on your own” (Wildy & Clarke, 2008, p. 731). Zellner (2002) noted that principals surveyed about their job described the position as “lonely with more recognition given to mistakes made than to accomplishments” (p. 4). Walker and Qian (2006) posited that isolation may be caused by the consistent pressure for high test scores, which lead toward a sense of competition rather than collaboration stating, “Given the competitive environment between schools, they [principals] can also feel isolated from their principal colleagues” (p. 301). These feelings of loneliness could be combated by opportunities for professional conversations with other principals. Researchers studying principal professional development pointed toward the need for collaboration among principals (Brown-Ferrigno & Muth, 2004; Duncan et al., 2011; Woolsey, 2010). Duncan et al. (2011) argued that dialogue with colleagues could reduce feelings of professional isolation. Susie, a participant in Woolsey’s (2010) research study, echoed this idea after participating in a principal mentoring program, “I learned very quickly that you are on an island...and you need someone to talk to” (p. 186). A sense of isolation and potential competition with other principals created increased pressure on principals. The depth of the role and its responsibility as well as the feeling of loneliness further emphasized the need for a support system for principals.

The role of the principal shifted dramatically in the last fifty years creating a more complex position that requires a diverse skill set (Crow, 2006; Spillane & Kenney, 2012; Whitaker, 2003). The literature categorized the skill set into two distinct groups, structural and cultural. Structural skills were defined as managerial tasks including, but not limited to, supervision, compliance, and finance (Darling-Hammond et al., 2007; Fullan, 2001; Duncan et al., 2011). Structural skills were consistent with the original role of principal as a manager of the school. Recent literature on the principalship, however, showed a shift in focus toward the development of cultural skills, in addition to these structural skills (Darling-Hammond et al., 2007; Fullan, 2001; Duncan et al., 2011). Darling-Hammond et al. (2007) described cultural skills as those embodied in instructional leadership, but Fullan (2001) argued that principals also needed to be leaders of change who built relationships and empowered staff toward school improvement goals. For the purposes of this study, Darling-Hammond et al. (2007) and Fullan's (2001) definitions were blended to form a more comprehensive descriptor of cultural skills represented as the ability to be an instructional leader by building relationships and empowering staff toward school improvement goals. Cultural skills require that the principal be able to attend to problems of practice at school and possess the ability to think about it critically.

Critical Problem Solving

This study examined, how principals collaborated to identify a problem of practice and explore its complexity through the use of critical case studies of practice. This critical problem solving was defined by its two parts, critical thinking and problem solving. Critical thinking was defined as the, "art of analyzing and evaluating thinking with a view to improving it" (Paul & Elder, 2006). Willingham (2007) posited that critical thinking was comprised of three distinct processes: reasoning, decision-making, and problem solving. In terms of problem solving, there were two basic types of problems. First, there are problems with one distinct right answer such as a math problem. Second, are were socio-emotional problems with multiple potential solutions that change based on a variety of factors including the organizational structure and the members of the organization. This study focused on socio-emotional problems with more than one solution. The principals in this study regularly faced problems that were dynamic and complex. The question raised in this research study was, How could analyzing case studies in collegial learning sessions support the principals' problem solving skills?

According to Paul and Elder (2006), when faced with complex issues, critical thinkers identify the problem clearly, gather relevant information, consider alternative solutions, recognize the implications of their choices, and communicate with others. These authors outlined a set of nine critical thinking skills including clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness (Paul & Elder, 2006). This study focused on three of these critical thinking skills in its design: relevance, breadth, and depth. Relevance referred to the ability to identify key ideas of the situation. For this study, relevance referred to the participants' ability to identify the problem and explain the issues surrounding it. Breadth was defined as recognizing the potential consequences of solutions to the problem and exploring the impact a solution had on the stakeholders involved. Depth meant the ability to contemplate the complexities of a problem and to consider open-mindedly a variety of perspectives.

Given the complexities of schools today, principals are called upon to critically problem solve regularly (Darling-Hammond et al., 2007). For example, one seemingly simple case described a parent request to move a child from one classroom to another. In this case, a principal would need to gather information about the problem (relevance), consider all of the alternatives (breadth), and then weigh the impact of the decision on the stakeholders involved and make a choice (depth). This way of thinking is not easy and principals, especially novice principals, need support to develop critical problem solving skills that enable them to delve into complex problems.

Supporting Principals

With the expected number of potential principal retirements and increasingly complex skill set required for the position, states and districts sought out new ways to support novice and experienced principals. The process of becoming a principal in Arizona; includes university coursework, as well as an internship course. Typical internship courses include a period of time shadowing current administrators and completing tasks assigned by the administrator. Then, the candidate must pass a written assessment. Finally, the state issues a specialized administrative certification for those who successfully completed the university course work and passed the written assessment.

University course work is the first part of principal preparation. Research indicated that university preparation programs emphasize the managerial responsibilities of principals (Bridges, 2012; Darling-Hammond et al., 2007; Hausman et al., 2000; Peterson, 2002). Traditional university principal preparation programs include courses on school law, budget, and human resources. Based on the feedback provided in several studies examining the effectiveness of principal preparation programs, candidates described a curricular focus on compliance and supervision (Bridges, 2012; Walls et al., 2007). However, in a recent study in Wyoming, principals were asked to evaluate their university preparation after completing their first year on the job. The results showed that a high percentage expressed concern about the lack of practical experiences (Duncan et al., 2011). In another study of 65 new principals over two years, Barnett and Shoho (2010) found that new principals struggled with how to deal with conflict.

In an effort to address the demands of a more complex position and need for focus on a different skill set, the Stanford Educational Leadership Institute conducted a study of principal preparation programs to identify the characteristics of exemplary programs (Darling-Hammond et al., 2007). Based on the findings of the study, exemplary programs provided course work and internship experiences to address both managerial and relational skills needed for principals. The study described exemplar programs using scenarios, case study analysis, and reflective journals to engage principals in problem solving experiences. The authors emphasized that more incoming principal programs should provide experiences dealing with the real life problems of practice facing future administrators (Darling-Hammond et al., 2007).

The *Principal Pipeline* project, developed by the Wallace Foundation (2008), is one such program. Working with six large urban districts in Maryland, Colorado, North Carolina, Georgia, Florida and New York, the Wallace Foundation developed partnerships with local universities to prepare future and incoming principals in the *Principal Pipeline* project. The program included a series of professional development workshops structured around common problems of practice experienced by administrators (Turnbull et al., 2013). The program offered two levels of support for principals including regular networking support sessions with other principals and individual mentoring for up to three years. Each district participating in the *Principal Pipeline* used the Interstate School Leaders Licensure Consortium (ISLLC) Standards to develop guidelines for their programs. The *Education Leadership Policy Standards: ISLLC 2008* (Council of Chief State School Officers, 2008) represented a multi-organization, research-based process of updating the *1996 ISLLC Standards for School Leaders*. The *ISLLC Standards* incorporated both structural and cultural skill sets, including components for vision building, communication, culture, ethics, and advocacy. The standards focused on developing relationships and guiding staff through the school reform process. Using the *ISLLC Standards* as a framework, the *Principal Pipeline* project incorporated both structural and cultural skill development. Principals involved in the project attended professional development to build structural and cultural skills, participated in collaborative networks to practice problem solving complex issues faced by principals, and received one on one mentoring support from retired principals (Turnbull et al., 2013; Wallace Foundation, 2008). The project was unique because of the nature of the content of the trainings and the comprehensiveness of the program. The program design was the foundation for numerous state and district programs including New York City's Leadership Academy and San Diego's Excellence in Leadership Academy (Darling-Hammond et al., 2007).

Case Studies as Professional Development

Case study as a teaching method date back to Harvard Law School when the dean, Christopher Langdell, introduced the practice into law classes in 1895 (Fossey & Crow, 2011). Since that time, case studies have been utilized as a primary teaching tool in preparation programs for law, medicine, and business (Brooks, Harris & Clayton, 2010; Cranston, 2008; Shenker, 2010). In recent years, pre-service programs for nursing, science, and education incorporated case studies to make connections from theory to practice (Brooks et al., 2010). While the structured use of case studies can be traced back to Harvard. Fossey and Crow (2011) argue that "Case teaching is an ancient pedagogy. Since time began, teachers have taught other people by drawing on stories from real-life experiences. In a way, then, telling stories taken from real life can be seen as case teaching" (p. 4).

A case study is, at its essence, a story. Shulman (1992) posited, "A case has a story because it is a set of events that unfolds over time in a particular place" (p. 16). Cases reflect social and cultural contexts through the lens of a specific event (Crow, 2006). The narrative presented in a case placed the learners in a real-life situation. Written from the perspective of a key person who has to make decisions and/or solve problems, the text includes details that were important when the case occurred (Tarnvik, 2007).

Crow (2006) has suggested that there were three elements of a good case study: context, complexity, and ambiguity. Context, refers to the events and relationships surrounding a case. Good cases offer a rich description of the context to create a complete picture of the situation. The second element, complexity, evokes both the context and the problem itself. Cases that are complex provided a good vehicle for discussion (Fossey & Crow, 2011). According to Crow (2006), complexity was a major attribute of educational leadership, and effective leaders could practice how to respond to complex problems by considering multiple perspectives provided in cases. Finally, strong teaching cases are full of ambiguity. Ambiguity ensures that the cases are not one-sided or possessed simple solutions. Crow (2006) stated that, "the central problem of a case should not be apparent or easy to identify" (p. 7). Ambiguity is also part of leadership. Leaders can rehearse critically thinking through the dynamics of problems that are not easily solved (Leithwood, Begley, & Cousins, 1994). Together these three elements form an intricate account of a problem a learner can analyze, discuss, and potentially use to gain leadership skills (Brooks et al., 2010).

Benefits of Case Study Analysis

Proponents of case study analysis posited that the approach brings meaning and relevance to the learning process. Shenker (2010) noted that case studies could assist students in transferring understanding from the classroom to practical situations. In terms of leadership, researchers have argued that cases could help leaders understand the cultural, ethical, and moral contexts of their work (Cranston, 2008; DeSanto-Medeya, 2007; Shenker, 2010). Holkeboer (1993) proposed that when learners analyze case studies, a three-step critical thinking process develops. Students identify a core problem, then, brainstorm possible solutions and agree on the best solution. Advocates of case studies as teaching tools contended that cases facilitated critical thinking by requiring the learner to identify theories appearing in actual situations, thus building analytical skills (Wolfer & Baker, 2000; Crow, 2006; Cranston, 2008; Brooks et al., 2010). Kunselman and Johnson (1993) argued that case studies assisted students in develop problem solving and analytical skills, which were valuable tools that prepared learners to make better decisions in the workplace.

Successful Uses of Cases with Pre-Service and In-Service Principals

It is important to note that case study analysis has often been conducted in a public setting (Cranston, 2008). Researchers noted that certain discussion and reflection methods increase learning from case studies (Shenker, 2010; Brooks et al., 2010;

Cranston, 2008; DeSanto-Medeya, 2007). One of these, collaborative networks, provide growth opportunities for both novice and experienced principals. In a research study on mentoring prospective principals, Brown-Ferrigno and Muth (2004) posited that, "Being involved through field-based experience with other principals provided … opportunities to problem solve and apply critical thinking skills to actual situations that would affect student achievement the most" (p. 478). Several respondents in Brown–Ferrigno and Muth's study indicated that developing collegial relationships with fellow principals changed their perspectives about the principalship. Likewise, in a study conducted in South Carolina on principal induction programs, respondents answered that the guidance they receive from peers was the most valuable aspect of the program (Hudson, 2009). Experienced principals also benefited from opportunities to interact with peers in collegial learning sessions. Woolsey (2010) found that mentoring principals indicated they gained skills when they articulated their beliefs and attitudes about the principalship. Cranston (2008) argued that, "Working together in these sorts of ways has the potential to facilitate the development of learning communities" (p. 9).

In 2008, an Australian researcher (Cranston) explored the effectiveness of case method in supporting, head-teachers' (the Australian term for principals) professional development. In the study, a group of 45 principals analyzed case studies that matched the practical issues faced by their participants and aligned to *Leadership Matters*, Australia's leadership guidelines (Cranston, 2008). Participants were given these cases in hopes of developing divergent thinking in leaders. The principals worked in small teams to untangle the intricate cases, consider varied perspectives, and develop possible solutions. Results from this study indicated that the principals perceived that case study analysis helped them to problem solve during the learning sessions as well as in the context of their schools. When asked if case study analysis was an effective leadership development exercise, participants expressed that they valued the small group discussions and time given to explore the complicated aspects of the cases (Cranston, 2008). The researchers stressed the importance of allowing time for deep analysis stating that participants may initially, " address surface problems" rather than dealing with the multiple complexities, diversities, and perspectives (Cranston, 2008, p 8). While the results of the Australian study were encouraging, the use of case study analysis was not a typical element in leadership development for in-service principals.

The Counter View and Gap

A major limitation of the case method is the difficulty in constructing cases (Tarnvik, 2007). As described in the previous sections, good cases required a detailed context, complexity, and ambiguity. It takes considerable time to write a case that prompted deep discussion and critical problem solving. Cranston (2008) described the long process used by the Queensland education department, who ultimately commissioned external consultants to design the cases used in the study. Opponents of case study maintain that case study analysis was also time consuming and potentially costly (Davis, 2011; Tarnvik, 2007; Willingham, 2007).

Darling-Hammond et al. (2007), a proponent of practical application methods like case study, argue that extended time is necessary to provide rich professional development for novice and experienced principals. Even Willingham (2007), who questioned the use of case studies, conceded that problem solving experiences such as case study analysis could lead to practical application stating, "When one is very familiar with a problem's deep structure, knowledge about how to solve it transfers well" (p. 11). Although there are differing viewpoints about case study analysis, there is also a gap in the literature regarding its use in supporting educational leaders. Concerns emerge about whether experienced principals in the workplace would value the use of case studies. Tess Lauffer (Personal communication, January 28, 2014), the program director of AZLeads, a voluntary support network for principals in their first three years on the job, stated that overworked principals with limited time questioned any professional development activity that was not directly related to their school. More research is needed to determine whether case study analysis can serve as an effective professional development for school leaders. The work of Cranston (2008) and the efforts of the Wallace Foundation provide a foundation that case study analysis could be a useful and authentic way to explore complex problems of practice.

Use of Cases in this Study

This study employed case study analyses in collegial principal sessions to develop the participants' ability to problem solve. The case study analysis process used by the Wallace Foundation (2008) *Principal Pipeline Project* was the foundation for the design of each learning session. It involved introducing the case, small group discussion of the complexities of the problem stated in the case, and individual reflection to consider the impact of the solutions generated. The cases used in this study provided background information, the context for a problem, and a problem of practice. The cases did not possess concluding action or solutions in order to offer principals a greater opportunity for developing their own solutions through critical problem solving.

Theoretical Framework

Adult learning theory and Vygotsky Space formed the theoretical framework for this study. The field of adult learning, defined as andragogy, was first noted in *The Adult Learner; A Neglected Species* by Malcolm Knowles (1978). Knowles' work compared pedagogy, how children learn, with andragogy, how adults learn. Andragogy assumed the following about adult learners: (1) Adults need to know why they need to learn something, (2) Adults need to learn experientially, (3) Adults approach learning as problem-solving, and (4) Adults learn best when the topic is of immediate value (Hudson, 2009). Moore (2010) stated, "The ultimate goal of adult learning is to make the educational experience as valuable to the learner as possible" (p. 1). Effective adult learning environments were learner-centered with a facilitator to guide and provide resources as needed. Adult learning theory assumes that adults valued choice and control in their learning environment. Case study analysis incorporates the tenets of adult learning theory by offering experiential learning and problem solving opportunities. Cases that directly relate to principals' current problems of practice are authentic, and therefore have immediate value to the principals as learners.

The Vygotsky Space (see Figure 1) is a theoretical model originally developed to demonstrate how an individual learns and transfers knowledge through participation in social processes (Gallucci et al., 2010, p. 925). Vygotsky Space suggests that individuals gain new ideas through participation in public activities, change those ideas in their context, and establish their learning through public talk or action (Gallucci et al., 2010). Figure 1 captures the model, which is broken into four quadrants with four recursive stages: appropriation, transformation, publication, and conventionalization. In the appropriation phase (QI), the learner acquires new information in a public setting. During this phrase, the learner strives to fit the new information with his/her existing knowledge. In the individual transformation phase (QII), the learner considers how the new knowledge related to his/her context. In this phase, the learner attempts to apply the knowledge. Here, the original content of what was learned could shift as the learner attempts to accommodate the new information into what they already knew. In the publication phase (QIII), learners move into public settings to "publish" their new learning through talk or action. In the final stage, conventionalization (QIV), the new information is adapted and conventionalized or part of the learner's knowledge base.

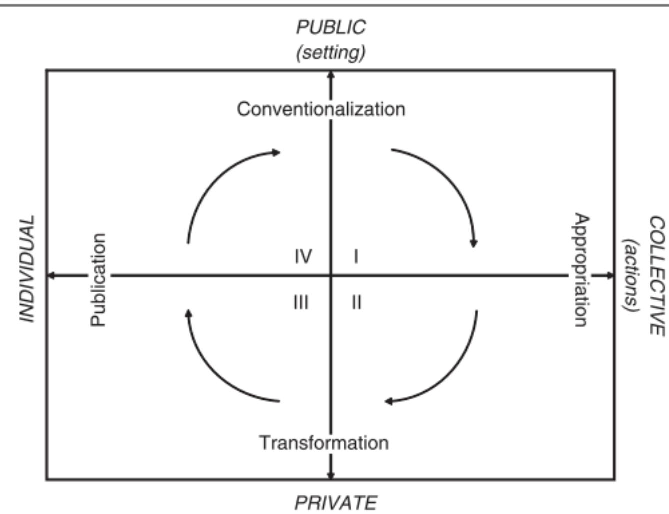

Figure 1. Vygotsky Space. Adapted from Gallucci et al., 2010. Permission to reproduce granted, see Appendix G.

Vygotsky Space represents learning in terms of settings and relationships. According to the theorists, a learner could be in a public or private setting and learning individually or collectively. The model used in this study was adapted over a period of years by a set of researchers. Harre (1984) identified four processes that depict the progressive transitions between the quadrants. The four stages describe how the learner changes between each learning setting: collective, private, individual, and public. Harre (1984) posited that the public-private and social-individual aspects of his model are not discrete. Although the model was illustrated as a recursive process, a learner could move from any quadrant to another. In fact, at any point in the learning process, an individual might pull from multiple quadrants.

Gavelek and Raphael (1996) expanded the model developed by Harre in 1984 by applying it to literacy pedagogy. The researchers used the model as a framework for their study on classroom discourse and its impact on student writing and comprehension. They suggested that the stages of Vygotsky Space could be observed through the students' writing, class discussions, and reflections.

Building on Gavelek and Raphael's work, this study used Vygotsky Space as a frame. The basic design of each session included the independent reading of a case study, a written response to critical problem solving prompts about the case, discourse in small groups, and personal reflection on the learning that occurred through the small group discourse. Gavelek and Raphael (1996) argued that researchers could gather information about each stage of Vygotsky Space during instruction by collecting data such as journal entries, observational notes on class discourse, and writing pieces.

In this study, case analyses were tools to demonstrate the principals' learning. The principals' independent case study analysis responses provide insight into the appropriation phase (QI). The discourse among principals when they share their case analyses offer understanding into the movement from the appropriation stage (QI) to the transformation stage (QII). Gavelek and Raphael (1996) suggested, “sometimes the public and the private seem to merge, as is the case when children are asked to record their responses in reading logs” (p. 187). The principals’ written reflections on the learning from the case study discourse provides information toward both the individual-publication stage (QIII) and the public-conventionalization stage (QIV).

The process of learning new information, testing it, applying it and publicizing the new knowledge aligns with the support needed for principals. The research on exemplar preparation programs emphasizes the importance of real world problem solving with complex issues. The research has shown that first year principals in several studies (Bengtson, Zepeda, & Parylo, 2013; Daresh, 1990) described a lack of real world problem solving. In addition, research has indicated that participants value collaboration on problems of practice (Turnbull et al., 2013; Wallace Foundation, 2008). The use of case study analysis in collegial principal sessions provides dual opportunities to the principals because it gives them time to dialogue with their peers about authentic problems of practice. Vygotsky Space works harmoniously with adult learning theory. Together, the two theories outline stages of learning within social contexts.

Chapter 3

Methods

With the increase of academic accountability from the state and national level, the role of the principal has become increasingly dense. The complexity of being a principal served as a rationale for this study investigating if, and how, peer collaboration around case studies could help the principals in the Power Elementary School District to explore critical problems of practice.

Methods Approach

Action research is a systematic inquiry process done in collaboration with the members of an organization (Creswell, 2009). Early action research studies began in the mid 1900s. In the 1940s, Lewin developed a theory of action research under the premise that "knowledge should be created from problem solving in real-life situations" (Herr & Anderson, 2005, p.11). Action research was regularly employed in applied fields such as nursing, education, and social work (Herr & Anderson, 2005). Action research occurred in the context of the workplace, to investigate a problem *with* the participants rather than study the problem as an outside researcher. Action research offered an opportunity to authentically explore a complex problem in the context in which it occurred. This study employed a mixed methods action research approach. The mixed methods approach engaged both quantitative and qualitative data collection and analysis. A mixed methods approach made sense when exploring the phenomenological context of principals collaborating. This study used a sequential mixed methods approach beginning with qualitative data analysis and moving to quantitative data analysis by using descriptives of qualitative codes to order and compare data. Data were organized, coded, and then counted and compared to provide a richer description of the experience for principals collaborating in the PN.

Qualitative researchers engage in inquiry, using an inductive style that allows patterns to emerge from data collection (Creswell, 2009). Qualitative research focused on the meaning making of individuals. In this case, this was the way principals made meaning of the problems of practice they faced at their schools. This action research study identified a problem, developed a potential innovation to address the problem, tested the innovation by collecting and analyzing data and reported on the results. As the researcher in this study, I explored the principals' experiences, but I was not an outsider of the organization since I worked closely with the principals in my role in the district.

The action taken in this study was based upon two previous action research cycles on collegial learning sessions conducted in 2012 through 2013. The first cycle centered on grade level leaders at one school site, while the second cycle focused on principals. In both, a lack of collaboration and problem solving opportunities were found. Given this information, this study was designed to gather data to answer the following research questions:

1. In what ways were principals' use of case studies in the Principal Network conducive to helping them understand the complexity of educational problems from multiple perspectives?
2. In what ways did the principals apply their understanding of the complexity of the problems from multiple perspectives to their own contexts?
3. In what ways did the principals find value in collaborating during the Principal Network?

Setting

This study occurred in the Power Elementary School District (a pseudonym) located in the west valley of Phoenix, Arizona. There were ten schools in the Power Elementary School District (PESD) with approximately 5,500 students. The district demographics included over 75% of students on free and reduced lunch with a 70% minority population. Each school had between 30 to 45 teachers on staff. The average number of years of experience teachers ranged from 0 to 28. Of the 10 principals in PESD, 2 principals were in their second year. PESD did not provide a structured support program for new or experienced principals. With a limited structured support, the district benefited from establishing a program to support principals and encourage communication among them.

Participants

Participants for this action research study were selected using a purposeful sample. Only principals (not other district leaders) were invited to participate in this study to focus specifically on the experience of the principal role. Participation was voluntary. The participants signed a consent form (Appendix A) if they chose to participate in the study and agreed to be videotaped during the PN sessions.

Participants in this study were five principals in the Power Elementary School District. Four of the participants were female and one of the participants was male. To gain a varied perspective, both novice and experienced principals were included. Studies indicated that homogenous groupings supported experienced as well as novice principals (Darling-Hammond et al., 2007; Grodzki, 2010; Wallace Foundation, 2008). Case study analysis was not previously utilized in PESD. Therefore, the content of the PN was novel to all the participants.

Three of the five participants were experienced principals who served in the position for five or more years. For this study, a novice principal was defined as a principal with less than three years of experience. Two of the participants were novice principals, both beginning their second year in the role. Table 1 below shows the participants' number of years of experience and demographic information for their school to provide background into their responses during the PN.

Table 1

Participant Years of Experience and School Information

Participant	Years of Experience as a Principal	Percent Free & Reduced	School Size
A1	12	98%	small
B1	5	71%	medium
C1	2	63%	small
D1	7	63%	medium
E1	2	97%	small

Note: School sizes defined as small=>600, medium=<600<800, large=>800

Participants in the PN attended six sessions over a four-month period from September through December. Not all participants were able to attend every session. Attendance was noted at each session, including absences and late arrivals. Principals who were unable to attend a session were at other school events such as parent nights or dealing with a school crisis. Table 2 shows the attendance for each session by participant. Overall, the participants attended the majority of sessions. One participant attended all sessions, and one missed two, but the majority attended all but one session. Table 2 also highlights that at least three members of the group attended each session, with four or more attending most sessions.

Table 2

Participant Attendance

Sessions	1	2	3	4	5	6
A1	p	p	p			p
B1	p	p	p	p	p	p
C1		p	p	p	p	p
D1	p	p		p	p	p
E1	p	p	p		p*	p
Total present	4/5	5/5	4/5	3/5	4/5	5/5

*p= present *=participant left session early*

In this mixed methods action research study, I served as the researcher and a co-facilitator for the PN. A co-facilitator assisted during the sessions to encourage participation and orchestrate the flow of the discussions. The co-facilitator for the innovation did not work in the district and was not a certified educator, but had over 25 years of experience in communication training and systems development. A co-facilitator was retained to allow the researcher to focus on data collection. In a previous cycle of research, it was learned that a co-facilitator allowed better processing of the participants' responses from a researcher's perspective without losing the flow of dialogue during the PN.

Innovation

The study took place over 16 weeks between the months of September and December with 6 PN sessions. PN sessions (approximately 90 minutes in length) were held about twice a month. Participants were provided dinner as an incentive for their participation. The goal of the innovation was to support principals' ability to think critically about authentic problems of practice.

PN sessions followed the same basic framework: participants read a case study, responded to the same three short prompts on relevance, breadth, and depth during each session (see Appendix B), discussed the case, and reflected on their learning using an individual written reflection form (see Appendix C). The first four case studies were taken from *Journal of Case Studies in Educational Leadership*. The last two cases were written by the researcher in order to better align to the participants' current problems of practice. The cases were approximately three to five pages long describing the context, problem and actions from the perspective of an administrator. A solution was not presented in the case allowing the reader to explore possible solutions. This type of case promoted critical problem solving, encouraged dialogue and aligned to the purpose of this research. The case studies were selected based on their alignment to the problems of practice identified by the participants prior to the first PN session.

In order to maximize time and limit work outside of the PN sessions, all artifacts were housed on a PN Google website. A digital folder with all of the forms utilized in each session was created for each principal. Prior to the first session, the principals identified current problems of practice in their schools. The Carnegie Project on the Educational Doctorate (2014) defined problems of practice as “a persistent, contextualized, and specific issue embedded in the work of a professional practitioner, the addressing of which had the potential to result in improved understanding, experience, and outcomes” (Design Concept Definitions section, para. 4). Using problems of practice as a focal point for the conversations during the PN sessions allowed participants to explore the complexity of the issues they faced on a day-to-day basis in a collegial setting.

After the final PN session, the participants were interviewed on topics that included the principal’s perception of the value of the PN, the principal’s understanding of case study analysis, and the principal’s application of learning in the PN to their problems of practice. Table 3 shows the timeline and protocols used for each PN session.

Table 3

Principal Network (PN) Timeline and Protocol

Sessions	Content	Data Collection
Prior 1	Gather problems of practice via a questionnaire	none
Session 1	Analyze case study #1 – prompts, group discussion, reflection	written responses videos of group discussions reflections
Session 2	Analyze case study #2 – prompts, group discussion, reflection	written responses videos of group discussions reflections
Session 3	Analyze case study #3 – prompts, group discussion, reflection	written responses videos of group discussions reflections
Session 4	Analyze case study #4 – prompts, group discussion, reflection	written responses videos of group discussions reflections
Session 5	Analyze case study #5 (research generated) – prompts, group discussion, reflection	written responses videos of group discussions reflections
Session 6	Analyze case study #6 (research generated)– prompts, group discussion, reflection, focus group	written responses videos of group discussions reflections focus group transcript
After 6	Participant interviews	interview transcripts

Measures and Data Collection

The following section describes the measures and data collection process employed in this study. Each measure was outlined detailing the rationale and design, the participants, when the measure occurred, and how the data were collected and analyzed.

Written responses to the cases provided. Written responses were utilized to explore the first research question, about the ways were the principals' use of case studies in the PN conducive to helping them understand the complexity of educational problems from multiple perspectives? Relevance, breadth and depth were three specific critical thinking skills used to support principals in studying complex problems (Paul & Elder, 2006). In this study, relevance, breadth, and depth were used to frame the three questions on the case study analysis form (see Appendix B). The first question addressing the principals' ability to identify the problem aligned with the critical thinking skill of relevance. The second and third questions attended to breadth and depth by analyzing the complexity of the problem through exploration of a solution, its impact and multiple perspectives of the stakeholders involved. After reading a case study, the participants completed the case study analysis form. Principals independently typed their responses onto the case study analysis form on the Google website. Written responses were coded using in vivo coding based directly on the constructs of the questions and participant responses. These codes were defined and then placed in a codebook. Written responses were coded in real time just after the session occurred. A constant comparative method of coding was used to revisit coding to ensure that drift of the code definition did not occur. Coded data were counted and compared in order to study the results for potential trends in codes over time.

Observational notes. To further investigate research question one, observational notes were collected to record how principals communicated about the complexity of problems and considered multiple perspectives. After principals read the case study and completed the case study analysis Google form, they discussed the case. Discussions were video-recorded. After each Principal Network session, the videos were viewed and observational notes were gathered based on themes that emerged from the comments made by the participants. The notes were recorded on a chart and then reorganized by research question and major topics. These topics were coded based on the constructs of the research questions and the responses of the participants. In some cases codes were drawn into larger themes that aligned to the study's theoretical framework.

Reflections. The reflections provided insight into research question number one and two, exploring the ways that principals acknowledged multiple perspectives and applied case study analysis to their own contexts. The reflection form included two questions, one to reflect upon the group discussion and one to address application. The first question addressed multiple perspectives. A code and definition was developed for multiple perspectives and what a response that included multiple perspectives might look like. These comments were coded, counted, and compared to illustrate trends over time in the data. The second question asked the participants to describe how they would solve the problem if it occurred at their school. The principals reflected individually on the prompts using an electronic form on the PN Google website.

Focus group. A focus group was conducted at the end of the sixth PN session. All five participants attended the focus group. The questions posed to the focus group addressed research question three. The intention was to offer a chance for participants to discuss their involvement in the study, what they found valuable about the PN, and what they would change. The information gathered provided insights into the phenomenological experience of being a principal participating in the PN. The focus group was videotaped and observational notes were generated upon viewing the video. The observational notes were categorized into groups using in vivo coding emerging from the participants' responses. The codes were then structured into larger emerging themes in axial codes that aligned to the theoretical framework of this study.

Interviews. Interviews provided insight for research questions one, two, and three. All principals participating in the PN were interviewed after the final PN session. The interview was semi-structured with four to six questions addressing topics that included the principal's perception of the value of participating in the PN, the principal's understanding of case study analysis, and the principal's application of their understanding of the complexity of problems from multiple perspectives (see Appendix D). Like the focus group data, the interview responses were categorized into groups using in vivo coding emerging from the participants' responses. The codes were then structured into larger emerging themes in axial codes that aligned to the theoretical framework of this study.

Data Analysis

The raw data were gathered from each measure (written responses, case studies, reflections, observational notes, and interviews). The written responses, principal generated case studies, and reflections were collected on electronic documents using the PN Google website. The observational notes were generated from the videos of the group discussions during the PN. The interviews were voice recorded and transcribed.

Once collected, the qualitative data were analyzed using a grounded theory approach. Grounded theory is a systematic, qualitative process to generate an explanation for a procedure or action (Creswell, 2009). Grounded theory analysis began with open coding to "capture the detail, variation, and complexity" of the data (Corbin & Strauss, 2007, p. 161). Coding is the process of breaking down a set of qualitative data into meaningful chunks (Miles & Huberman, 1994). Codes are labels for the chunks, which can be words, phrases, or sentences. Participants used a case study analysis and reflection form to guide their writing. Codes began from the constructs of the analysis and reflection forms. The open coded results of the written responses and reflections were then axial coded to describe overarching themes that emerged in the data. A constant comparative method was employed to review data for conceptual similarities and differences. The quantitative data gathered from the written responses and observational notes were clustered, organized, and compared.

Reliability and Bias of Qualitative Measures

In order to ensure reliability, procedures were established to confirm trustworthiness. All qualitative data was read through twice prior to coding to check for errors made during the data collection process. A second coder independently reviewed a preliminary coding of data based on theory and the research questions. Codes were cross-checked by another researcher and the co-facilitator of the PN sessions. Codes were then recorded in a qualitative codebook and constantly compared as new data was collected to make adjustments and certify that there was not a drift in the definition of the codes (Creswell, 2009). Throughout the study, a researcher journal was kept to record reflections and perceptions. Recording insights throughout the research process allowed for monitoring of bias.

To validate the accuracy of the study's findings, multiple strategies were employed. Member checks with the participants of the PN were utilized to determine the accuracy of the written responses, case studies, reflections, and interviews. The co-facilitator and researcher engaged in peer debriefing to gain another interpretation of the accounts of the PN small group discussions. The data sources were triangulated after the coding process. Table 4 outlines the tools that align to each research question. Finally, negative or discrepant data that did not support the emerging themes were presented as realistic elements of results that occur during an action research study.

Table 4

Data Collection by Research Questions

Research Questions	Tools to Collect Data
RQ 1. In what ways were using case studies in the PN conducive to helping principals understand the complexity of educational problems from multiple perspectives?	Written responses Observational notes Focus Group Interviews
RQ 2. In what ways, will the principals apply what they learned in the Principal Network (PN) to their own contexts?	Reflections Observational notes Interviews
RQ 3. In what ways did the principals find value in participating in the PN?	Focus Group Interviews

As a practitioner committed to enhancing the district's principal support system, I recognized my own bias in hoping that the use of case study analysis would promote collaboration and problem solving among the participants. The importance of outside research support through cross-checkers, and peer debriefing, was employed to ensure that my passion toward this research did not influence the results. I am a white, female, district administrator who had positive public education experiences. These viewpoints could have affected my perspective. It was key that I took steps to limit bias. I wrote honestly and reflected deeply on the data gathered to create a rich, thick description of the findings in this study.

Threats to Validity

Threats to validity must be addressed in order to confirm trustworthiness of the collected data. In this study, the threats to validity were mortality, novelty effect, and experimenter effect.

Mortality occurs when a participant leaves the study or is unable to participate. In this case, there was no mortality. While participants may have missed individual sessions, most participants were able to attend every session except one. To maximize attendance and participation, dinner was provided as an incentive to participate in the study and tasks to be completed outside of the PN were limited.

The novelty effect occurs because the innovation is new. The impact of the innovation could be attributed to the fact that it was new rather than the innovation itself. Since case study analysis was new to the district, it was possible that the novelty effect was a threat to validity. This effect was noted as a limitation to the study in the findings section.

The experimenter effect occurs when the results of a study can be attributed to the subjects' response to the researcher rather than the innovation itself. This was a very real threat for this study as I had developed relationships with the principals over time. Two additional steps were taken maximize validity. First, communication about the study with participants was limited outside of the PN session. Second, the participants were told that there was no expectation of their actions. Their feedback, positive or negative, was critical to make good decisions about the impact or non-impact of the case study analysis.

Chapter 4

Results

This chapter presents the data gathered in this study based on the underpinnings of the Wallace Foundation's professional development program for new and aspiring principals conducted in Power Elementary School District. The purpose of this study was to explore what would happen if novice and experienced principals collaborated around critical case studies of practice. The chapter is organized according to the study's three research questions: 1) In what ways were principals' use of case studies in the Principal Network conducive to helping them understand the complexity of educational problems from multiple perspectives? 2) In what ways did the principals apply their understanding of the complexity of the problems from multiple perspectives to their own contexts? and, 3) In what ways did the principals find value in collaborating during the Principal Network? Data including participants' case study analyses, case study reflections, observational notes taken during the PN sessions, and focus group and interview transcripts were all analyzed to answer these questions.

Identifying the Problem and Its Complexity

The first research question explored the ways in which using case studies in collaborative sessions were conducive to helping principals understand the complexity of educational problems. To answer this question, participant responses to case study analysis form (see Appendix B) were examined to determine the complexity of the problem identified during each session, and whether those responses increased in complexity over time. In addition, observational notes during the PN discussions were reviewed for evidence of changes in the way participants considered the issues presented.

Overall, it appeared that the PN was conducive to helping the participants identify and understand the complexity of educational problems.

During each of the six sessions of the PN, the participants read a short case study (see Appendix F), completed a case study analysis form independently (see Appendix A), discussed the case with the rest of the participants, and wrote an individual reflection (see Appendix C) on the case study analysis form once the discussion was complete. The case studies provided a context, description of a problem, the stakeholders involved, but ended without a solution. Using the analysis form as a guide, participants identified what they perceived to be the over-arching problem, considered the stakeholders and formulated possible solutions and next steps. The questions on the form directly aligned to each of the three critical problem solving skills of relevance, breadth, and depth. Question number one on the case study analysis form, which was aligned to relevance, asked, "In one or two sentences, describe the problem in this case." Participants' responses were coded according to the level of complexity of problem identification using three codes: simple, complex, and insightful. Figure 2 is an excerpt of the codebook (see Appendix E) for this study, which shows the codes, definitions, and examples for each code in problem identification.

Code	Definition	Example
Simple	Problem statement came directly from the case study text without inference	"The problem is high teacher turnover" (D1, Case #2)
Complex	Problem statement did not come directly from text and required inference	"The principal in this case is actually alienating non-tenured teachers…" (B1, Case #2)
Insightful	Problem statement went well beyond the text with the participant placing him or herself in the context of the case study	"The principal formulated a plan to improve the school in isolation and in doing so created a bigger problem with lack of teacher buy-in and support" (A1, Case #3)

Figure 2. Problem identification codes.

Simple identification (SI) was defined as a problem statement that came directly from the case study text without any inference. An example of simple identification was "the problem is high teacher turnover" (D1, Case #2). This phrase came directly from the case study text. Complex identification (CI) was defined as a problem statement that did not come directly from the text and required inference. An example of complex identification was "the principal in this case is actually alienating non-tenured teachers" (B1, Case #2). The use of the word or idea of alienating the non-tenured teachers was not directly stated in the case study. Rather, the case study provided information regarding the kinds of tasks assigned to non-tenured and tenured teacher groups. In this case study, non-tenured teachers did not have additional duties such as lunch and recess duty, were given the lowest performing students, and were selected for extra-curricular responsibilities such as tutoring and coaching. This participant used that information to infer that each group might be frustrated by the inequality of the responsibilities given by the school principal. Insightful identification (II) was defined as a problem statement that extended well beyond the text of the case study and demonstrated that the participant had placed him or herself into the context. An example of an insightful identification was, "The principal formulated a plan to improve the school in isolation and in doing so created a bigger problem with lack of teacher buy-in and support" (A1, Case #3) or "The teachers didn't know or understand the purpose for a math specialist, nor did they see the need for one" (C1, Case #3). These problem statements were coded as insightful because the ideas invoked in the statements were not present in the text and demonstrated that the participants placed themselves into the setting in order to gain insight about the problem. The participant examples shown in the table used the information provided in the text and then placed themselves into the context to think beyond the basic information provided in the case study.

Codes for problem identification were charted by participant and by session. Table 5 shows the frequency of participants' coded responses for problem identification by session.

Table 5

Frequency of Problem Identification Codes by Session

Sessions	1	2	3	4	5	6
Simple	3/4	2/5	0/4	0/3	1/4	0/5
Complex	0/4	2/5	1/4	1/3	2/4	5/5
Insightful	1/4	1/5	3/4	2/3	1/4	0/5

The frequency of simple identification codes decreased from session one to session six. Three out of four participants' responses were coded as simple identification in session one, while in session six, there were no simple identification codes. Correspondingly, the frequency of complex codes also increased from session one to session six. In session one, none of the participants' responses were coded as complex identification. By session six, five out of five participants' responses were coded as complex identification. The frequency of insightful identification codes also showed an increase through session four and then decreased for the remaining two sessions.

The second data source used to explore the first research question was observational notes taken during the PN discussions. After participants read the case studies and completed the individual case study analysis form, the group shared their responses, and discussed the case. These discussions were videotaped. Observational notes were recorded on the content of the discussions. Observational notes were analyzed using open coding by reviewing the phrases used in the responses and creating categories from the patterns that emerged. Notes were coded as problem identification, solution, impact, multiple perspectives, and application. The observational notes regarding problem identification, solution, and impact were examined for this research question. Initial problem identification responses during the discussion time matched that of their written responses to question one on the case study analysis form (see Appendix B).

A pattern emerged throughout the observational notes that showed that participants identified the problem in writing on the case study analysis form, but elaborated on the problem through their discussions with their colleagues. For example, in session one, Participant D1 wrote, "Rene is a gifted student who is having behavior issues in the classroom." This statement was coded as simple problem identification because it came directly from the text of the case study. After Participant D1 listened to peers during the discussion, however, D1 added new layers to his/her thinking about the complexity of the problem adding statements that included "I wonder about the other kids in the classroom," "I am worried about how Rene feels about how she is being treated by the teacher," and "the teacher, Rene, and her parents are not working together to focus on supports for her." These statements were different than D1's original written problem identification and explored more than one aspect of the problem. Participant D1's original statement focused only on the student behavior issues. The comments made during discussion addressed the needs of the student, the other children in the classroom, and the teacher.

This pattern was consistent with the other five participants as well. In session two, Participant E1 identified the problem as, "Overcreek Middle School has a high turnover rate and it's costing the district money to replace teachers on a yearly basis." Throughout the discussion with peers, E1 extended those original ideas with the following comments; "The evaluations say nothing about what they do well," "You need to consider what motivates people," and "We need to gather some data, to really find out why people are leaving, but also why are some people staying." In session four, C1 wrote that the problem for the case study was, "The principal and teachers have concerns regarding the student's IEP and disability." When she shared her ideas during the discussion, however, several other elements of the problem emerged, such as "There is a potential racial issue," "Mom is an issue with how much she does for Calvin," "How do you honor mom recognizing that Calvin is a freshman in high school," and "There is a need to acknowledge mom's sacrifice, but still talk about how to increase the student's independence." These statements made during the discussion illustrated how principals expanded their thinking about the complexity of the problem through collaboration with their peers.

In further sessions, participants built on the complexity of each other's problem statements. For example, after reading case study six, Participant A1 initially identified the problem in her written response as "Student instructional needs not met in 7th grade. 7th grade team is reluctant to modify or collaborate for the student." Upon further discussion with her colleagues, she added these comments; "There are some home circumstances in this case," "The student is disengaged and disconnected," " He gets sent to ACP because he can be with that teacher," "I wonder about who else [in the school] is impacted with scheduling this student's time, the counselor, the psychologist..." Her responses demonstrated her consideration of complex dimensions of the problem. Like

C1, D1 and E1, A1's statements were more complex, reaching beyond the text. These responses showed an attention to the critical thinking skill of relevance. Relevance was defined for this study as the ability to identify a problem and the issues surrounding it. The participants' comments illustrated an understanding of the complexity of the problem and a need to explore the issues that made up its multiple layers.

As participants discussed the problems in each case, they also explored the impact and potential solutions. The critical thinking skill of breadth was defined as recognizing the potential consequences of solutions to the problem and exploring the impact a solution had on the stakeholders involved. Throughout the PN sessions, principals often moved from problem identification, to solution, to impact fluidly. One example of the interconnectedness of the problem, impact,, and solution came in the discussion about case study number three. All three participants stated that the use of a new math coach was not effective in their initial problem statements. During discussion, the participants acknowledged a variety of reasons why the new math coach was not effective and naturally began to offer solutions. Participant B1 said, "Why didn't Hannah tell the principal that teachers were missing the meetings?" Participant C1 added, "The principal thought there was a need for the grade level meetings, but she wasn't helping to support them. The meetings needed a structure." Participant A1 offered, "The principal seemed to make the decision for hiring a new math coach on her own. She needs to get some input from the leadership team or the representatives to get some feedback about what they need from the new math coach." These responses showed how the participants tied the problem identification to determining a solution and its impact and demonstrated the critical thinking that developed during the PN. Overall, the improved quality of the responses across PN sessions illustrated recognition that the problems presented in the case study could be explored from a variety of levels and participants were utilizing the critical thinking skills of both relevance and breadth.

Considering Multiple Perspectives

The second half of the first research question looked at how the PN was conducive to helping principals consider multiple perspectives. This part of the question went beyond whether participants could identify the problem in a complex way, but whether they could also incorporate different perspectives in considering alternative interpretations of the problem. The code of multiple perspectives (MP) was specifically defined as the statements, written or oral, that acknowledged other colleagues and other PN participants' viewpoints. Four data sources were used to answer this question: participants' written responses to the case study reflection form, observational notes, focus group, and interview responses. These data showed that the PN was conducive to helping principals consider multiple perspectives and that principals increased their incorporation of other's ideas across sessions.

The first data source was the participants' written responses to the case study reflection form. After reading and discussing the case studies during each session of the PN, participants wrote a reflection (Appendix C) about their experience from the case and dialogue. These written responses were coded either *multiple perspectives* (MP) or *no multiple perspectives* (No MP). The code multiple perspectives was defined as a response that included alternate viewpoints from other PN participants or other colleagues. The following statements represented examples of written responses that were coded as including multiple perspectives. Participant C1 commented, "I liked E1's input on getting the leader on board with you." A1 remarked in one of the reflections "This is a reminder to continue to seek input from staff regarding their needs." Codes for multiple perspectives were tracked over the six sessions of the PN. Table 6 shows the frequency of participants' coded written responses for multiple perspectives by session.

Table 6

Frequency of Multiple Perspective Codes in Analysis Form by Session

Sessions	1	2	3	4	5	6
	3/4	3/5	2/4	3/3	2/3*	5/5

**Note: E1 left the session early and was unable to complete the reflection.*

This data tentatively shows an increasing trend in the written responses coded as incorporating multiple perspectives. In session one, three out of four participants' written responses coded as multiple perspectives, but by session six, five out of five written responses were coded as incorporating multiple perspectives.

Observational notes were also used to answer part two of the first research question. Observational notes regarding multiple perspectives demonstrated that participants valued each other's point of view and recognized similar and differing outlooks. In each session, there were several comments made by the participants that were coded as incorporating multiple perspectives. Some examples of using multiple perspectives included statements such as "A1 brought up the idea of working from the positive," "I like what you said, E1, that the decision you make shouldn't be based on the loudest person," and "I thought the same thing and I was also thinking about what you said, B1, about how the data was collected." The comments showed not only agreement with practice, but also an acknowledgement of other colleagues' viewpoints.

Focus group and interview responses were the third data source used to answer research question one. The feedback provided during the focus group and interviews provided strong evidence of the value principals found in hearing their peers' perspectives on the cases. During the last session, the principals participated in a focus group. Two main questions were posed (see Appendix D). One question asked the principals to identify the value of participating in the PN. The focus group responses were broken into themes. One theme that emerged was the value of hearing multiple perspectives. Participants spoke about how they appreciated listening to one another and hearing how their colleagues approached the problems in the case studies.

Participant A1 noted that each member of the PN brought a different perspective when initially approaching the case saying, "It is interesting to see the place where we come from when we first think about the case…" She continued by stating, "Each of us comes from a certain place, like our super strength." Other participants echoed the appreciation for varied perspectives. D1 spoke about the importance of taking on other viewpoints verbalizing, "There was value in being in someone else's shoes." E1 agreed with this idea commenting, "It was good to see how other people view things." C1, a novice principal, also expressed comfort in knowing that her ideas were often similar to her more experienced peers replying, "the validation of having pretty similar thoughts and ideas helped." B1 summarized the group's feelings about the value of multiple perspectives, "I think is it powerful to talk to other people about what they are doing." These comments demonstrated the participants' beliefs that collaborating with one another to analyze case studies gave them increased insight about each other's perspectives.

Interview responses added to the general feeling of appreciation for being exposed to multiple perspectives through the PN discussions. After the last session, principals were interviewed using a semi-structured interview format (see Appendix D). Interview responses were open coded according to themes that surfaced during analysis. Multiple perspectives emerged again as a theme. Each participant made from three to six comments regarding multiple perspectives. In the interviews, participants spoke about how listening to their peers' outlooks raised their awareness of each other's viewpoints. B1 said, "by getting together and having discussion I could see where A1 was coming from…" A1 made a similar statement noting, "It was an aha to hear E1 always come from the student position. It really showed where E1 was coming from." E1 stated from the beginning, that one of his motivations for participating was learning more about how other principals processed through a problem, "I wanted to see what other principals thought." These comments showed that principals were interested and valued one another's perspectives.

While gaining insight about one another was one theme that surfaced in multiple perspectives, there was also a theme about considering a situation from several angles. C1 said, "There were things people said that I hadn't considered." In a similar fashion, A1 noted, "Some situations, I hadn't experienced in the same way as others in the group." Participant D1 said, "I think the cases helped in the sense of understanding there are multiple stories to every case study." Further in the interview, participant D1 also acknowledged how the participants identified the problem, stating, "Sometimes there were several problems to address and what we perceived as the main problem and how we would approach it was different." B1 offered an interesting point given her status as an experienced principal commenting, "After doing this for a few years, you get into a groove and you don't necessarily think of other perspectives." She elaborated toward the end of the interview offering, "The Principal Network definitely gave me a different perspective on things." The comments demonstrated that the principals were recognizing other ways to view critical problems of practice. Participant B1's comment alluded to the challenge that can emerge when principals feel isolated.

Across all data sources (individual case study reflections, observational notes, focus group and interview responses), there was evidence that the use of case studies in the PN was conducive to helping principals consider multiple perspectives.

Application from the Principal Network

The second research question explored the ways in which principals applied their understanding of the complexity of the problems from multiple perspectives to their own contexts. The data utilized to explore this question included individual responses on the case study reflection form, observational notes, and interview responses. Based on the data, the principals did not apply skills and concepts back to their contexts.

The first data source used to answer the second research question was individual case study reflections. Using open coding, reflection statements were coded according to three separate codes for the category of application; general, specific, and no application.

Figure 3 is an excerpt of the codebook for this study (see Appendix E) and provides descriptions and examples for the codes.

Code	Definition	Example
General	Reference to work place with a general plan to apply learning from the PN	"What I will take from this case, is to stick with what we are doing now, as the morale seems to be picking up." (E1, Case #2)
Specific	Explicit reference to an application of learning to a current work place situation	"Gave out thank you notes and it was interesting the staff who thanked me for the card… good information to file for later." (C1, Case #2)
No	No references to work place	D1, Case #21

Figure 3. Application codes.

Reflections coded as general were defined as statements that made a reference to workplace in general terms with regard to application from the PN. An example of an application statement coded as general was, "What I will take from this case is to stick with what we are doing now as the morale seems to be picking up" (E1, Case #2). The response was coded as general because the statement is vague and does not provide any detail about application, but still shows that there was consideration of their workplace. Reflection responses coded as specific were defined as having an explicit reference to an application of learning to a current work place situation. Some examples of explicit references were; "Gave out thank you notes and it was interesting the staff who thanked me for the card… good information to file for later" (C1, Case #2) and "I have an open door policy, but maybe I need to stress this even more with those teachers in a rut" (D1, Case #5). Both of these statements address current situations where the participant provides some specifics on how he/she will apply his/her understanding of the complexity of the problems from multiple perspectives. Reflections coded without an application statement were those reflection responses that did not refer back to the participants' workplace.

Data from each of the coded items were gathered by session. Table 7 illustrates the frequency of application codes for each participant by session.

Table 7

Frequency of Application Codes by Session

Sessions	1	2	3	4	5	6
General	3/4	2/5	3/4	1/3	0/3	2/5
Specific	1/4	3/5	1/4	0/3	3/3	0/5
No	0/4	0/5	0/4	2/3	0/3	3/5

There was no pattern in the frequency of application codes from session one through session six. The data collected from the reflection responses suggests that the participants did not increase their application of learning from the PN.

Observational notes were the second data source used to answer research question number two. Participant discussions about the case studies were videotaped and observational notes were gathered from the videos. Initially, comments made by the participants were grouped into themes including connections to participant workplace. Throughout the case study discussions, participants referred to previous and current experiences such as, "We've all had teachers who are tired…sometimes it happens, I've had teachers tell me that" (E1, Case #5), "I know that with our staff, sometimes, we have to talk about the positives we know about the student" (D1, Case #6), and "I've got the opposite problem on my campus, the low ones they are good with, it's the gifted ones who keep dropping"(C1, Case #5). These statements demonstrated the connections principals made to their workplace as they analyzed case studies; however, the comments did not illustrate an application back to their workplace. Application comments were defined as statements participants made applying ideas from previous PN sessions. For example, D1 said in session 5, "B1, you are good at reminding me about the law, I keep that in mind more now when I am in these situations." While this statement provides a good example of application in the workplace, there were only two additional comments made by any participant that directly referenced application.

The third data source utilized to explore the answer to research question number two was interview responses. After the completion of the PN sessions, participants were interviewed using a semi-structured interview format (see Appendix D). One of the questions posed during the interview was "Were there ideas from the Network that you might apply to your position?" Five out of five participants did provide a statement about applying learning directly from a case. Some principals made more general statements about application. Participant B1said, “I applied what I learned in a general way, but I don’t really have an example.” D1 echoed a similar idea and pointing out the pace of a principal’s day, noting, “If you were to ask me any case study details, I wouldn't remember a single one, only because it is so crazy busy and you are moving from one thing to the next.” The interview responses matched the results gathered through observational notes and written reflections. While principals all felt the sessions were helpful to their jobs, they could not recall concrete examples of when things discussed in sessions directly helped them within their workplace.

Value of Participating in the PN

The final research question explored the ways principals found value in collaborating during the PN. Part of this question was already answered in the first research question, as it increased their complexity in identifying problems from multiple perspectives. However, principals found several other valuable aspects about collaborating during the PN. The data used to answer this question included focus group and interview responses. Based on the data (focus group and interviews) collected and analyzed to delve into this question, principals found value in reducing isolation of the principal role through professional conversations with their peers while in a safe, risk-free environment.

In both the focus group and individual interviews, principals were asked to identify what was valuable about participating in the PN. The question was posed in individual interviews after the focus group to determine if there were differences in opinions not expressed during the focus group. Responses from the focus groups and interviews were collected and categorized by the major themes that emerged. Both data sources were considered simultaneously in answering the third research question because the responses of the participants during the interviews was consistent with the conversation that occurred in the focus group. Responses for both were first open coded to reveal themes of value in having conversations with people who truly understood their job, reducing competition, and learning from each other. Axial coding was applied to these themes. Axial coding refers to a process through grounded theory where core themes are related to one another (Corbin & Strauss, 2007). In this case, the themes of value of conversation, reducing competition, and learning from one another could be categorized into a larger concept of reducing isolation.

When the question of the value of the PN was initially posed in the focus group, participants began responding to the question with statements that described the isolation they felt in their roles. Participant D1 said that being involved in the PN was a reminder that, "You're not the only one." The pressures of the job and the time constraints limited the principals' ability to meet together and collaborate. Participant B1 noted, "We never get time to just talk." Participant C1 reaffirmed this idea of isolation and the value of principals having time to talk with one another saying, "I think that sometimes you are isolated. You are outside the teaching staff. You don't have someone to go to." This concept was elaborated on when Participant A1 spoke about the difference between having an assistant principal and not having an assistant principal adding, "I had a strong partner [when I had an AP] where you could have ideas and talk about them, all the time, sometimes into the wee hours of the night. Now, I don't and you feel isolated." Continuing, Participant A1 emphasized the point saying, "We work so hard to open up teacher's worlds, for them to collaborate and have pushed so hard and come so far with that in education in the last couple of decades. And we have not done that for administrators." Participant A1's comments, echoed by other participants, illustrated the lack of collaborative opportunities for the principals and highlighted the need to break down the isolation that can come with the position.

Talk of isolation led to positive comments about the power of having time to talk in a semi-structured environment like the PN. Participant E1 stated, "It is good to come here and talk about things." Participant B1 noted, "The most valuable part (of the PN) is having time to talk about cases like this, or just having a conversation with one another." Participant D1 responded, "There is value when you get together and talk about it, say this situation happened and how would you handle it?" In the interviews, five out of five participants stated having conversations with their principal colleagues was a benefit of participating in the PN. Participants made statements like, "having a place to process together," "exploring different scenarios," "free flowing conversations," and "being able to sit down together and talk" when asked what was valuable about participating in the PN. Principals' comments illustrated that time conversing with professional peers was valuable to them.

As principals talked in the focus group, conversations veered toward how future sessions could look beyond this study. Principals emphasized the value of opportunities for dialogue with peers. Participant D1 exclaimed, "I can think of three topics off the top of my head where I just want to ask, 'What are you doing about this?'" Participants discussed how they craved time to be with just their principal colleagues. Several participants echoed this idea of time with other principals without other district or school administrators. The comments described a feeling of solidarity with those who understood the daily responsibilities of a principal. Participant B1 summarized the statements of the group saying, “Other principals know more what it’s like in my role than anybody else. When it is just us, you can let your hair down.” Statements like these showed the participants need to be in homogenous groupings of principals. Their responses demonstrated the value they found in being with peers who experienced the similar challenges as school leaders.

The principals also spoke about the value of the PN as an opportunity to learn from their peers. There was discussion around the lack of professional development for principals. Participant E1 said, “Being a principal is like learning on the run.” Participant D1 agreed commenting, “There’s no principal manual or flow chart saying if this, then this.” Emphasizing the point, D1 noted, “Once you're a principal, it is like, you know everything. You don't need any professional development and we do. We do!” The principals viewed the PN as a place to learn from one another. In the interview, Participant A1 stated, “The whole that we were able to discuss was much greater than any one of our single perspectives.” The language used in the principals’ comments around professional development and learning addressed the lack of professional development and training available to principals due to the nature of their jobs. When participants made comments about the lack of a manual or they learned on the run, they were speaking of the problems of practice they faced daily and how they felt unprepared to deal with those problems.

Part of the value of reducing isolation in the PN was establishing what participants felt was a safe environment. In the focus group, participants spoke about the impact that creating a safe environment had on having open dialogues. Several participants described the value of establishing ground rules for confidentiality, and creating a risk-free environment where it was a safe place for conversation. Some examples of these statements were, “time together that is not necessarily driven by an agenda,” “a safe environment where there is a high level of professional respect,” and “a supportive place where you feel free to speak.” These statements aligned with comments participants made during the interviews. Participant D1 expressed the value of an environment that was semi-structured saying, “It was comfortable, there was a format we had to follow for the study, but there was no concern when we talked about the case whether there was a right or wrong.” Four out of five participants remarked that the loosely structured time for discussion was a factor in the comfort level. Participant C1 acknowledged that, “for the most part, we could take the conversation where we wanted it to go. It was a casual setting.” The feedback provided by the principals in interviews and the focus groups showed that the participants saw value in a less structured environment of trust that promoted open and honest discussions.

Overall, the results of this study suggested that the use of case studies in a collegial atmosphere increased principals’ complexity of thinking in identifying problems and solutions and helped principals take multiple perspectives into account. While it appeared that principals did not necessarily apply what they learned to their local contexts after this brief intervention, they still identified many benefits to the program. Principals found value in collaborating during the PN by reducing their feelings of isolation, gaining insight from one another, and establishing a safe environment to share for a group of professionals that rarely get to meet. These positive results are encouraging for the continued use of the PN in the future.

Chapter 5

Discussion

This study explored what happened when a group of principals collaborated in the PN to analyze case studies together six times over a period of fifteen weeks. Overall, results indicated that participants' ability to identify the complexity of problems as well as consider multiple perspectives involved in the cases improved across the innovation. While the data did not demonstrate principals' application to their own workplace, results showed that the principals valued gaining insight about one another, appreciated collaborating with colleagues, and expressed a reduced feeling of isolation when participating in the PN.

Exploring Complexity and Multiple Perspectives

The first research question in this study investigated how the principals' use of case studies in the Principal Network was conducive to helping them understand the complexity of educational problems from multiple perspectives. The data gathered from the participants' analysis forms and observational notes generated during the PN discussions suggested that principals did improve in the identification of the complexity of a problem as well as the consideration of multiple perspectives as a result of the PN. Overall, the principals' written problem statements became more complex from session one to session six. In addition, observational notes demonstrated that the participants extended their thinking about the problem and explored multiple layers of the case study. The principals also increased their consideration of multiple perspectives as a result of participating in this study as illustrated by their written reflections, focus group comments, and interview responses.

It is not surprising that the participants in this study increased in their ability to see complex problems from multiple perspectives. This was a novel activity for all participants, and they were motivated and chose to actively participate. Prior to the PN, in this district, principals had limited opportunities to work together in collegial settings. The principal and assistant principal meeting agendas primarily focused on management issues or upcoming events. At the first PN session, five out of five principals stated that they hoped to learn more from one another as the main reason for participating in the study. It appears that participants did gain insight from one another (increasing the complexity of their analysis and incorporating multiple perspectives), which aligned with adult learning theory (Knowles, 1978). A major tenet of the theory is that adults learn better when they have more control in their learning. In this study, the principals chose to participate knowing that the focus of the study was collaboration with peers, therefore, they had some control over their learning which may have impacted the results of this research question. The idea of appreciating multiple perspectives was particularly interesting when considering the number of perspectives a principal is faced with on a daily basis including parents, teachers, students, and district administrators. Despite the numerous viewpoints they heard every day, the results of this study indicated that principals valued hearing their peers' viewpoints.

Additionally, it could be argued that the principals' limited experience with collegial dialogue provided a large opportunity for growth. Several participants expressed during the interviews and focus group that they were so busy at their schools and occupied with technical issues when attending district principal meetings that they had little time to dialogue with a group of their peers. B1 explained, "We don't see each other - other than P/AP (Principal/Assistant Principal) meetings and we don't get time to talk about issues that affect us every day." Principals were quick to clarify that the lack of time was a product of their intensely busy schedules and related back to the pressures placed on schools by state assessments and guidelines for teacher evaluation. Their comments were consistent with the research on the role of the principal. Principals were so busy being leaders of change that there was little time for their own professional growth. It was evident that the principals in this study felt the weight of accountability for a school letter grade. Issues surrounding school improvement took precedence in principal meetings.

Prior to this study, the participants had not explored case studies with one another. The use of case studies and their alignment to the principals' work life and the PN sessions may have been a factor in the positive results obtained. Cases were selected based on feedback from the participants prior to the first session about problems of practice occurring at their school site. Adult learning theory (Knowles, 1978) states that adults learn best in problem solving situations and when the topic is of immediate value. The last two case studies were written by the researcher based on current issues principals were experiencing. The intention was to create direct alignment between the cases and the events at the principals' schools to increase their likelihood of learning from the activity. Furthermore, research has suggested that complex cases can provide a good conduit for discussion (Fossey & Crow, 2011). The cases provided a structure for principals to talk about their problems of practice. When asked about the use of cases, several principals commented on how the cases furnished principals with a concrete example of a situation they might deal with every day. Participant D1 summarized her impressions of the case studies, saying, “The benefit of a case study was that it grounded you in very specific information.” The cases provided principals with a place to begin discussing their everyday experiences.

The novelty effect may also have impacted the results of the first research question. The novelty effect states that improvement in data could occur because the innovation is new. In this study, the participants had not analyzed case studies before. The principals’ ability to think critically about the relevance, breadth, and depth of a problem may have appeared to improve because the principals became more accustomed to reading and analyzing case studies over time.

Like the case study itself, the analysis form may have played a role in the results of research question one. The case study analysis form was aligned to the three critical thinking skills of relevance, breadth, and depth. The first question supported relevance, asking participants to identify the problem. Questions two and three, aligning to breadth and depth, solicited possible impacts and solutions for the identified problem. In each session, the principals used the form as a guide for the written responses and discussion. In the first two sessions, the participants referred back to the case study analysis document during discussion to remember the next question. According to field notes, from session three through six, the participants were able to naturally flow from one question to the next without looking back at the case study analysis form. This fluidity could have been caused by the consistent use of the same prompts in the case study analysis form. In a way, the form might have helped the principals to think more critically by moving from problem identification to complexity.

Surprising Results: Breadth

In Paul and Elder (2006) work, breadth was outlined as separate critical thinking skill; however, the participants in the PN did not distinguish between breadth and the identification of the problem during conversations. Dialogue around the identification and exploration of the complexity of the problem included comments about potential solutions. The impact and solutions were embedded in the discussion of the problem. Participants did not spend a significant amount of time discussing them separately. This phenomenon may have occurred because the PN sessions were not designed as formal critical thinking professional development opportunities. There was no direct teaching of the critical thinking skills built into the study. Participants were not provided information about each of the questions' alignment to critical thinking skills. The sessions simply provided time and space for dialogue guided by the case study analysis form. Any critical thinking occurred naturally through discussion. This type of analysis and response would also likely be expected naturally as a result of their positions as principals. Principals do not often have time to consider each aspect of a problem before considering potential solutions (Crow, 2007; Woolsey, 2010). They must simultaneously be analyzing the problem and solution to make sure that their school runs in an efficient manner. Given the design of the study to allow principals to analyze these case studies in their own way, it followed that they would use the skills and strategies they used on a daily basis in their work.

Application

Research question two explored the ways in which principals applied their understanding of the complexity of the problems from multiple perspectives in their own contexts. The data collected in the case study reflection forms and the interviews demonstrated little to no evidence of application to their context. There were a number of elements in the study design that could have impacted these results. The study design made assumptions that the principals would make connections to their workplace and apply the ideas without any direct expectations or explicit requests to do so. In other words, the study did not require that participants apply elements from the sessions to their context. There were no questions posed on the forms that emphasized application. Additionally, principals were not guided verbally or in writing to make connections from one session to the next. Each PN session was independent of the next. Finally, principals were not asked to share cases from their own world that might have been similar from the previous case. During the interviews, five out of five of the principals explained that they did not apply their understanding of the complexity of problems to their context.

While the principals did not make any direct application of the cases themselves to their workplace, there was some evidence that the participants did shift their thinking about problems of practice on their site. In interviews, three of the five principals spoke about having similar cases on their own campuses. Participant D1 said, “I've got three cases going right now.” Participant A1 stated, “If you asked, I could have written a case study. I think any one of us could have written case studies, multiple case studies for you.” The interview results provided insight into how principals thought about the problems that arose on their sites. Participant D1 commented that cases helped in thinking through each step, understanding there are multiple stories. These statements illustrate how the principals were thinking about problems of practice from a case study perspective rather than issues they needed to address at their schools.

When processing the potential causes of the participants' lack of application, the theory of Vygotsky Space could be considered. Vygotsky Space seeks to describe the process of learning in social settings. The theory lays out four phases to detail how learners move from acquiring new information to the application phases of making the learning their own. There are four quadrants in the model used in this theory. Quadrant one is the appropriation phase where the learner gains new knowledge and attempts to recreate it through dialogue or written expression. In quadrant two, the learner moves into the transformation stage, attempting to associate the new knowledge with previous knowledge and experiences. Quadrant three describes how the learner moves toward publication either orally or in writing about the new learning. This phase might occur in a public or private setting. Finally, in phase or quadrant four the learner conventionalizes the learning into their own context and adjusts the information to fit their setting. In this study, the principals' independent case study analysis responses provided insight into the appropriation phase (QI). The discourse among principals when they shared their case analyses offered understanding into the movement from the appropriation stage (QI) to the transformation stage (QII). While intended to address quadrants three and four, the study design did not directly gather data on how principals moved from quadrant two to quadrants three and four. The results of the study affirm that the quadrants of Vygotsky Space are not necessarily linear, meaning that participants may have moved from one to three but without the benefit of a participant journal or blog there was no way to chart the shifts in more private settings outside of the PN sessions.

It should be noted here that the decision to maintain the structure of the PN was a conscious choice based upon the principals' limited experience with collaborating around case studies of practice. Deliberate choices were made to not impose on principals' time outside of the PN sessions with additional journal reflections or blogs. Given the newness of the opportunity to collaborate with one another around case studies, the decision was made to not focus more heavily on application or extension in favor of offering principals more time to collaborate together. Additionally, peer collaboration around case studies was new to the participants. The results for this research question demonstrated that the PN was an initial stage for collaboration. The experience of listening to and acknowledging peers' perspectives was foundational in building toward higher levels of critical thinking and application which might have occurred if the timeline of the study was extended.

What Principals Valued about the PN

Based on the results of this study, what principals valued most about the PN was the opportunity to collaborate with their peers about problems of practice. Research question three explored what the principals valued about collaborating during the PN. The results gathered from the focus group responses and interviews strongly suggested that the principals valued several aspects of the PN, including gaining multiple perspectives through conversations, reducing isolation by learning from one another, and feeling safe to dialogue openly. Again, the principals' expectations for learning played a role in what they valued. The participants expressed a desire to learn from one another, they felt that they did learn, and said that they valued it. Here the word "learn" described the raising of awareness or gaining insight. In other words, the data indicated that the participants became more aware of their peers' viewpoints; in their words they "learned from each other."

The context of the PN was also considered critical to the overall feeling of trust within the sessions, which allowed for multiple perspectives to be expressed. The environment of the PN was deliberately established as casual and risk free. The sessions had a "soft start" time meaning that participants did not all arrive at the same time. This was a purposeful decision intended to honor the pace and time challenges of a principal's work life. According to field notes, the range of the participants' arrival time for sessions varied up to fifteen minutes. A soft start allowed for two events to occur without wasting precious principal time. One, participants received dinner each night upon arrival as an incentive for participating in the study. Two, the participants were provided time during the PN sessions to read and independently analyze the cases using the analysis form. Since the documents were housed on a Google website, principals were able to enter at their own pace, eat, read, and write before the group discussion began. This less formal pace was intentional, creating a feeling of comfort and a slower pace compared to the principals' faster paced day. In the first session, the co-facilitator established guidelines for the PN sessions by stating that conversations were confidential, information shared by participants was valued, and the atmosphere was respectful, allowing principals to hold good conversations about the problems of practice they faced as principals every day.

While no formal data was collected about the principals' affect upon entering and exiting the PN sessions, field notes indicated that participants frequently commented that they had not eaten, sat down, or had a chance to catch their breath during the day. Field notes described principals entering the PN with hunched shoulders, flustered or tired expressions, and/or red faces. As the participants ate and talked, the field notes indicated a change in the participants' affect, with shoulders in more relaxed positions, deep breaths, and lots of laughter. Although these field notes were not captured in a formal manner, they pointed toward how the participants felt during the PN. Participants' comments in the interviews aligned with these ideas. Four of the five participants spoke about the risk free and comfortable environment, mentioning that having time away from their site, eating together, being able to slow down, and process the cases all contributed to a feeling of the casual setting. These factors may have played a part in creating an environment that promoted dialogue and a deeper exploration of the problems in the cases.

The environment may have also fostered a sense of togetherness that helped to reduce the feeling of isolation the principals expressed. For all intents and purposes, the principals were together twice a month for the regularly scheduled principal meetings. However, these more formal meetings did not provide opportunities for collegial dialogue. The PN was expressly designed to capitalize on the collaboration of novice and experienced principals. The results for research question three were consistent with the literature about mentoring programs and principal support programs where principals engage in professional dialogues. In a research study on mentoring prospective principals, Brown-Ferrigno and Muth (2004) stated the participants believed that developing relationships with fellow principals changed their perspectives about the principalship. In this study, principals discussed how hearing other perspectives helped them to consider multiple angles of a problem. Both experienced and novice principals commented in their interviews that the dialogues with their peers allowed them to view situations from more than one side.

Researchers studying principal professional development have argued that dialogue with colleagues could reduce feelings of professional isolation (Duncan et al. 2011). In Woolsey's (2010) research study, one of the participants echoed the same ideas expressed by the principals in this study saying that principals are islands. A sense of isolation and potential competition with other principals creates increased pressure. The participants in this study spoke openly about feeling in competition due to the state expectations and inadequate funds to be shared among the schools. They acknowledged that the pace of their days limited their opportunities to interact with one another. Participant B1 noted, "We don't really have that much to do with each other and that is a huge drawback because you have a lot of knowledge among us." In Australia, Cranston (2008) studied head teachers, the equivalent to United States principals, as they engaged in collaboration around case studies. The study's results were similar to this study. The participants in the Australian study expressed that they valued the small group collaboration time to explore the complicated aspects of the cases. This study was based on the Wallace Foundations research on principal support programs where case studies were utilized as catalysts for conversation. The results aligned to the major findings of the Stanford Educational Leadership Institute about exemplar principal support programs that demonstrated that collegial settings provide positive settings for collaboration with principal peers.

Bryk and Schneider's (2004) work on trust in schools was echoed in the results of this study. The level of trust and feeling of a risk-free environment was among those aspects principals valued most about collaborating during the PN. Bryk and Schneider (2004) showed that students were able to take risks in classrooms where they felt safe and were more likely to appear vulnerable and ask for help. Much in the same way, the principals described a feeling of trust the during PN sessions. In the interviews and focus groups, they spoke about knowing that there was no right answer helped them to share. The field notes indicated that throughout the sessions the principals brought up problems from their own sites that aligned to the case study. They shared their fears, questions, and frustrations. For the principals in this study, a big part of trust was drawn from the homogenous grouping of the PN. In other words, the principals emphasized the importance of the group being exclusively principals, not other district administrators and not principal supervisors.

Potential Threat to Validity

Sometimes, despite the development of a safe and comfortable environment, elements of the principals' daily lives crashed into the PN sessions. The participants met in the Power Elementary School District office and were generally not disturbed by outside or district individuals, with the exception of session four. On that evening, right before the session began, the finance department delivered information regarding the school personnel's incentive pay. Since the payments were determined based upon student achievement data, there were differences among the payouts. That evening, the principals reviewed the information shared by the finance department prior to starting their work with the PN. The group became quiet. Discussion was more disjointed with significantly more pauses between comments from participants. This experience, as well as just the time needed to decompress from the workday, was also a limitation of the study. The group's behaviors and responses that evening might have demonstrated the loss of trust due to a change in the dynamics. The sense of competition for incentive pay funds coupled with the entrance of a district administrator might have adversely impacted session four's data.

Limitations

There were several limitations to this study when considering replication in other contexts. First, the principals volunteered to participate in the study. They expressed interest in learning from one another. The study might have very different results if conducted with a group of principals who were expected to participate in case study discussions rather than choosing to be involved. Second, the small sample size may limit generalizability to another setting. The sample size of five participants was very different than a large group of thirty or more principals in a larger district. Third, although the results of the study demonstrated positive results overall, the fifteen week time allotment may have interfered with more potential growth that might have occurred had the study been extended through the remainder of the school year.

Time played a significant role in the outcomes for this study. Principals attended sessions voluntarily in addition to their already busy schedules. As such, some participants arrived late to sessions or were unable to attend. All of the absences were due to school situations rather than illness or no-shows. Because time was a high priority, some tasks were purposely left out of the study. There were no extra assignments to be completed outside of the PN discussions to respect the commitment of the participants that all work would be completed during the PN sessions. For the same reason, the PN session structures were also kept consistent to create a routine and therefore a more comfortable setting. While the structure nurtured a safe environment, it also narrowed the possible results by limiting the ability to adapt the content throughout the learning sessions. In other words, keeping the process consistent restricted changes to the case study analysis form and adding any other elements to the format of each session such as asking participants to bring example cases of their own to share.

Finally, finding short, complex cases that aligned to problems of practice of the participants was challenging. Although there were good cases in the *Journal of Cases in Educational Leadership*, many of the cases were lengthy, at over five pages. The length of cases was important, longer cases cut down on the amount of time participants had for discussion. Length was not the only issue with the case studies. Often, cases were geared toward district leadership versus principals and the perspective was not aligned to school situations. In order to maintain close connections to current problems of practice for the participants, I wrote two of the cases. Writing cases was much more challenging than expected. According to Crow (2007), good cases are ambiguous and complex. Ambiguity was a challenging position to manage. Personal bias crept into the first drafts. The struggle to find good cases was echoed in both Tarnvik's (2007) and Cranston's (2008) research. In each of their studies, they described the extensive time and effort needed to write a case study that possessed a detailed context, complexity, and appropriate ambiguity.

Implications for Professional Development

The critical finding for this study was that principals need time together in collegial settings. The nature of their work, the isolation of the position, and the sheer intensity of the work begs for growth opportunities. Some might argue that only novice principals need time to dialogue with peers. However, the results of this study and the literature on support programs for principals reinforce the need for principal collaboration at all levels of experience.

The environment for these dialogues seemed to be an essential element. Future work with principals in collegial settings would require norms or guidelines for professional conversations. The principals in this study expressed appreciation for the clear expectations outlined during the first session. Further, the participants emphasized that maintaining a homogenous group of principals without the addition of other district administrators or principal supervisors contributed to the comfort level they felt. Sustaining a group exclusively consisting of principals was deemed as more comfortable to the participants in this study. Therefore, the position of the facilitator for those sessions was an important consideration for future professional development. In order to create a safe environment, the principals stated in the interviews and focus group that the facilitator should not be someone who evaluates them. They also suggested that the principals could manage their own group talk time with peers without needing an outside facilitator.

Principals also commented on the structure of the PN sessions. Most of the participants appreciated the time to read, individually process, and then share their ideas. Two of the participants, who tend to be quieter in larger settings, expressed how the time to read and think was useful for them to process prior to talking in the group setting. Future professional development might take into account the need for some participants to have time to think before speaking to the group as a whole.

Suggestions for Future Research

Suggestions for future research include making modifications to the current structure of the PN sessions to explore alternative ways for principals to experience critical problem solving and collegial learning sessions. It would be interesting to study what might happen if collaboration around critical case studies was offered as an optional adjunct to regularly scheduled meetings. Doing so would carve time out for principals to collaborate without making it mandatory for the whole group to attend. Secondarily, there might be further exploration to see what the rate of participation would be if the sessions were optional. Future studies might also modify the case study analysis form to provide a graphic organizer that abbreviates the writing principals do before moving into collaboration about the cases. Additionally, the design of this study might be adapted to offer a reflection time during the week that asks participants to identify the ways critical thinking skills were utilized in their context thus, making connections from one session to the next, and making applications to their everyday work.

Potential issues to be explored in future research might include how principals could write their own case studies and share them with peers. Studies that increase the number of opportunities for principals to interact about content rich topics and engage in critical thinking are essential. A future study could be conducted to extend the design of this study and build toward participatory action research by asking a group of principals to identify a common problem they face, collaborate to develop a solution, test the solution and evaluate its effectiveness, thus experiencing a full research cycle. Finally, another approach to this field of research might be through the lens of collaborative problem solving for principals. Miller Nelson (2009) described a process for exploring problems of practice that extends from setting ground rules and established roles through to refining the solution to achieve greater results. Both participatory action research and collaborative problem solving are next steps to this study's beginning stages of establishing a safe environment where collaboration is both appreciated and built upon.

A Model for Future Principal Collaboration

This conceptual model is a visual representation of the Principal Network that may be used for the future research. The elements included in the model are based on participant feedback. It is important to note that more research is needed to further flesh out the conceptual model and explore which elements may have a greater long-term impact in critical problem solving through collaboration. This study employed a three-point approach to enhancing collaboration with principals by presenting case studies as authentic problems of practice through rich discussions using critical problem solving.

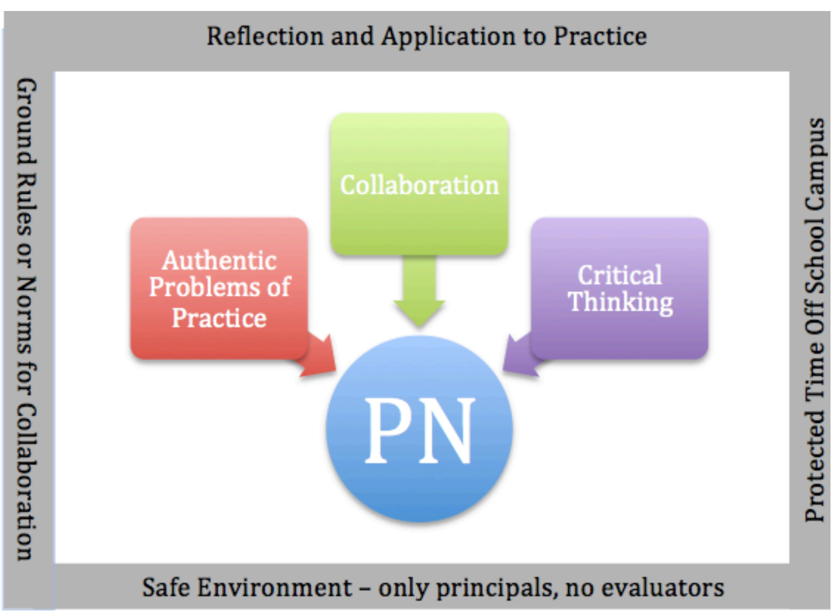

Figure 4. A conceptual model for future research based on the results of this study.

The center of the conceptual model is a circle with the letters “PN” which represents the Principal Network. The three key elements of the PN point toward the circle and include authentic problems of practice, collaboration, and critical thinking. The results of this study demonstrated that case studies were catalysts to the discussion but could be replaced by other methods for exploring problems of practice, such as short scenarios, topics of interest or current issues that principals were facing. Collaboration is a critical element to future iterations of the PN. Participants consistently reported a lack of opportunities for collaboration as well as high interest in hearing alternative perspectives. The final element of the PN is critical thinking. The PN was structured around three critical thinking skills of relevance, breadth,and depth. This concept aligned with the literature on the use of case studies, stating that exploring case studies could enhance critical thinking skills. The results of this study showed that principals increased their ability to understand the complexity of a problem (relevance and breadth) and view it from multiple perspectives (depth). While direct instruction of critical thinking skills was not used in the study, future versions of this research could include more explicit instructions

Around the outside of the PN are four boxes that frame the PN’s essential elements. These items are processes and conditions that shelter the PN and ensure that a sense of trust is developed. The ideas presented in the gray boxes emerged as themes from the participants’ comments during the study. First, the foundation for the PN is a safe environment created by a group of principals that includes no other administrators or principal evaluators. Then, the PN frame is held up by two side supports: location off the school campus during protected time and ground rules for discussion behavior. The top bar shows the addition of reflection and application back to practice for future iterations of the study. Again, all of these ideas emerged from the participant feedback during post innovation interviews and the focus group. In this study, protected time occurred outside the school day in addition to principal responsibilities. Future research studies might carve out time within the school day or during regular meeting times for collaboration around authentic problems of practice.

One element left out of the conceptual model is the offering of food at the PN. While participants expressed gratitude about having food, it appeared to be a "nice to have" item versus a critical element or part of the conceptual model's frame.

The conceptual model could support the continued work of the Wallace Foundation by emphasizing the importance of collaborative problem solving opportunities for principals with peers. The foundation's work was certainly an underpinning to this study. The information gathered from these results will hopefully inform future research for the kind of programs that the Wallace Foundation strives to develop.

Conclusion

· Ultimately, this study scratched the surface in exploring the support systems that help principals critically solve problems. The immense pressures, the feeling of isolation, and the complex nature of the position plead for solid professional growth opportunities for principals. The literature and the results of this study indicate that professional development for principals should be authentic, of immediate value, provide opportunities for problem solving, and offer collegial interactions.

If a school truly catches a cold when the principal is sick (as suggested by the opening quote of this dissertation), then emphasis must be placed on how principals are supported. Our principals know that they need and deserve the chance to grow professionally. As the nation continues to explore the challenges of the education system, the role of the principal and the support systems provided to them should be on the forefront of the discussion. The school leader has great potential impact on a school and student achievement. Time and effort must be dedicated to research the best methods for helping them develop a complex set of skills as they navigate an ever-changing and highly demanding position.

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APPENDIX A

CONSENT FORM

Investigators

Principal Investigator, Erin Rotheram-Fuller, Ph.D., Associate Professor and Co-Investigator, Wendy Kubasko, doctoral candidate, at Mary Lou Fulton's Teacher College have invited your participation in this research study.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are an in-service principal.

Why is this research being done?

The purpose of the research is to gather information about what happens when principals work collaboratively to analyze problems of practice through case studies.

How long will the research last?

We expect that principals choosing to participate in this study will be engaged in six 90-minute sessions over a 15-week period in the proposed activities, which is a total of 12 hours.

How many people will be studied?

We expect four to six people will participate in this research study**.**

What happens if I say yes, I want to be in this research?

If you choose to participate in this study, I will contact you and the other participants to set up the Principal Network sessions. We will schedule these sessions in a mutually agreed upon time that best suits the needs of all participants. Before the first session, you will receive a short questionnaire regarding current problems of practice you would like to explore during the Principal Network sessions. All case study analysis will occur during the Principal Network sessions. During the sessions, you will discuss the case studies with other participants. Your discussions will be video recorded to gather data about case study analysis. Please let me know if you do not wish to be video recorded. There is no additional work to be completed outside of the sessions. Participants will be interviewed individually for 45 min. period. You are free to decide whether you wish to participate in this study.

What happens if I say yes, but I change my mind later?

You can leave the research at any time, and it will not be held against you. Your participation or nonparticipation in this study will not have an impact on your standing with __________ District.

Is there any way being in this study could be bad for me? There are no foreseeable risks for taking part in this study.

Will being in this study help me in any way?

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include gaining strategies for addressing problems of practice, learning from principal colleagues, developing skills in analyzing case studies, and using case study analysis at your school site as a tool for professional development. This study's results may inform future professional development used by _________ District or other school districts to support in-service principals. Participants will receive professional development 12 hours toward their state certification for their participation.

What happens to the information collected for the research?

Due to the nature of group settings, complete confidentiality cannot be guaranteed. Participants will be given a random alphanumeric code that will be linked to their name on a password protected master list. Materials collected from participants will be coded and saved in de-identified form. Efforts will be made to limit the use and disclosure of your personal information, including research study records, to only people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the University board that reviews who want to make sure the researchers are doing their jobs correctly and protecting your information and rights. Video recordings will only be viewed by the members of the research team for collection of observational notes. Videos will be secured on a password-protected computer, and destroyed upon completion of the study. Any data shared regarding the results of the study will only be reported in aggregate form and will not identify you by name.

Who can I talk to?

If you have questions, concerns, or complaints, you can talk the following members of the research team:

Associate Professor, Erin Rotheram-Fuller 480-965-6156

Doctoral Candidate, Wendy Kubasko 602-790-9096

If you have questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk; you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at 480-965 6788.

Your signature documents your permission to take part in this research.

______________________________ ____________
Signature of participant Date

____
Printed name of participant

Your signature documents your permission to be video-recorded as part of this research.

____
Signature of participant

APPENDIX B

CASE STUDY ANALYSIS

Title of Case: *Date:*

After reading and highlighting the key points of the case, answer the following questions individually. You will be sharing your responses with your discussion group.

Restate the problem in one to two sentences. What evidence do you have to support this claim?

List several possible solutions for the problem and describe who will be impacted by each solution.

If this problem occurred in your context, what would you have done?

APPENDIX C

CASE STUDY REFLECTION

Title of Case: *Date:*

After discussing the case study in your small group, read and respond to the reflection question.

List several things learned from the case study and discussion. How can you apply your learnings back to your school site?

APPENDIX D

FOCUS GROUP AND INTERVIEW QUESTIONS

Focus Group Questions:

1. Why did you choose to participate in the Principal Network?
2. What did you find valuable about participating in the Principal Network?

Semi-Structured Interview Questions

1. Why did you choose to participate in the Principal Network?
2. What did you find valuable about participating in the Principal Network?
3. What was least beneficial about participating in the Principal Network?
4. We used case study analysis as the foundation for learning. Was this an effective learning tool for you, and if so, can you tell me why?
5. How did writing during the Principal Network work for you as a learner?
6. In a word, what was the best thing about the time you spent in the Principal Network?

   In a word, what was the least favorite thing (or challenging aspect) about the Principal Network?

APPENDIX E

CODE BOOK

Problem Identification		
Code	*Definition*	*Example*
Simple (SI)	Problem statement came directly from the case study text without inference	"The problem is high teacher turnover" (D1, Case #2)
Complex (CI)	Problem statement did not come directly from text and required inference	" The principal in this case is actually alienating non-tenured teachers…" (B1, Case #2)
Insightful (II)	Problem statement went well beyond the text with the participant placing him or herself in the context of the case study	"The principal formulated a plan to improve the school in isolation and in doing so created a bigger problem with lack of teacher buy-in and support" (A1, Case #3)
Application		
Code	*Definition*	*Example*
General (GA)	Reference to work place with a general plan to apply learning from the PN	"What I will take from this case, is to stick with what we are doing now, as the morale seems to be picking up." (E1, Case #2)
Specific (SA)	Explicit reference to an application of learning to a current work place situation	"Gave out thank you notes and it was interesting the staff that thanked me for the card… good information to file for later." (C1, Case #2)
No (NA)	No references to work place	D1, Case #2l
Multiple Perspectives		
Code	*Definition*	*Example*
Multiple Perspectives (MP)	Includes alternate perspectives from other Principal Network participants or other colleagues	(C1, Case #2)
No Multiple Perspectives (NMP)	Describes personal opinions and experiences only	

APPENDIX F

CASE STUDIES UTILIZED IN PN SESSIONS

Session 1

Note: For the first session, a scenario was used as a model for the PN structure rather than a case study.

In the Classroom

- Renee is a third grade student who was tested at the end of last year, identified as gifted, and placed in the only grade 3 gifted classroom.
- Renee is constantly loud and disruptive, demanding the teacher's attention and often speaking out of turn. When she is not acknowledged immediately, she will get angry and yell, often using inappropriate language.
- Other students' parents have complained to the teacher because their children come home with stories of classroom disruption and being bothered by Renee.
- Today, when the teacher told Renee she would not be able to go to recess because of her behavior, she spit at the teacher. She was sent to the principal's office because of this incident.

Teacher's View

- The teacher has been in the assistant principal's office in tears on three separate occasions because, she says, she "cannot deal with this child." The teacher has asked that Renee be removed from her class.

Family Interactions

- On two previous occasions when the principal has conferenced with Renee's parents, the parents expressed their belief that the teacher treats Renee differently and that other students get away with behaviors that Renee is being punished for

- The principal is treading lightly because he knows that Renee's father was laid off from his job six months ago and that the family is under a lot of financial stress.

Session 2

Adapted from Brown, K. M., & Schainker, S. A. (2008). Doing all the right things: Teacher retention issues. *Journal of Cases in Educational Leadership*, *11*(1), 10–17.

Alice Jo (AJ) Johnson, principal of Overcreek Middle School, put her head in her hands and leaned over her desk. Even though Dr. Mike Atkins, the assistant superintendent for personnel, had left AJ's office 2 hours earlier, she could still hear the angry words ringing in her head. He had abruptly departed after saying,

> *AJ, you've got a big problem that you absolutely must address. Over the past 3 years, about 20% of the district's non-tenured teachers were terminated, voluntarily resigned, or requested transfers to other schools. That figure has been about 30% in your school. You started this year with seven 1st-year teachers, five 2nd-year teachers, and two 3rd- year teachers from a total classroom- teaching faculty of 34. You have recommended terminating two 1st-year teachers, and three others have voluntarily resigned. In addition, three of your five 2nd-year and one of your 3rd-year teachers have requested transfers or have resigned, effective at the end of this school year. This means that you are only retaining five of your non-tenured teachers or about 35%, and you are losing about 65%. Obviously, you're doing something wrong!*
>
> *Every time we have to fill a teaching vacancy it costs us approximately $10,000 in real money and staff time. That means your turnover this year will cost this district $90,000. That is $90,000 that could be better used to purchase materials, supplies, and equipment or to support additional positions. More important, the type of staff turnover you are having here is disruptive to the school, negatively affects student achievement, and hurts staff morale. This all reflects badly on you and your leadership. Either you aren't hiring the right people or you aren't giving them the support that they need to be successful. You need to change some of the things you're doing around here and change them fast!*

AJ Johnson tried to collect her thoughts. Overcreek was located in a lower middle to middle working-class suburb. Its enrollment of 550 students consisted of 55% Caucasian, 35% African American, and 10% Hispanic students, which was somewhat different from the composition of the student body three years ago when she first arrived. At that point, the distribution of students was 65% Caucasian, 30% African American, and 5% Hispanic. She had recognized the turnover problem over the past few years and had taken what she thought were decisive steps to resolve the problem at Overcreek.

Two years ago, she had done the following:

- Added classroom teachers to the school's interviewing/hiring committee to get teachers' perspectives regarding teaching applicants. (Previously, only she and her assistant principal had interviewed candidates and had determined which applicants would be hired.)
- Instituted a new mentoring program that year in which every new teacher had been paired with an experienced, senior faculty member and the two of them were required to meet 1 hour per week to discuss issues of mutual interest.
- Personally planned and conducted a special 3-day orientation for 1st-year teachers held before the beginning of the school year in which school expectations, rules, and procedures were explained.
- Mandated that every 1st- and 2nd-year teacher on the staff participate in a monthly 2-hr workshop conducted by her assistant principal (a former high school chemistry teacher) that focused on the development of effective classroom management strategies.
- Provided 1st-year teachers two substitute coverage days each semester so they could visit teachers either in their school or at other district schools to learn how those teachers handled their classroom management problems.
- Asked all 1st- and 2nd-year teachers in the school to submit a two-page reflection each month regarding the types of problems they were encountering and how they were trying to deal with them.

This past year, the principal had continued all of the activities she had implemented the previous year plus the following:

- Required that anyone looking for a teaching position at Overcreek submit a videotaped demonstration lesson that would be reviewed by the interviewing/hiring committee.
- Assigned after-school extracurricular activities to all non-tenured teachers based on interest to provide each of them $1,000 to $2,000 extra in pay.
- Assigned the lowest achieving students to all the 1st-year teachers to relieve them of the stress of having to deal with the most demanding and critical parents.
- Had every non-tenured teacher observed by an administrator four times each semester with written feedback and a face-to-face conference after each observation focusing on the improvement of instructional effectiveness.
- Re-allocated budget funds to give each 1st- and 2nd-year teacher an additional $250 over and above the amount provided to other teachers for purchasing supplemental classroom materials.
- Freed all 1st-year teachers from any lunchroom supervision responsibilities during the year to give them a duty-free lunch. This was something that no other teachers had.

Recently, AJ, as well as the other principals, received the raw data from a district-sponsored teachers' feedback survey, with the response data disaggregated by school. Given all of the demands on her time, AJ had not been able to carefully analyze the information from the Overcreek staff, but she had been somewhat mystified when she had learned that only about 60% of her faculty or 20 individuals had bothered to complete the survey. She also had been surprised when she had noticed the following results on some selected items:

- The administrators of my school care about me as a person.

  Strongly agree = 5; *agree* = 6; *disagree* = 7; *strongly disagree* = 2

- My administrators are professionally supportive of my efforts to improve my instructional effectiveness.

  Strongly agree = 3; *agree* = 4; *disagree* = 10; *strongly disagree* = 3

- I feel that I am given opportunities to be meaningfully involved in important decisions that impact my job.

  Strongly agree = 2; *agree* = 7; *disagree* = 8; *strongly disagree* = 3

- The entire faculty is committed and collaboratively works to attain common goals.

  Strongly agree = 1; *agree* = 3; *disagree* = 8; *strongly disagree* = 8

AJ felt that she had done all of the right things. For her newer teachers, she had done the following:

1. Made the interviewing process more rigorous and meaningfully involved teachers in the hiring of new teachers to get the best candidates.
2. Provided rookie teachers with experienced mentors.
3. Formalized new teachers' orientation to ease their transitions to the school.
4. Provided ongoing staff development.
5. Facilitated beginning teachers, visiting with and learning from other teachers.
6. Encouraged new teachers to reflect on and learn from their own experiences.

7. Ensured that new teachers received extra pay to supplement their salaries.
8. Reduced new teachers’ stress by minimizing their need to interact with the most demanding and critical parents.
9. Provided new teachers with ongoing feedback regarding ways to improve their instructional effectiveness.
10. Given new teachers extra money they could use to strengthen their teaching.
11. Ensured that new teachers had a duty-free lunch to reduce their stress levels.

AJ realized she had not been able to reduce her teacher turnover problem among her newest staff members. In fact, the teacher turnover problem was getting worse. Most of the teachers she was losing this year were far from being perfect teachers, but a couple were above average and another three had great potential. AJ didn’t know what more she could do. She had done all of the right things!

Session 3

Adapted from Mangin, M. M. (2010). Building relationships step by step: One teacher leader's journey. *Journal of Cases in Educational Leadership*, *13*(2), 13–20. http://dx.doi.org/10.1177/1555458910372658

Garden Side was one of two elementary schools in the Lakewood School District. The district had always been demographically stable, with few people coming or going. In fact, many of the teachers had been students in the district and the community slogan claimed, "Everyone's a friend in Lakewood."

The teachers in the district were considered an important part of the community and were regarded with respect and deference. In turn, the teachers felt valued. For instance, during teacher appreciation week, parents organized a banquet to celebrate the teachers' contributions to the community, praising them for their hard work and commitment to children. Morale in the schools was high, and teachers were known to develop deep friendships with one another. It was not unusual for teachers to socialize together on the weekends, after school, or during the summer. A key component of these relationships was the teachers' adherence to an informal policy not to "talk shop." In the words of one teacher, "I don't want to spend time with my friends griping and complaining about work."

Recently, Lakewood's convivial spirit had been tested by new policies being communicated from the State Department of Education. The state had implemented new curriculum standards and an achievement test to be administered at most grade levels. In the first 2 years of testing, Lakewood students had performed below standard on every measure at all the tested grade levels. Administrators and teachers felt pressure to increase test scores, but no one seemed to have a solution, and there were no easy scapegoats. Not surprisingly, both the elementary principals decided it would be a good time to retire.

The local paper ran a feature article on the new principal at Garden Side Elementary, who had been hired from outside the district. It stated, “Ms. Foster has a proven track record for boosting test scores in underachieving schools. Lakewood is proud to consider her a new member of our community.” In support of the new principal, the school board had agreed to Ms. Foster’s request for funds to hire a full-time Math Specialist. Ms. Foster envisioned the Math Specialist’s role as a resource for teachers—someone who could assist in the classroom, model lessons, and promote more innovative teaching practices.

As she conducted her search for a Math Specialist, Principal Foster weighed the pros and cons of hiring someone from within the district versus an outsider. She thought an insider might have important insights into long-standing practices and relationships, but she worried that the school needed a fresh perspective to make lasting changes. In the end, she decided to cast a wide net and hire the most qualified math expert she could find.

Two Steps Forward

The first time Hannah met Principal Foster, the two women talked for almost 3 hours about how to revolutionize math education. Hannah explained:

Math needs a make-over. Teachers are quick to say they can’t teach math. You would never hear a teacher say, ‘I’m just not good at reading’ but they wouldn’t hesitate to make the same remark about math. If I can get teachers excited about math, students will pick up on that excitement. Principal Foster agreed; “I’d like to create a positive math culture at Garden Side, one where teachers and students are learning about math together."

The two women agreed that the first step to building a positive math culture would be to make math fun. They decided that during the fall semester, Hannah would organize schoolwide math activities to alter teachers' perception that math was repetitive and dull. Instead, Hannah would use activities such as Bingo, a raffle, and a small school store to convey the usefulness and excitement of math. Moreover, Hannah and Principal Foster believed that the nonthreatening activities would make the teachers more open to working with Hannah, and that over the course of the school year, she would be able to gradually shift her work to focus more directly on improving teachers' math instruction.

The day before students returned to school, Principal Foster introduced Hannah to the faculty. She explained, "Hannah has been hired to provide supplemental math services. Having her in the building is a great opportunity for us to really jumpstart our math pro-gram and I hope everyone will take full advantage of this great resource we have." Standing at the front of the room, Hannah could feel the teachers' eyes on her. Principal Foster had asked her to briefly describe some of the activities she would do this year. Mindful of her mission—to gain teachers' trust and make math fun—Hannah brought out a large jar full of brightly colored M&M candies. As the teachers passed the jar around the room, Hannah distributed a handout that described ways to incorporate estimation into classroom instruction. She explained to the teachers:

There are many games and activities that reinforce important math concepts. For example, having students guess how many candies are in a jar is a great way to apply the concept of estimation. Now, on one of the sticky notes at your table I would like each of you to please write your name and your best estimation of how many M&M candies are in the jar. Hannah paused, watching as the teachers peered into the jar and jotted down their numbers.

“Whomever has the closest estimation will get to use the M&M’s in her own classroom. Either I can come in and teach a math lesson that incorporates candy as a math manipulative, or I can provide some handouts with suggested activities.”

Next, Hannah handed out a four-page newsletter titled September Math News. She had chosen an animal theme for the newsletter, decorating the first page with the school mascot, the cheetah, and some animal math facts: Did you know the cheetah can sprint about 70 miles per hour (110 kph) for short distances? Did you know the blue whale is the largest animal on Earth? It can grow to be 100 feet (30 m) long, and its weight is close to half a million pounds (200,000 kg).

The newsletter also included directions for a sorting game that involved grouping animals by size, the names of several math websites, hints for storing math manipulatives, and a “coupon” for a free ruler that teachers could redeem if they visited Hannah’s trailer behind the school. Hannah had also included an introductory letter describing her love of cats, gardening, and home decorating. As Hannah passed out the newsletter, she told the teachers that she would leave a sign-up sheet in the teachers’ lounge where they could specify a week when they would like Hannah to create a math-focused bulletin board for their classroom. Hannah was not sure whether the teachers even heard this last comment because many of them were already reading the newsletter.

The fall semester was a whirlwind of math activity as Hannah worked to establish math-related routines. Each week, she set up a table in the library with a “math challenge" for teachers to work on with their students. At the end of the week, the winning class, drawn at random from the correct entries submitted to the math challenge, received an extra 15 min of recess. Each month, Hannah organized a family math night for parents and caregivers to learn about supplemental math activities to do at home. Local businesses donated items to be raffled, and 80-100 people came to each family math night. At the same time, Hannah made her way around the school making math-related bulletin boards for each of the teachers.

At the end of each month, Hannah and Principal Foster met to discuss how Hannah's work was proceeding. By October, there were already noticeable changes in the math culture at Garden Side. "Everywhere I look I see something related to math," said Principal Foster. "The 'school day count' bulletin board in the lobby looks great and I think the 'first 100 days' celebration will be a big success." Hannah agreed that math was becoming more visible. "I've been getting some positive feedback from teachers and students. One second grader told me her class is making a temperature chart using the weather report I announce each morning on the PA system." Hannah added that most teachers had asked her for materials, advice, and supplemental activities. By the end of November, Hannah had been in every teacher's classroom to model a math lesson or to help set up math centers.

By December, Principal Foster felt certain that the teachers were ready for the next step—reflective conversations about their teaching practices and how to improve math instruction. Principal Foster knew from her previous work in low-achieving schools that having fun with math would not be enough to improve student learning and achievement. She was pleased that the teachers had accepted Hannah, but now, she expected the work to focus more intentionally on student learning in mathematics. Beginning in January, she planned to have the teachers meet weekly in grade-level teams during their common planning period. Hannah would facilitate the meetings, keeping them math-focused and encouraging teachers to think critically about their math instruction and how it might be improved.

One Step Back

Hannah planned carefully for the first week of grade-level meetings. She created a long list of possible discussion topics. In her mind, some of the most important topics were articulation across grade levels, benchmarks and assessments, the use of rubrics, math content knowledge, constructivist strategies, the use of math centers, and math journal writing. Of course, Hannah was open to other ideas, but she wanted to be prepared with suggestions. “After all,” she thought, “I’m supposed to be a resource. This way I’ll be ready for anything.”

What Hannah did not anticipate was that no one would show up. At first, she assumed that it was a misunderstanding. When none of the fourth-grade teachers arrived for their Tuesday morning meeting, Hannah presumed that they had forgotten. She quickly created reminders for the teachers in the other grade levels and placed them in their mailboxes. Still, only two kindergarten teachers and one first-grade teacher came out to the trailer that week. Hannah reasoned that maybe it was too difficult for the teachers to get bundled up to head outdoors in the middle of their work day, so she scheduled the next week’s meetings for the media center in the main school building and sent another round of reminders. Even then, the results were only marginally better, with some teachers sending her notes to say they would not make it and others asking to reschedule for another date or time. After the third week, Hannah felt certain that it was not the cold, the room, or the time that was keeping teachers away.

Hannah's suspicions were confirmed when she overheard Connie Collins and Fran Turner, two fourth-grade teachers, talking in the teacher's lounge. "Did you see that we're going to examine students' math work in today's grade level meeting?" asked Fran. "I really don't see the point," replied Connie, "we already know which students are struggling." "Besides," added Fran, "some kids just aren't going to get it, no matter how many times we drill the math facts." Connie chuckled, "too bad I won't be able to make it to the meeting; I already have something scheduled with me, myself, and I." "I do feel bad for Hannah though" said Fran, "I think she's genuinely a nice person." "I don't care how nice she is," retorted Connie. "It's the tests that need fixing, not my teaching."

For the first time in her short career as the Math Specialist, Hannah felt uncertain of what to do. She had been confident that her fun approach to math would help her earn teachers' trust. She had been especially careful not to talk with the principal about any individual teachers, so that she could maintain her status as a peer and not be seen as a spy or an evaluator, but after overhearing Fran and Connie's conversation, Hannah realized that the teachers did not understand their role in improving student achievement; they did not see that they needed to change their teaching to meet students' needs. The teachers' close relationships with one another had always been based on avoiding difficult conversations about their work. They certainly did not want to call attention to their shortcomings. Hannah worried that if she told the principal about the teachers' resistance to the grade-level meetings she would be breaking their trust. At the same time, she had to do something—her job was to help the teachers improve their math instruction. Hannah wished there were another Math Specialist in the district whom she could ask for advice.

Without consulting the principal, Hannah decided to take a new approach. She would let the grade-level meetings slide and focus on one-on-one modeling. Although she would not be able to reach as many teachers as she would in a group setting, Hannah reasoned that this was the only way to continue building relationships with the teachers: slow and steady, one by one. Hannah was pretty sure that the kindergarten and first-grade teachers would be open to work with her. They were not under the same testing pressures as the other teachers, and because no one expected the lower grades to focus on math, the teachers were willing to admit that they had a lot to learn. Starting with the five kindergarten and four first-grade teachers, Hannah arranged to visit each teacher's classroom once a week during the month of February. Armed with a new plan and warmed by the positive response from the early elementary teachers, Hannah felt more confident.

Hannah anticipated her February meeting with Principal Foster with both excitement and trepidation. She dreaded having to tell the principal that the grade-level meetings had never taken off. At the same time, Hannah felt the progress she had made with the lower-elementary teachers would counteract the setback. Sitting in Principal Foster's office, Hannah reviewed her calendar, proudly noting that she had conducted 30 model lessons in February, but before Hannah had a chance to tell Principal Foster about the model lessons, the principal delivered some shocking news.

Hannah, the upper elementary teachers have asked me to reconsider the need for a Math Specialist. They have leveraged some serious criticism against you. I know that some of their resistance is fear and nothing against you personally but I have to say I'm concerned about the direction your work is taking. I guess I wonder how we can build a positive math culture if you aren't working to build relationships with all the teachers.

Stunned, Hannah wondered how things could have gone so wrong so quickly. Was it realistic for Principal Foster to expect Hannah to have established collaborative relationships with all the teachers only midway through the school year? Could it be that the emphasis on "fun math" had given teachers the wrong expectation for the kind of work Hannah would be doing? What more could have been done to set the conditions necessary for critical collegiality at Garden Side Elementary? As Hannah's head spun with questions, she hoped that it was not too late to get back on course.

Session 4

Adapted from Marshall, J., Hamrick, F., & Goodman, P. (2009). Principal considerations: Super parent or Super pain? *Journal of Cases in Educational Leadership, 12*(4), 37-47. http://dx.doi.org/10.1177/1555458909357886

Janice Brookfield has just begun her first academic year as principal at Kelley High School (KHS). After serving as a high school principal for 4 years in a smaller and less affluent district, Janice, who is White, accepted the offer to become principal at KHS. Janice had worked many hours during the summer to prepare for the upcoming school year, including meeting with her predecessor, who was moving to the district's central office.

KHS is the sole high school in Kelley, a U.S. town of 45,000+ and bedroom community to a neighboring urban center. The town of Kelley is 85% White, and most families are upper-middle class in terms of income. KHS's enrollment of 1,000 students is representative of the town, with 15% students of color and 6% student eligibility for free or reduced lunch. The special education enrollment at KHS is 9%.[1] KHS has a history of high student performance on national accountability measures, and parents have high expectations for their students' college readiness.

Before the start of classes, Janice had participated in rounds of Individualized Education Plan (IEP) meetings with the special education coordinator, special education teachers, general education teachers, and parents of ninth grade students who qualified for special education services. Janice had been particularly impressed with Ms. Barbara Brighton, the mother of an entering ninth grader. A highly educated African American woman, Ms. Brighton discussed her son Calvin's hearing and auditory processing impairments—descriptions that were consistent with documentation the special education coordinator had received about Calvin from his middle school. Ms. Brighton expressed her satisfaction with the conditions of Calvin's existing IEP—which included a full-time aide—noting that Calvin had earned "A" grades in all of his eighth grade courses. Before the meeting, the special education coordinator had alerted Janice about Calvin's most recent set of standardized test scores, which placed his proficiencies at the 15th percentile for reading and 10th percentile for math, which seemed inconsistent with his record of "A" grades. When Janice noted her concern about Calvin's proficiency as measured by the standardized tests, Ms. Brighton shook her head and said, "Calvin just doesn't do well on tests. That's one reason that the IEP provisions have been so good for him. They allow him to do his best work in school." She continued with a smile,

> *You can expect to see me at school maybe more often than you see your other parents. It's a financial hardship for our family that I don't work, but my husband and I made the decision long ago for Calvin to be enrolled in this school district and for me to be as involved as possible in his education, whatever the sacrifices. With all that teachers have to do nowadays, we've found that it can be easy for Calvin's needs to be overlooked. We won't let that happen to our son. He's done so well thus far.*

At the end of the third day of classes, Ms. Rachel Porter, the 9th- and 10th-grade life sciences teacher and science department chair, stopped by to see Janice. When they had first met, Janice had been impressed with Rachel's professionalism and enthusiasm, particularly since she was then entering her 31st year of teaching. Janice knew that Rachel had been actively involved with the teachers' association as an elected representative, and during Janice's visits with other KHS teachers, she'd learned that the more inexperienced staff members valued and respected Rachel as a supportive resource for them. This afternoon, however, Rachel said,

> *Janice, do you have a few minutes? We need to talk about Calvin's mother and about Calvin's IEP. Ms. Brighton has come with Calvin and his aide to my first*

period science class every morning so far this week. That would be okay, but she makes comments to herself that appear to distract students who are sitting near her. Also, I gave a short class quiz yesterday on the assigned chapter, and Ms. Brighton insisted that Calvin be allowed to take the quiz home. His IEP stipulates that he be allowed to finish work at home that he can't finish in class, but here is his quiz (she hands Janice the sheet of paper). This is not Calvin's handwriting. When I asked her about the quiz, Ms. Brighton said she simply wrote down at home the answers that Calvin provided. That would be fine with me, but Calvin's responses to some of my questions today in class indicate clearly to me that he does not know this material at all. Calvin barely sits still, and his aide continues to have a difficult time keeping his attention focused. Earlier in my career, I was a special education teacher for four years, and I strongly suspect that his disability is not limited to hearing and auditory processing. For Calvin's benefit and for the teachers who are trying to help him, I think Calvin should be re-examined for possibly other conditions or learning-related difficulties, and his IEP should be reviewed and updated accordingly.

Janice thanked Rachel and told Rachel that she would stop by her first period class the next morning to observe Calvin. Arriving the next day shortly after class began, Janice checked to see if the provisions of Calvin's IEP were followed, starting with Calvin's seat, which was front and center in the classroom. Janice saw that Rachel provided visual as well as auditory cues for Calvin and noted that the aide was recording what the class was doing as well as Calvin's homework assignments. Janice observed that Rachel maintained extra eye contact with Calvin, tapped his desk regularly, and otherwise tried to direct Calvin's attention and keep him with the class. Janice also observed Calvin's time on task during class, his interactions with peers and instructor, and his ability to manage materials (e.g., textbook, homework sheets). Janice concluded that Calvin was pleasant but ignored most instructions when Rachel was not physically by his desk. Twice she saw Calvin put his head on his desk, appearing to doze. Janice also saw that Ms. Brighton took extensive notes, made soft but audible comments to herself, and shuffled folders loudly. When class ended, Janice asked Ms. Brighton to come into the hallway as Calvin and his aide left for Calvin's next class.

> *Ms. Brighton, I am concerned with Calvin's behaviors in class this morning. I saw that his original IEP was based on a very early diagnosis, but conditions can change as children age. For his educational benefit, it may be a good idea for Calvin's educational needs to be re-assessed.*

As Janice spoke, Ms. Brighton began to frown and shake her head. She replied,

> *Calvin has hearing problems. That's all. He is doing fine as long as teachers will work with him and make sure that he gets the accommodations to help him succeed. How can you argue with all A's in 8th grade? And hearing problems are one thing, but I've done far too much reading and learning about special education since Calvin started school. I know that Calvin could be just another Black kid labeled as special ed and then ignored. I won't be party to that happening to him. It would ruin his future. Now, please excuse me. I need to get to his next class before the bell.*

Over the next two school days, Janice asked Calvin's other teachers about their impressions of Calvin's progress. They each expressed concern with Calvin's in-class behaviors but noted that his grades on his classwork, homework, and quizzes so far had been satisfactory.

At the end of the following school day, Ms. Brighton knocked on Janice's open office door. Janice greeted her, and Ms. Brighton introduced the person accompanying her as Thomas Hopkins. After shaking hands with Mr. Hopkins, Janice asked them both to sit down and asked, "What can I do for you?" Ms. Brighton nodded at Mr. Hopkins, who said,

> *You know that Ms. Brighton is trying to do all she can to ensure her son's success, at great personal sacrifice to her family. She has asked for the advice and support of the community group that I head. We're called 'Powerful Dreams,' and we work to help young Black men achieve their highest potential. You may not be familiar with our group yet because you're new to Kelley. Ms. Brighton is concerned that her wishes and judgment as a parent be respected in decisions related to Calvin's education, and I just wanted to let you know that I fully support her in this. I've asked Ms. Brighton to feel free to call us whenever she feels that she needs extra support.*

Ms. Brighton and Mr. Hopkins rose to leave and Mr. Hopkins shook Janice's hand and said, "I'm sure you seek to do what's best for your students and their parents. I know that we can reach appropriate resolutions on matters related to Calvin's education."

Session 5

Case Study written by Wendy Kubasko

Maria, the principal of Coyote Canyon Elementary School, rushed back to her office in time for a post-observation conference with a teacher. It had proven to be another day of hustle and bustle around her busy campus. It was her fourth year as the principal of Coyote Canyon, which is located in a suburban area with approximately 900 students. In all, 80% of the student body is Hispanic, 10% White, 4% African American, 3% Asian/Pacific Islander, and 3% other racial or ethnic groups. Eighty percent of the students at Coyote are eligible for free or reduced meals. A total of 40 teachers work at Coyote Canyon Elementary School, with the faculty comprising 75% White, 15% Hispanic, 5% African American and 5% other racial or ethnic groups.

When Maria became principal, Coyote Canyon was labeled as a lower performing school by the state. During her time in the school, the school rose in ranking and last year received a label just under excelling. While Maria is pleased with the growth, she envisions Coyote Canyon as an excelling school and has built her communication with the staff around this goal.

In the last four years, Maria slowly adjusted teaching practices at Coyote Canyon such that; teachers now regularly turn in lesson plans, expect walk through observations and meet together to collaboratively plan instruction and analyze data. The majority of the staff responded well to the changes Maria implemented. Their former principal was inconsistent in his practice and interactions with the staff and students. Many teachers grew tired of not knowing what to expect from him or his policies. Maria, in comparison, clearly described her expectations, was consistent in her practice, and treated staff with respect. Some staff members, who felt put upon by Maria's changes, chose to leave Coyote Canyon. Therefore, approximately 25% of Maria's teachers have been teaching for three years or less with the other 75% of the teachers with ten or more years of experience.

Maria was pleased with the results of her leadership in the last four years, but driven to continue improvement. On her last review of the district benchmark data, she noted that while many students in the average growth group has moved up to the above average group, the lowest performing group showed little to no improvement. She was especially concerned about the middle school students. Sixth, seventh and eighth graders in the lowest performing category had not improved in the last two benchmark assessments. She noted that many of those students in the lowest performing category were also frequently in the principal's office due to office referrals. She decided she would monitor this group more closely.

As Maria navigated back to her office, she caught a bit of conversation from a group of sixth grade teachers on their break. They were speaking in frustrated tones about a student. Maria overheard the words "not going to change" and "given his home life". Once in her office, she reflected back this conversation and two other interactions during classroom visits earlier in the day.

The first interaction occurred while Maria observed Mr. Ludusco's seventh grade math class. She noted the short, clipped tone he used with Jacob, a student who seemed to be struggling. At one point, Mr. Ludusco told the boy, "Get it together, Jacob. I am tired of picking up the slack for you!"

Jacob was a regular visitor to Maria's office. His teachers sent him to the principal's office for various reasons including improper dress, disrespect or interruption of class time. Maria knew that Jacob's mother, not always present in her son's life, was currently in jail and Jacob was living with his aunt. He was often tardy or missed school. Maria noted that Jacob put his head down after Mr. Ludusco's comment and remained silent for the rest of the class period.

In her second observation, Maria visited Mrs. Rodger's science lab. She arrived just as the students were getting seated in class. This time she noted that another of her frequent visitors was in the class. Nadir stood next to his lab table balancing his notebook on his finger while other students looked on laughing. Nadir, a quick, funny boy, regularly received discipline referrals for classroom disruption, fighting and disrespect. As the bell rang, Mrs. Rodger's sharply called out Nadir's name telling him, "Young man, we will begin now, if you are finished with your circus act."

Maria pondered all three conversations and wondered about staff attitudes toward challenging students. She decided to quietly observe interactions among students and staff over the next two weeks.

An Air of Defeat

Maria's observations over the two weeks served to strengthen her concerns. She witnessed multiple examples of teachers demonstrating little patience with students. Even more disconcerting, she noted that when the sixth, seventh and eighth grade teams reviewed their data, they were unable to generate possible ways to improve the lowest performing group's scores. When she pressed the teams, they responded with statements such as, “I’ve tried everything I can think of”, “He’s never in class,” and “What else can I do?”

One teacher addressed Maria’s concern directly saying,

> *Look, I know that we want these kids to get better scores. But how can I make that happen when they don’t care about school? I mean we’ve got some kids in eighth grade who just don’t want to be here. How do you cope with that?*

During observations in the classrooms, Maria paid particular attention to the students in the lowest performing category. She noted that the students demonstrated a self-defeatist attitude, either choosing to become aggressive to avoid working in class or remaining unresponsive.

When she asked staff about who had connected personally with the individual students in this group, some teachers shrugged or stated they were not sure.

In her classroom visits, Maria noticed that the middle school teachers worked diligently to provide engaging instruction with opportunities for student choice. Lessons were instructionally sound but often students from the frequent flyer/lowest performing group were not expected to complete the work required. If the students from this group stayed silent and complied to the teachers, they were able to avoid classwork.

As Maria reflected on all she had learned through observations and data analysis, Maria began to develop a plan to address her concerns with the staff.

Session 6

Case study written by Wendy Kubasko

Jeff Gains, principal of Tumbleweed Elementary School, turned the corner to his office to find Deavon, a seventh grader, sitting in a chair just outside his door. He stopped and took a deep breath, attempting to contain his frustration before greeting the student.

Deavon started at Tumbleweed Elementary School in April of his sixth grade year. His previous school records showed inconsistent attendance. From Kindergarten to fifth grade, Deavon changed schools five times. In between the changes of schools, there were records of attendance concerns and truancy. When Deavon enrolled at Tumbleweed, his grandmother explained that Deavon used to live with his mother, but she was no longer able to care for him. Deavon's grandmother now had legal guardianship and intended to establish him in a school where he could improve his academic performance.

Deavon struggled his way through the end of sixth grade. He was reading at a third grade level and able to solve basic addition and subtraction problems. He was prone to angry outbursts in class especially when asked to complete work independently. The sixth grade team members asked for a Child Study Team meeting in early May to discuss their concerns. While Deavon's history of inconsistent attendance was considered, the team strongly agreed that Deavon's skill set warranted gathering more information. The sixth grade team worked with the psychologist and Jeff to set up a meeting with Deavon's grandmother where the team agreed to evaluate Deavon to determine potential eligibility for special education. In the final weeks of school, the multidisciplinary evaluation team met, reviewed Deavon's previous data and recent testing results and determined his primary eligibility as specific learning disability. The behavioral screeners completed by Deavon's grandmother and the sixth grade team indicated a high level of impulsivity. The school year ended with the development of Deavon's individualized education plan for implementation in the new school year.

During the first weeks of the new school year, the seventh grade team met with Deavon's grandmother, the school psychologist and Jeff to review Deavon's IEP and discuss classroom supports. The seventh grade teachers viewed their roles differently from the sixth grade team. Like the eighth grade teachers, the seventh grade teachers held a long-standing belief that their job was to prepare students for high school. The seventh grade teachers were each content experts and very passionate about their chosen area. They felt constrained by the limited time to cover the content to be mastered by high school. Therefore, they protected their class time and were not apt to collaborate on assignments.

Seventh and eighth grade students switched at every class period; were expected to maintain orderly notebooks for each course and given few reminders about upcoming assignments. Make-up assignments were not provided. Grades were provided to students and parents weekly. Missing assignments were counted as zeros. When the seventh grade team met with the rest of the IEP team to review Deavon's IEP, each teacher posed question about his/her own content. Mrs. Rhodes, the Language Arts teacher, was particularly concerned about the amount of time that Deavon might miss her instruction due to his scheduled time with the resource teacher. The team debated for more than an hour about how to best organize Deavon's schedule to provide time for resource instruction in Language Arts and Mathematics.

As a seventh grader, Deavon was a regular visitor in the Jeff's office. In the four months since the school year began, he was suspended three times, twice for fighting and once for disrespect. In between the suspensions, Deavon was sent to the office or ended up in the alternative placement room about three times a week. In class, his teachers reported that he demonstrated an apathetic attitude by putting his hood up, giving minimal responses to questions, and not completing his classwork. When he was pressed to be more productive, he would have an outburst. Last week, he called his math teacher a derogatory name when she continued to ask him to answer a question. His behavior appeared to be consistent in all of his classes, but the frequency and level of the outbursts were strongest in his Language Arts class. Mrs. Rhodes repeatedly called and emailed Jeff about Deavon's behavior. She expressed grave concerns over Deavon's attitude and disrespect to her in class. Deavon often missed her Language Arts class due to outbursts. Not surprisingly, he had extremely low grades for Language Arts.

Deavon's resource teacher reported slow but steady progress in his reading performance. Jeff observed Deavon during resource and noticed gains in his fluency and accuracy when he read. Deavon still struggled with motivation because reading was slow and challenging for him, but his attendance in resource was more consistent than in other classes. He scoffed at the work but when his resource teacher enforced her expectations, he followed through.

Deavon's relationships with his peers were inconsistent. There were some days when he seemed to connect with a specific group of seventh grade boys and other days when he argued with them. He often got into fights at recess and spent his lunch and recess in the alternative placement room. Mr. Camble, an instructional assistant who was a former army officer, managed the alternative placement room. Mr. Camble was tough, but he earned grudging respect from most of the students. While Deavon would not say the words out loud, Jeff suspected that he is actually relieved to spend time in the alternative placement room with Mr. Camble. Jeff has observed Deavon when he is in the alternative placement room. Deavon asks Mr. Camble questions about his army experience and all of the places he has traveled.

As Jeff looked at Deavon sitting in the chair next to his office, he thought of the progress Deavon had made. He was beginning to connect with adults, his reading was improving and his attendance record was consistent. Yet, neither Deavon nor the seventh grade team seemed to be aware of the improvement. Several questions ran through Jeff's mind in that moment:

- How would he motivate Deavon to continue to try in school?
- How would he maintain the high expectations for behavior and academics at Tumbleweed while still addressing the needs of this student?
- What could be done to better support the seventh grade team in developing a plan for Deavon?

APPENDIX G

INSTITUTIONAL REVIEW BOARD APPROVAL

EXEMPTION GRANTED

Erin Rotheram-Fuller
Division of Educational Leadership and Innovation - Tempe
-
Erin.Rotheram-Fuller@asu.edu

Dear Erin Rotheram-Fuller:

On 8/14/2014 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	The Principal Network: Developing Critical Problem Solving Skills through Case Studies
Investigator:	Erin Rotheram-Fuller
IRB ID:	STUDY00001420
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• WK Consent Form w changes , Category: Consent Form; • WK Protocol w changes, Category: IRB Protocol; • WK Measures w change, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • WK script w changes, Category: Recruitment Materials;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 8/14/2014.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,
IRB Administrator

cc: Wendy Kubasko
Wendy Kubasko

APPENDIX H

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Title: Instructional Coaching: Building Theory About the Role and Organizational Support for Professional Learning

Author: Chrysan Gallucci, Michelle DeVoogt Van Lare, Irene H. Yoon, Beth Boatright

Publication: AMERICAN EDUCATIONAL RESEARCH JOURNAL

Publisher: SAGE Publications

Date: 12/01/2010

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> Gallucci, C., Van Lare, M. D., Yoon, I. H., & Boatright, B. (2010). Instructional Coaching: Building Theory About the Role and Organizational Support for Professional Learning. *American Educational Research Journal*, *47*(4), 919–963. doi:10.3102/0002831210371497

You can contact me via email at wenkubasko@me.com or my address, 11971 W Berkeley Rd Avondale AZ 85392.

Respectfully,

Wendy Kubasko
Doctoral Candidate