How Principal Leadership Influences Teacher Motivation to Seek Out Professional Development Opportunities on New Technology

Submitted by

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March 12, 2015

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Abstract

This qualitative case study explored how principal leadership influenced teacher motivation to seek out professional development opportunities on new technology. Two groups of participants included: 36 middle school teachers, and three principals in an urban area in Arizona. Information was collected for this study in two ways, teacher focus groups and principal interviews. Four research questions were developed: 1) What principal leadership factors motivated teachers to seek out professional development opportunities on the use of new technologies, 2) How did principal leadership influence collaboration among teachers resulting in a "learning" culture to share professional development "best" practices, 3) How did proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom, and 4) How did principal leadership style determine what the nature of the process is that will be followed to determine how teacher requirements for professional development on new technology are fully met? This qualitative approach was derived from the theoretical foundation based on the work of Guskey, with more emphasis on principals and their ability to influence and motivate their teachers. The results and implications of this study supported (a) principals as the instructional leaders of their schools, (b) a need for better quality professional development workshops, and (c) motivation of teachers to seek out and share the content of professional development workshops with other teachers However, these results are not generalizable due to the sample size and use of only one school district in urban Arizona.

Keywords: Principal leadership, professional development, collaboration, technology, and teacher motivation.

Dedication

This research paper is dedicated to my family. First, I want to thank Jesus Christ. Without you in my life, nothing is possible. Thank you for choosing me to take this doctoral journey. Not only have I learned to serve others, but also you have shown me the true meaning of sacrifice. Second, I want to thank my beautiful wife Christy. You have seen me through my peaks, my valleys, and everywhere in between. You have given me words of encouragement when I needed them the most and kept me focused when I needed it. Without you, I could never have done this. You are not only my best friend, but you are the love of my life. I look forward to spending the rest of my life with you. Next, I want to thank my children Carley, Harrison, Madison, and Avery. No father can ask for better kids than all of you. I know I have not been able to be there for many of your events, but PLEASE know you are in my heart and soul. I hope that my educational journey will encourage you to seek a higher level of education. Lastly, I want to thank my Mom and Dad. You brought me life and showed me how to live it to the fullest. Both of you have taught me that hard work and dedication pays off. I would not have accomplished this journey if you did not teach me those skills. Having both of you in my life is indescribable. Thank you for your help and encouragement along the way. I love all of you!

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Chapter 1: Introduction to the Study

Introduction

In Arizona and across the country, the education industry must adapt to changes, which have changed the culture, climate, and focus of student achievement. Administrators and teachers have more responsibility placed on them to increase test scores and to create a better, more positive learning environments. Therefore, federal, state, and local agencies are analyzing the educational system and looking for alternative methods and strategies for educating the youth of America. Organizations such as Apple Computers, Inc., and the Bill and Melinda Gates Foundation, among others, have made financial investments throughout the country. These investments are not only to the level of technology in schools, but also to the study of the impact of technology on the instruction in the classrooms and on student learning (Jacobs, 2012).

Standards and regulations have called for accountability for student learning (North Central Regional Education Laboratory, 2005). Technology tools that assisted in accomplishing these goals and meet the rigors of accountability. So, how do teachers know and understand the best practices for integrating technology in the classroom? The answer relied in part on the effectiveness of the professional development in preparing and supporting teachers in the use of technology in the classroom. The International Society for Technology in Education [ISTE] (1998; 2001), and Shanahan (2005), suggested and encouraged the use of technology as a tool that enabled students to access more information and allowed students to build content knowledge in a richer context.

Generally, teachers see the benefits of technology integration in their classrooms, but have concerns about the implementation (Bickmore, 2011). The answers to these

concerns may come through sustained and job-embedded professional development. A key component to any initiative is professional development. Studies showed the importance of an effective professional development program (Alexander & Henderson-Rosser, 2010; Amori, Gregory, Joseph, Robert, & Lun, 2011; Beavers, 2009; Blankstein, Houston, & Cole, 2010; Bowgren, & Sever, 2010; Cain & Milovic, 2010).

In order for school and district leadership to provide effective professional development in the area of technology, they need to consider and plan for several factors. The integration of technology in the classroom was equally important as shared visions and goals (Alsafran & Brown, 2012). Professional development allows teachers access to technology (Harris, 2010; Hixon & Buckenmeyer, 2009; Hora & Holden, 2013). The call for increased integration of technology in classrooms has brought attention to methods for evaluating both technology use and professional development (Alsafran & Brown, 2012). The methods have involved analysis of student achievement, student engagement, teacher comfort level with technology, teacher efficacy, teaching strategies, and effective pedagogies (Harris, 2010; Hixon & Buckenmeyer, 2009; Hora & Holden, 2013). Each study has points to the complexity of factors involved and the interrelationship among these factors; however, in most cases, the professional development component seemed to play an influential role (Harris, 2010; Hixon & Buckenmeyer, 2009; Hora & Holden, 2013).

Principals motivate and influence teachers, support staff, and students to work to their fullest capabilities. Strong leaders motivate people to learn and to solve problems together by asking tough questions and by naming the big problems, while refusing to offer easy answers (Al-Safran, Brown & Wiseman, 2013). The rapid introduction of new

technologies has caused difficulty for some teachers to stay abreast of all of the changes. Since an emphasis has been placed on teacher accountability, Lyon (2010) described that teachers were expected to meet the new technology demands to ensure student achievement.

The problem that exists is that it is not known how and to what extent principal leadership style influences teacher motivation for professional development on new technology. In order to discover the connection between principal leadership, teacher motivation, and professional development on the use of new technology in the classroom, this study focused on how principal leadership motivated and influenced teachers to seek out professional development opportunities about the integration of new classroom technologies in middle school settings. The setting for this study was three middle schools located in one school district in urban Arizona.

This chapter provides a foundation for this study. The following section describes the background of the problem of principal leadership, teacher motivation, and professional development pertaining to the use of new technology in the classroom. In addition, the groundwork for the purpose of this study was presented along with the research questions that will guide this study. Furthermore, this chapter will explain why this study is significant to the education industry. In addition, the rationale for using a qualitative methodology will be explained.

Background of the Study

As technology improves and is made available, through many new instruments for teachers to use to improve classroom instruction, problems still exist. One of the issues of importance pertains to whether the professional development opportunities available to

teachers provided the resources necessary to improve student achievement. Administrative leadership plays an important role in answering this question. In the past on district in-service days, teachers in these three middle schools attended the same professional development workshops, regardless of their content area. This was a district initiative, rather than principal initiative. Since district office leaders do not know what each middle school's individual needs were, it was the role of each principal to motivate and meet the demands of each school's teacher to integrate new technologies into their classroom instruction.

The rapid advancement of computer technology gained much attention and popularity in recent years in the educational arena, as computers have increasingly become an integral part of life in our society (Oda, 2011). In this so-called "information age," technology had found its way into education with the hope that it would improve learning outcomes at schools. The increased presence of technology in educational institutions was well illustrated by a recent report from the U.S. Department of Education, which indicated that 97% of schoolteachers (K-12) had access to a computer every day in the classroom (Hixon & Buckenmeyer, 2009). Dominant themes from the literature review related to technology and professional development revolved around teacher collaboration (Bowgren, & Sever, 2010; Norton, 1994), collaboration modeling (Cain & Milovic, 2010; Norton, 1994; Evans, 2011), and administrative support as teachers implement technology in the classroom (Evans, 2011).

In the target district, all teachers must attend district appointed workshops. Content area teachers were not able to focus on improving their area of teaching. In the past, district leaders offered more workshops for teachers to attend to help improve

content area instruction. Unfortunately, more opportunities do not always mean better quality professional development workshops. Professional development was a way for many school districts to continue to educate their teachers (Shough, 2010). As the instructional leader, one focus of the principal should be that he or she is aware of effective instructional practices and make professional development opportunities on new technology available for teachers. Motivating the teachers to seek out or attend professional development workshops on technology however is not an easy task.

In light of the increases in technology and the need for education technology integration, the International Society for Technology in Education (ISTE) released the National Educational Technology Standards (NETS) aimed at providing students, teachers, and administrators with technology objectives (ISTE, 1998, 2000, 2001). Each set of NETS has six additional standards, including concepts and processes related to the objective, followed by performance indicators and key tasks. Key tasks demonstrated technology integration. Following a survey from members of the State Education Technology Directors Association, 35 of the 39 states that responded were using the NETS for Teachers (ISTE, 2011). These standards were to ensure administrators, teachers, and students were learning and exhibiting technology skills in schools across the United States. This is important because if the target district does not support this standard, then the implementation and use of technology could be unsuccessful.

There was little, if any, introduction of new technology in these three middle schools. The individuals who were most affected by this problem were school principals, classroom teachers, and the students of the school. If teachers do not have the opportunity to learn about new technologies to improve classroom instruction, there will be little to

no improvement in classroom instruction. Shough (2010) added that the introduction of new practices, applications, and technologies was to improve the level of learning in the classroom.

Principals should know and understand curriculum, assessment, instruction, legal issues, resource allocation, personnel issues, and research in their field of practice, and professional development (Erlandson, 1994; Hoy & Miskel, 1994). With the increased societal and workplace needs for more knowledgeable, skilled, responsible citizens, the pressure on a school leader increased dramatically (Marzano, Waters, McNulty, 2005). In recent years, school principals in this Arizona school district had additional pressures and restrictions placed on themselves. Due to budget cuts and reduced funding from the state, the ability of principals to fund and implement technology initiatives was reduced. Principals had to cut staff and programs to meet budget requirements. This made it harder for teachers to help improve on student achievement. When new teachers are hired, their professional development needs are different from teachers who have been teaching for several years. This was an opportunity for the principals to develop a scaled plan for professional development based on the number of years in the teaching industry.

Another change occurred in the laws passed by Congress and which forced districts and administration to follow certain guidelines to accomplish certain goals, was the No Child Left Behind Act (NCLB). The goal of NCLB is to have all students meet grade level proficiency standards by the year 2014 (McHenry, 2009). Shough (2010) advised that principals offer professional development and offer opportunities for teachers to collaborate to improve classroom instruction. Teachers influence students to

achieve. Teachers also set higher standards for themselves because they spend the most time with students in an educational environment.

Problem Statement

It was not known how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate technology into classroom instruction. Aelterman (2009) noted that principal leadership contributed to a positive school culture that encouraged student achievement. However, the general problem of professional development still existed: How does the leadership style of the principal motivate teachers to engage in professional development how to integrate technologies into their classroom instruction? This study was needed to develop an understanding on how a principal's leadership style influences and motivates teachers to seek new learning opportunities on integration of new technologies into classroom instruction. Additionally, it was also important to discover if a scaled model of professional development was needed for teachers with different levels of teaching experience.

Accountability standards within NCLB required that the overall percentage of tested students and each subgroup of tested students reach progressively higher Adequate Yearly Progress (AYP) targets each school year (USDOE, 2009). This accountability is not the sole responsibility of the classroom teachers. School administrators and district leadership are also accountable for the quality of classroom instruction offered.

The importance of this research lies in its potential to provide a lens through which the influence of principal leadership style motivated teachers to seek out professional development on new technologies. Professional development opportunities

on how to integrate technology is a tool for teachers to get up-to-date resources to improve classroom instruction. Studying principal leadership style provided additional information about the influences or motivation the principal had on teachers. School leadership and a culture of trust were widely recognized as important in promoting in-school processes and conditions that supported and increased student learning and achievement (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Louis, Dretzke, & Wahlstrom, 2010; Robinson, Lloyd, & Rowe, 2009; Supovitz, & Klein, 2009).

In order to be an instructional leader of a developmentally appropriate school setting, one of the expectations of a middle school principal was to be an expert in early adolescent education and in addition, to have a clear picture of what an effective middle school looks like (Lucas, 2003). This way teachers with different years of experience and different content areas can get the newest professional development of technologies needed to ensure student achievement. Teachers with less classroom teaching experience tend to have more experience with the use of technology (Elmore, 2000). Many existing educators do not have the same knowledge and ease of using technology that their students possess (Beavers, 2009). The problem was the lack of effective professional development for training the middle school teachers to integrate technology in the curriculum. Researchers have found successful technology integration does not occur without meaningful professional development (Houston, & Cole, 2010; Bowgren, & Sever, 2010; Cain & Milovic, 2010). The results from this study may guide principals in other middle schools and districts in understanding the power they have to educate their teachers via professional development. This study showed a direct correlation between the level of professional development opportunities on current technologies and teacher

motivation. Managerial tasks having little or no direct bearing on the improvement of instruction consume a typical principal's workday, thus a single administrator cannot fill all of the leadership roles in a school without substantial participation by other educators (Elmore, 2000). Strong administrative leadership was a key component of schools with high student achievement (Cotton, 2003).

Professional development is crucial in the teaching of 21st century learners. The North Central Regional Educational Laboratory (NCREL) reported that in order for educators to learn new technology skills and strategies, they must engage in professional learning that targeted educational technology and 21st century learners (NCREL, 2000). The time for progressing educational professional development was and continued to be a major challenge for many school districts and administrators across the country. Teachers were teaching most of the instructional day, therefore the time for ongoing professional development was limited. Technology is expensive, and when combined with education and the need for professional development; it is common for teachers to participate in very few hours of training related to technology integration within a calendar year (NCREL, 2000). Therefore, there is much room for improvement in understanding, designing and implementing teacher education in technology integration.

Purpose of the Study

The purpose of this qualitative case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Looking at the leadership style of the principals, and the opportunities provided for technology utilization to their teachers, assisted and

furthered the understanding of the skills needed to build and maintain a learning environment that promoted student achievement. The principal is the key to moving teachers to a higher performance level. The use of technology in the classroom, and evaluating teaching practices is an attempt to achieve a high quality teaching in order to improve student learning (Beavers, 2009).

The population for this study was focused on three middle schools from one school district in urban Arizona. Two groups of participants were the focus of this study. The two groups of participants were 36 middle school teachers (12 from each of schools), and three principals (one from each middle school). The total number of middle schools in the population of the selected urban Arizona school district was six. The sample size for this study was three of the six middle schools. This study utilized three of the middle schools. The fourth and fifth middle schools were not eligible since the principals were in their first year, and the sixth middle school was not eligible since it was the place of employment of the researcher. The researcher wanted to gain knowledge of the questions in this research in order to provide research-based data so these districts and others like it could improve student achievement (Phillips, 2013).

The demographics and population of the school district in the selected urban Arizona covered an area of approximately four million square miles. The school district employed nearly 1670 teachers. The make-up of the school district is 19 elementary schools, 6 middle schools, and 5 high schools. The student to teacher ratio in the middle schools are as follows: 6^{th} – 8^{th} grade is 34:1. Individual class sizes varied, but this was the average ratio.

Research Questions

This qualitative case study focused on four research questions. The formulation of the research questions was to support and better clarify the connection between principal leadership style and how principals influence teachers to seek out professional development opportunities. There were four research questions:

R1: What principal leadership factors influenced teachers to seek out professional development opportunities on the use of new technologies that facilitated learning in the classroom?

R2: How did principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices on classroom uses of technology?

R3: How did proactive teacher use of new technology influence the modification of teacher instructional approaches in the classroom?

R4: How did principal leadership style determine the process to be followed to meet the professional development requirements on the use of technology in the classroom?

The research questions were formulated to explore how the leadership style of the principal influenced and motivated teachers to seek out professional development opportunities on new technology. Discovering the answers to these questions assisted, or was designed to assist, district leaders and school principals in facilitating better quality professional development on new technology. Research question one was aimed to discover how their principal is motivating them to seek out professional development opportunities on new technologies. This was important to understand for two reasons: 1)

Are principals influencing or motivating their teachers, and 2) Are teachers influenced and motivated by their principal. The second research question was geared toward discovering how the principal is promoting collaboration amongst teachers to share uses of classroom technology. This is important to understand because teacher collaboration could be an avenue or a way for teachers to incorporate technology in the classroom. If a teacher has attended a professional development workshop, how was the information being shared with the other teachers? Research question three was important so it can be understood how teachers modify their classroom instruction to incorporate technology. The last research question was to understand how principals are following up with teachers on meeting the requirements of the use of technology in the classroom. This was important to understand because it will reveal how teachers are incorporating the use of technology in the classroom.

Advancing Scientific Knowledge

The overall theoretical framework for this study was based on, and was intended to demonstrate Guskey's model of professional development and teacher change in three middle schools in urban Arizona. Despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research consistently point out the ineffectiveness of most programs (Wong, 2010; Walker, Recker, Ye, Robertshaw, Sellers, & Leary, 2012; Spanneut, Tobin, & Ayers, 2012). A variety of factors contributes to this ineffectiveness. It has been suggested, that the majority of programs fail because they do not take into account two crucial factors: (1) what motivates teachers to engage in professional development, and (2) the process by which change in teachers typically occurs (Guskey, 1986). What

attracts teachers to professional development, therefore, is their belief that it will expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students (Guskey, 1986). A second important factor that many professional development programs fail to consider is the process of teacher change. Professional development activities frequently are designed to initiate change in teachers' attitudes, beliefs, and perceptions (Guskey, 1986). Professional development leaders, for example, often attempt to change teachers' beliefs about certain aspects of teaching or the desirability of a particular curriculum or instructional innovation.

The gap expected to be filled after this study was the effect principals have on motivating teachers to seek out professional development opportunities on new technology. Are principals motivating the teachers at their school to incorporating technology in the classroom? Incorporating technology in the classroom and engaging students in a higher level of understand benefited teachers and students (Gorder, 2009). There is a growing interest for technology in the schools, the interest extended to the purpose of technology education integration. Research indicated that although technology has been at the disposal of teachers, they are not using it to its full potential (Gorder, 2009).

The researcher was looking to understand how teachers were using technology in the classroom and how the introduction of new technology took place, as well as understanding what motivates and influences teachers. This could lead to future studies to discover which technology was better to use in the classroom for engaging students at a higher level of understanding. This could also lead to more focused and better quality professional development workshops provided to teachers. The goal of effective

professional development was to improve performance by students, staff, and the organization (Spanneut, Tobin, & Ayers, 2012).

According to Guskey, (1986, 2002) when teachers engage in professional development, they confirm or challenge their beliefs. Guskey adds that staff development programs were a systematic attempt to bring about change – change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the learning outcomes of students (Guskey, 1986). While most professional development designs aimed to establish teacher buy- in from the start, Guskey (1986, 2002) theorized that teachers' believed only changes when they see the professional development program was effective. Guskey's (1986) model of the process of teacher change began by engaging teachers in professional learning. The next step involved teachers modifying their teaching practices to reflect what they have learned from the professional development series. The project utilized the theoretical framework of a Professional Learning Community (PLC) to provide an environment of ongoing support and training in education technology integration (Wong, 2010). The final step occurred after teaching practices changed and allowed teachers to see changes in student achievement. Because student outcomes drove teacher beliefs, when student achievement increased, teachers believed the success of the professional learning innovation was the cause of the increased and continued to integrate that learning in instructional practices (Guskey, 1986).

Significance of the Study

The importance of this study was to give further insight as to how the connection between principal leadership styles, as perceived by teachers and the professional

development opportunities on new technology provided to them. New technologies were available to teachers. However, how were principals motivating and providing these opportunities to the classroom teachers? Giving teachers more tools to use in the classroom and engage students in the learning process was crucial to the improvement of students. This study examined the perceptions of both teachers and principals about their motivation on technology professional development courses. This research added to the body of knowledge on integration of technology in K-8 classrooms. Federal policymakers, such as The State Educational Technology Directors Association (SETDA), United States Department of Education (USDE), and the Federal Communications Commission (FCC) used study results to support state policymakers in their efforts to improve technology integration and prioritize funding.

Examining the relationship between principals' leadership styles and teachers' perceptions of principals' leadership practice explained the importance of integrating teacher perceptions in leadership development and reform. The lack of practical training and relevancy in principal preparation programs has influenced principals' abilities to transform leadership theoretical knowledge into practice (Gordon & Patterson, 2006). Many of the current leadership preparation programs focused on the top-bottom direction of the interaction between principals and teachers (Fleck, 2009). The notion that leaders were the key factor in effective leadership had been the focus of the literature and leadership development programs (Gordon & Patterson, 2006). The literature and leadership preparation programs focused on leaders as a key factor in leadership effectiveness and ignored teacher perspectives of effective leadership practice.

For a collaborative work environment, principals needed to integrate effective leadership practice and benefit from skills and experiences of all staff within their schools. In other words, leadership approaches that incorporate teacher leadership perceptions enabled school principals to evaluate current leadership practices and integrate new methodologies in school leadership (Johnson, 2009). Most of the knowledge found in the literature reflected the impact of teachers' perceptions of leadership behavior of principals from a Western perspective (Brown & Conrad, 2009). The study discussed the same topic from a cross-national perspective and examined teachers' perceptions of leadership conduct in a developing country.

Professional development coordinators used the results from this study to assist them in creating quality technology professional development for teachers. This research helped principals and curriculum specialists in developing technology professional development designed with the specific needs of their teachers in mind. Ham (2010) explained professional development opportunities were a direct resource for principals to provide up-to-date workshops teaching new technologies to specific content area teachers. Moreover, students were more accountable for not only their behavior in the classroom, but also higher levels of achievement.

The significance of this research study was to provide teachers a better understanding about self-reflecting on their own teaching practice, which was consistent with their pedagogical beliefs, and an understanding that technology cannot stand-alone. Administrators and teachers alike might be provided with viable research to support a more focused approach to professional development (Ogunduyile, 2013). This increased understanding and support led to the increased use of technology in classrooms.

Ultimately, school districts were responsible for the principals they hired for their schools (Dillon, McCaughtry, & Hummel, 2010). The information provided in this study led to a more scrupulous hiring process for school districts. Maintaining the same skills in a changed industry will leave a district stagnant. Change was always going to occur, but how to deal with change was up to strong leadership with solid skills.

Rationale for Methodology

The purpose of this qualitative case study was to examine the effects principal leadership styles had on teachers' professional development opportunities on new technologies. For school leaders, identifying effective and ineffective teachers was an essential leadership skill that allowed principals to design leadership strategies based on skill inventory of teachers (Jacob & Lefgren, 2010). Understanding the way teachers perceive principals' leadership practices was crucial for examining the effect of certain leadership qualities on teacher motivation.

Examining leadership effectiveness from the perspective of teachers was important to leadership preparation programs because teachers' feedback helped identify essential skills for effective leadership (Lovegrove, 2009). Not only was the content of teachers' feedback made a difference, the concept of considering teachers' perceptions of effective leadership practice affected the design and strategy of leadership preparation programs (Daresh, 2009). The study contributed to an unconventional approach of leadership that focused on educational leadership instead of educational administration. Many leadership preparation programs have introduced new types of principal preparation programs that reshape principals' preparation processes "through new collaborative opportunities" (Orr, 2006, p. 494).

The sample for this study consisted of three middle schools selected from a population six middle schools in one school district in urban Arizona. The three middle schools had a principal that has been at the school at least one year. This study utilized three middle schools, the fourth and fifth middle schools were not eligible since the principals were in their first year, and the sixth middle school was not eligible since it was the place of employment of the researcher. The sample size of one principal and twelve teachers from each middle school was suitable for data collection methods. The typical number of participants in focus groups was 5 - 12 people (Spanneut, Tobin, & Ayers, 2012).

Nontraditional schools did not participate in the research sample to ensure a comparative sample. The schools that were not included have a characterization as private, detention, charter, and kindergarten through eighth grade schools. In addition, assistant principals and administrators other than principals did not participate because the purpose of the study was to explore the direct relationship between principals' leadership behaviors and teacher motivation on new technology.

Nature of the Research Design for the Study

The nature of this qualitative case study was to examine and attempt to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. This study explored two areas: 1) principal leadership style and 2) teacher motivation on professional development of new technology. By analyzing the responses of participants to interview and focus group questions, the study revealed the relationship between effective leadership styles and teacher motivation on new technology. In addition, using a

qualitative approach for the study was adequate to analyze themes of the phenomenon through exploring the thoughts, ideas, and opinions of principals and teachers. Different situations and cultures affected human behavior that made a qualitative approach more suitable to explore teachers' perceptions in different settings using multiple sources of information (Burke, Feinberg, & Ostroff, 2011).

The reason for selecting the qualitative method was to explore general themes by examining individuals' experiences (Burke, et al., 2011). This allowed the researcher to analyze the thoughts, ideas, and opinions of teachers and principals about school leadership style and motivation. Current literature has discussed many factors that influence teacher performance, including leadership practice (Brown & Conrad, 2009). There was a lack of information about the affects principal leadership style had on teacher motivation on new technology. According to Yin (2014), qualitative research was an adequate research method when there was little information about a phenomenon. An important limitation of qualitative research was that the method depends on participants' individual descriptions of a phenomenon, and findings may not be applicable for others out of the research study setting (Yin, 2014).

As the purpose of the study was to examine and attempt to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. A quantitative study was not an appropriate method in collecting and analyzing data. Using an instrumental approach did not fit the purpose of the study and the structure of participants for two reasons; 1) obtaining accurate statistical data for a quantitative study was difficult when collecting thought, ideas, and opinions of both teachers and principals, and 2) there was a

lack of educational research in the selected geographic location. As a result, finding a tested instrument for the study was very difficult and the timeframe of this study did not allow developing and testing a new instrument.

The nature of the study, including the research method, sample type and size, data collection method, and data analysis method match the purpose. The design and process of data collection helped present outcomes that listed general themes. The findings of the study displayed general themes and suggestions in chapter four. The findings of the study provided a clear explanation of the phenomenon and determined the extent to which implementing effective leadership styles motivated teachers.

Definition of Terms

***Best practices*.** The term "Best Practice" has been used to describe, "What works" in a particular situation or environment. When data supports the success of a practice, it is referred to as a research-based practice or scientifically based practice (State Education Resource Center, 2012).

***Collaboration*.** Joint intellectual effort by students, or students and teachers together (Kowta & Chitale, 2012).

***Distributive leadership*.** Provides decision-making authority throughout the school for everyone—including teachers, students, parents and community members—to participate in key decisions (Harris, 2012).

***Leadership*.** The educational leader is able to promote a shared community vision, mobilize people, lead curriculum and pedagogical practice, administrate effectively and reflect critically on all practice (Craggs et al., 2009).

***Leadership behavior*.** The behavior used by an individual to influence individuals or a group of individuals to achieve a common goal (Leithwood, Patten, & Jantzi, 2010).

***Leadership style*.** Leadership style is the manner and approach of providing direction, motivating people, and achieving objectives (Alsafran & Brown, 2012).

***Middle school*.** A school that educates 6th grade to 8th grade students (SUSD, 2014).

***Professional development/staff development*.** A lifelong collaborative learning process that nourishes the growth of individuals, teams, and schools through a daily job-embedded, learner-centered, focused approach (Shumack & Forde, 2011).

***School culture*.** The guiding beliefs, assumptions, and expectations evident in the way a school operates (Fullan & Hargreaves, 1996).

***Servant leadership*.** A leader in which shares power, putting the needs of others first and helps people develop and perform as highly as possible (Greenleaf Center for Servant Leadership, 2011).

***Transformational leadership*.** Leadership style focused on effecting revolutionary change in organizations through a commitment to the organization's vision (McDonough, 2011).

There are. three topics that have been identified; 1) the principal leadership, 2) the motivation teachers felt from their principal, and 3) the professional development opportunities provided to teachers.

Assumptions, Limitations, Delimitations

The overall assumption of the study was that principal leadership style did have a direct effect on student achievement. Other assumptions of the study were assertions to

be true, but not actually verified (Airasian, Gay, & Mills, 2009). The first assumption was that the teachers at the urban middle schools in Arizona had a good understanding of the principal leadership styles at their schools. Each teacher has worked and interacted with the current principal to assess and describe what the principal's leadership style was. This researcher expected that principals who have remained at the same school for an extended period had more of an ability to establish stronger professional development program or opportunities (Stolp & Smith, 2009).

The second assumption was the teachers know specific types of professional development needed to improve classroom instruction. Having worked with the principal, teachers described their perception of the principal's motivation to provide professional development opportunities. Teachers were also able to evaluate whether or not the learning environment of the school created by the principal encouraged student achievement. From this, future leaders can develop a better understanding of the leadership competencies that influence a school's culture and foster higher student achievement (Mees, 2009).

The final assumption was that the information provided by the teachers that they were honest. Teachers had two perceptions about their school environment; 1) Some teachers may have had a personal liking for the principal, but do not agree with the leadership behaviors the principal displayed, and 2) Some teachers many not have had a personal liking toward the principal, but agreed with the leadership behaviors the principal displayed. There was the assumption that teachers were honest and spoke their true thoughts about the leadership at their schools. This study was about leadership style and not personal liking of the principal.

The data was limited to administrators and teachers in three middle schools. This study attempted to determine whether a relationship existed between principal style, teacher motivation, and professional development in middle schools. However, this connection cannot lead to a determination that certain leadership styles cause increased teacher collaboration or changes in student achievement (McHenry, 2009). The study design assumed that the teachers not only possessed the knowledge to respond accurately to the questionnaire, but that they also answer truthfully.

The second limitation was the study took place at three middle schools in Arizona, which limited the generalizability of the findings. Arizona was one of fifty states; in addition, there were many middle schools in the State of Arizona. The middle schools that participated in this study may be different from other urban middle schools in Arizona. The location and school levels may be different in other locations of Arizona.

A further limitation was that only an examination of the connection amongst principal leadership styles, teacher motivation, and professional development occurred. Principal style did have an effect on many things at a school, but for this study, the scope was toward principal leadership styles, teacher motivation, and professional development. In addition, the limits of the findings for this study were by the validity and reliability of the instrument and by the accuracy and perception of the participants. There was the assumption that teachers responded honestly and interpret the instrument as intended.

Considering these assumptions and limitations, it was still reasonable to generalize the study findings to all of the middle schools in one school district in urban Arizona, based on the size of the sample of participants in focus groups and principal interviews. While small differences may exist considering the different areas of focus, the

focus group and principal interviews identified some unique characteristics about principal leadership, teacher motivation, and professional development opportunities. The ultimate goal of this research was to show the effectiveness of principal leadership, teacher motivation, and professional development. That goal will be applicable to any middle school in one school district in urban Arizona.

Organization of the Remainder of the Study

This chapter has set the foundation for the importance of this study. History has showed that as technology improves and made available, many new instruments for teachers to use to improve classroom instruction, problems still exist. One of the issues of importance pertains to whether the professional development opportunities available to teachers provided the resources necessary to improve student achievement. It was not known how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate technology into classroom instruction. Aelterman (2009) noted that principal leadership contributed to a positive school culture that encouraged student achievement. However, the general problem of professional development still existed: How does the leadership style of the principal motivate teachers to engage in professional development how to integrate technologies into their classroom instruction?

Chapter 1 described the purpose of this qualitative case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Based on this, the formulation of the four research questions was to support and better clarify the

connection between principal leadership style, and how principals influences teachers to seek out professional development opportunities. The nature of this qualitative case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona.

Chapter 2 contains a literature review of three styles of leadership, professional development, teacher motivation, teacher collaboration, and technology support. Chapter 3 contains a comprehensive picture of the methodology used to conduct this research, which Chapter 4 will describe in detail with an analysis of data and description of the research design. Chapter 5 will conclude this study with an explanation of findings and recommendations related to principal leadership, teacher motivation, and professional development. The Prospectus for this research was approved on September 14, 2013. After approval of the Proposal and IRB approval, focus groups and principal interviews were conducted. After the data collection took place, chapters four and five commenced. The goal is to complete the dissertation process by spring, 2015.

Chapter 2: Literature Review

Introduction to the Chapter and Background to the Problem

The purpose of this qualitative research study was to explain how principal leadership styles influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in urban Arizona. According to Makewa, Role, and Nyamboga (2011) stated the display of school leadership practice was through two essential styles: structure and consideration. Both leadership styles constituted effective strategies to motivate and enhance the performance of teachers (Makewa et al., 2011). Some research showed that principal leadership styles differed among schools (Spanneut, 2010). However, research was limited describing the influence of the leadership style of the school principal on teacher motivation to seek out professional development opportunities on new technology (Spanneut, Tobin, & Ayers, 2012). Loke (2001) recognized that in order to use new technologies well, teachers needed more than just access to the resources; they needed opportunities to discover, operate, and experiment with ways to apply them in their classrooms. Loke's research has proven that leaders' behaviors have a direct impact on employees' job satisfaction and motivation, and that supports the concept of behavior theory in leadership practice.

The information used in the literature review in chapter 2 was gathered from peer reviewed articles, journals, and books that match the targeted search criteria of principal leadership style, professional development, teacher motivation, and technology. The searches for the peer reviewed articles, journals, and books were online searches at the Grand Canyon University library and the Arizona State University library, respectfully.

Since these are the focus of this study, it is important that the information used in this review match the criteria for the search. No specific dates were used to find information for this study, but the information was evaluated by matching all three of the searched information listed above. After information was found and reviewed, to continue collecting review information, other work by the same author was reviewed for thoroughness. When an article was used, the references from that article were looked at for additional articles that could be used in this study.

Chapter 2 is formatted to explain previous information on the history of leadership. Three different leadership styles that will be targeted are: 1) distributive leadership, transformational leadership, and servant leadership. In addition, the areas of professional development, technology, teacher collaboration, teacher motivation, and technology support will also be reviewed to better understand how this study will further the current knowledge of these areas. This study will expand the current literature and further assist in understanding the importance of the role the principal has at their school.

In the education industry, the stakeholders look to the leaders of the district to guide them in a direction that will lead to a higher level of education for children (Loke, 2001). Professional development and/or staff development and technology are avenues principals can use to focus on what teachers need to increase the level of instruction in the classroom (Amori, Gregory, Joseph, Robert, & Lun, 2011). In addition, professional development on technology and the motivation for teacher to seek these workshops out is another avenue that the principal must utilize (Blankstein, Cole, & Houston, 2010). Never before has a school principal's job been more important and never before has the job been difficult (Murphy, Hallinger & Heck, 2013). This is not limited to a particular grade

level, but can also focus on content area teacher. Content area teachers such as mathematics, language arts, science, and social studies teachers can get specialized training that relates directly to their content area. Leaders facilitate the engagement of other constituents, and by providing opportunities for professional learning and collaborative engagement (Dibbon & Sheppard, 2011). The quality of schooling for students has not been adequate to prepare students for the future, including working in a global economy (Murphy, Hallinger & Heck, 2013).

Early research done at Stanford University focused on how computers could improve the efficiency and quality of teaching (Atkinson & Suppes, 1968; Suppes & Morningstar, 1969). A decade later, Seymour Papert (1980) introduced the radical notion that computers could change the way children thought and learned. The suggestion that learners construct knowledge in a student-centered environment using computers marked a revolutionary shift in the expectations for computers in education. At that time, computers did not just transmit the prescribed curriculum in schools; computers could become a tool for educational reform meant to change how educators taught (Gaytan & McEwen, 2010).

Schools today face significantly different issues than they did 20 or 30 years ago (Waddock, 1995). Waddock (1995) commented that during the past 40 years, multiple expectations have surfaced for technology in education. The use of technology is a tool to improve existing teaching methods and to promote the radical transformation of schools (Waddock, 1995). More recently, the use of technology is a factor to the economic survival of countries around the world (Bowgren & Sever, 2010). Bowgren and Sever (2010) as added that as expectations for technology increase, the pressure intensifies for

schools to bring technology into education. As computers made their way out of the laboratory and into K-12 schools, researchers studied the effects of technology on classrooms (Bellanca & Brandt, 2010; Amori at el., 2011). Researchers focused on how technology could change teaching and learning by using levels of teacher and student use of technology as indicators of change (Amori at el., 2011). This study attempts to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them.

To meet the demands of a technology rich society, improve student learning, and educational reform to prepare students for the workforce, the budgeting of funds and resources toward the school technological infrastructures must occur. The investment in computers explains the increase in Internet access in schools. Results from the United States Department of Education national surveys in public schools found instructional computers with access to the Internet rising from 8% in 1995 to 93% by 2003. The ratio of student to computer decreased from 12.1 in 1998 to 3.8 by 2005 (NCES, 2006). The NCES also reported that the use of broadband Internet connection in public schools increased from 80% in 2000 to 97% by 2005 with wireless connections expanding from 32% in 2003 to 45% by 2005.

Today's school leaders are between current expectations of improving test results and expectations of the past. The principal's job was to see the school ran smoothly, the principal was responsive to the needs of students/ parents, and other stakeholders (Fullan, 2009). A perceived role of the principal is to create and maintain a positive learning environment and define the cultures value to the school (Thompson, 2009). The leadership of the principal develops a mission and goals for the school year. However, the

creation of the school's mission and goals will establish the level of expectation for student achievement. The level of expectation of student achievement needs to lead the principal of the school to discover opportunities for professional development to demonstrate the new technologies that are available.

The new resources that are available can help teachers utilize the Smart Board to present lesson to classes. New programs may assist teachers and help student learning improve. While most schools are now experimenting with interactive whiteboards, texting homework reminders or streaming missed lessons to absent students, technology and education still tend to dance on opposite sides of the hall (Choi & de Vries, 2011). Principals cannot accomplish these goals unless they have the support and buy-in from the teachers and staff. A much stronger basis for improving curriculum and instruction to meet the needs of students would be the implementation of meaningful and sustained professional development for school faculty and staff, focused on implementing shared decision-making processes in the school (Murphy, Hallinger & Heck, 2013). School leaders can gradually accomplish a high level of expectation of student achievement by simply being thorough and consistent when paying attention to specific behaviors, values, and fundamental assumptions of staff members (Thompson, 2009).

After reviewing 81 educational reports, Cotton (2003) found that principal leadership style does not affect student outcomes in a direct way, but leadership does affect student outcomes through the principal's interactions with teachers and the professional development opportunities they make available to them. While formal school leaders do have a positive affect student learning, it is widely understood that the

effects of their leadership on students are largely indirect (Leithwood, Patten, & Jantz, 2010).

Principal leadership has made drastic changes over the past several years. At one time principals were the ones looked to as the sole leader of a school. Principals were also the one to make the decisions at their schools with no suggestions or thoughts from the teachers and staff. Knowing the difference between leadership skills and management skills and how to use each effectively is important to a principal's and a school's success (Murphy, Hallinger & Heck, 2013). However, over recent years more principals are distributing the leadership role, sharing responsibility with teachers, and creating a more collaborative environment. This study will look to discover the importance of collaboration when discovering professional development opportunities for groups of content teachers. In response to these changing and amplified conditions of accountability, numerous leadership models show how to meet the leadership needs of the past several decades (Hallinger, 2013; Niesche, 2013; Sergiovanni, 2009; Foo & Ho, 2012). However, there is a gap in existing research to clarify the connection between principal leadership styles, as perceived by teachers, and teacher motivation to seek out professional development opportunities on new technology. This is the reason why the researcher has chosen a qualitative approach to this study. A qualitative study focuses on the participants' experiences in order to gain an understanding of the processes the participants engaged in to accept the technology (Mosley, 2012). Merriam (1998) provides the definition of qualitative research as an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena.

Qualitative data collection. The reason for selecting the qualitative method was to explore general themes by examining individuals' experiences (Burke, et al., 2011). Qualitative research and, in particular, focus-group interviews generate large amounts of data, which tend to overwhelm novice as well as experienced researchers. Yin (1989) points out that data analysis consists of a number of stages, i.e. examining, categorizing, and tabulating or otherwise recombining the evidence, in order to address the initial goal of a study. Krueger and Casey (2000) build on this concept and suggest that the purpose should drive the analysis; they believe that 'analysis begins by going back to the intention of the study and survival requires a clear fix on the purpose of the study. This allowed the researcher to analyze the thoughts, ideas, and opinions of teachers and principals about school leadership style and motivation. Current literature has discussed many factors that influence teacher performance, including leadership practice (Brown & Conrad, 2009). According to Yin (2011), qualitative research was an adequate research method when there was little information about a phenomenon.

The process of qualitative analysis aims to bring meaning to a situation rather than the search for truth focused on by quantitative research. Unlike quantitative analysis, qualitative analysis, particularly focus-group analysis, occurs concurrently with data collection. Different situations and cultures affected human behavior that makes a qualitative approach more suitable to explore teachers' perceptions in different settings using multiple sources of information (Burke, Feinberg, & Ostroff, 2011). A qualitative study allows a space for interaction between participants and moderators and provides an opportunity for reflection (Loke, 2001).

Focus groups. A focus group is, according to Lederman (Kwong, Hing-Man Ng, Kai-Pan, & Wong, 2010), a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population, this group being 'focused on a given topic'. Focus groups are a form of group interview that capitalizes on communication between research participants in order to generate data. Although group interviews are often used simply as a quick and convenient way to collect data from several people simultaneously, focus groups explicitly, use group interaction as part of the method (Krueger & Casey 2000). This means that instead of the researcher asking each person to respond to a question in turn, people are encouraged to talk to one another: asking questions, exchanging anecdotes and commenting on each other's experiences and points of view (Kitzinger, 1994). The method is particularly useful for exploring people's knowledge and experiences and can be used to examine not only what people think but also how they think and why they think that way.

The idea behind the focus group method is that group processes can help people to explore and clarify their views in ways that would be less easily accessible in a one to one interview. Group discussion is particularly appropriate when the interviewer has a series of open-ended questions and wishes to encourage research participants to explore the issues of importance to them, in their own vocabulary, generating their own questions and pursuing their own priorities (Cooper, 2009). When group dynamics work well the participants work alongside the researcher, taking the research in new and often unexpected directions. The power of focus groups as a research tool rests with the environment created by the interaction of the participants. Cooper (2009) explains that in

well run sessions, members of the group are stimulated to respond by the comments and the support of others in the group. In this way, the depth of information offered by a respondent may be much greater than that obtained through individual interviews.

Principal interviews. In qualitative interviews, the interviewees are given space to expand their answers and accounts of their experiences and feelings. Moreover, their answers are not pre-categorized in the interview schedule. Qualitative interviews are often used in an exploratory manner, which seeks to investigate the subjective interpretations of social phenomena. They do not necessarily presume that most of the topics of interest are known in advance. The aim is often interpretation and understanding of how and why, not 'fact-finding' or getting answers to questions of how much or how many (Patton, 2011). In qualitative interviewing, the respondent's experience has diverse qualities and meanings and the interview can explore these and their social organization (Gubrium & Holstein, 2001). It is a valuable research method for exploring data on understandings, opinions, what people remember doing, attitudes, feelings and the like, that people have in common (Cain & Milovic, 2010).

Field Notes. The third method of collecting data came from the field notes from the researcher. Once the focus groups and principal interviews concluded, the researcher recorded both the observations and experiences that occurred during the interview process in the researcher journal/ field notes. A researcher field journal was utilized to record observations of the surroundings, faculty reactions to the interview questions, including body language during the process and the researcher’s perceptions about the interview process, which would become an essential element in data collection (Delunas & Rouse, 2014; Polkinghorne, 2005). There are four steps in the field note/ researcher

journal process that are key to the credibility of the field notes process: a) take notes regularly and promptly, 2) write down everything no matter how unimportant it may seem at the time; c) try to be as inconspicuous as possible in note taking, an 4) analyze notes frequently (Denzin & Lincoln, 2011, p. 708).

Compared to quantitative research a qualitative study generally focuses on a much smaller sample, does not isolate areas of focus, and results are almost by definition impossible to reproduce. The decision to interview implies a value on personal language as data. Face-to-face interviewing may be appropriate where depth of meaning is important and the research is focused in gaining insight and understanding (Denzin & Lincoln, 2013; Ritchie & Lewis 2013). It could also be argued the researcher choosing to interview face-to-face recognizes the potential significance of the context. However, from a critical realist position it is possible to recognize the collaborative qualities of research data while maintaining a belief in its validity in revealing knowledge beyond itself of the social world within which the interview event has occurred (Banfield, 2004).

Conceptual Foundation

This research was grounded in Guskey's (1986, 2002) model of Professional Development and Teacher Change. Guskey's model of teacher change describes four stages: 1) professional development, 2) change in teachers' classroom practices, 3) changes in student learning outcomes, and 4) changes in teachers' belief and attitudes. While most professional development designs aim to establish teacher buy-in from the start, Guskey (1986, 2002) explained that teachers' beliefs only change when they see the professional development program is effective. Guskey's (1986) model of the process of teacher change begins by engaging teachers in professional learning. The next step

involves teachers modifying their teaching practices to reflect what they have learned from the professional development series. The final step occurs after teaching practices change and allow teachers to see changes in student achievement. Student outcomes drive teacher beliefs, and when student achievement increases, teachers believe the success of the professional learning innovation was the cause of the increase and continue to integrate that learning in instructional practices (Guskey, 1986). The overall conceptual model for this study is based on and is intended to demonstrate Guskey's theory in three middle schools in one school district in urban Arizona.

To expand on Guskey's model, the areas of teacher motivation, principal leadership style, and technology have been included in this study to further clarify and expand on Guskey's model. Many studies in the past have connected three of the areas of focus. Goolamally and Ahmad (2014) and Makewa et al. (2011) connected principal leadership style and technology, Bickmore (2011) and Spanneut, Tobin, and Ayers (2012) connected principal leadership style and professional development, Othman and Wanlabeh (2012), and Eyal and Roth (2011) connected principal leadership style and teacher motivation, but few studies have linked the connection between principal leadership style, professional development on technology, and teacher motivation. This expands Guskey's idea to evaluate other factors that could influence or motivate teachers to attend professional development works on technology. In addition, this study will gain the perspective from both teachers and principals to examine and attempt to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them.

Again, Guskey's model was designed toward professional development and teacher change. The research questions created for this study focuses on Guskey's model and expands on its concepts. The research questions created for this study focuses on principal leadership style, teacher motivation, and professional development on new technology. These questions also expand on Guskey's model to evaluate other factors that could influence teacher change and change in classroom instruction. This study further expands on previous studies relating to professional development and teacher change by adding additional factors like principal leadership style, teacher motivation, and professional development on new technology.

Sheppard and Dibbon (2011) describes that the success of a school hinges on the right balance between the principal being an innovative visionary and the leader for teaching and learning. Up to now, leadership development lacked coherence, direction, and status (Botha, 2013). To have the greatest impact, principals define their job as helping create a professional learning community in which teachers can continually collaborate and learn how to become more effective (Quint, 2012). Most schools continue to operate as traditional hierarchical bureaucracies; therefore, the common expectation is that someone at the top of the organization will set the direction. Simply stating that an organization is now going to be collaborative and that all constituents will now be leaders will most likely result in failure (Sheppard et al., 2009). Classroom practices are also impacted by such things as the professional learning experiences of school administrators and teachers, as well as the attitudes, beliefs, and opinions of other constituent groups (e.g., unions, professional associations, parents, the community, business groups, researchers, and the media) (Sheppard and Dibbon, 2011). Even though school leadership

provided by both formal leaders (e.g., school administrators) and informal professional leaders (i.e., teachers) helps shape the nature of the school learning environment, other conditions such as school and classroom conditions, along with student/family background conditions, have a major influence on both the learning conditions and on student learning (Sheppard et al., 2009).

Review of the Literature

The concept and definition of leadership has been a topic of debate among scholars for many years. Simple concepts are easily defined but complex concepts such as leadership must be defined more vaguely (Leithwood & Duke, 1999). Defining leadership is difficult because it involves a multitude of follower interactions, which take place in many different types of organizations and environments (Duke & Leithwood, 1999; Fitzgerald & Schutte, 2010). Foo and Ho (2012) stated the concept of leadership has fostered many definitions, with no one definition becoming universal, since the concept of leadership is so arbitrary and subjective.

Leadership theory has many faces: trait, behavioral, sociological, and cognitive (Jacobs, 2010). It also has other applications: Servant Leadership (Greenleaf, 1977), Distributed Leadership (Harris, 2012), and Transformational Leadership (Avolio & Bass, 1989; Fitzgerald & Schutte, 2010; Burns, 2011). According to Burns (2011), who characterized these leadership styles in relation to business, see leadership as either a focus on change or a focus on management. While various models have served educational leaders for several decades, new comprehensive models have been created that promises to provide a positive and encouraging structure to guide today's leaders through complex times (Burns, 2011). Discovering the most effective approach to

reaching the goals of leaders has been the focus of research for many years. Fullan (2009) proposes that improvement within a school should be an organizational goal and the principal key to the movement toward that goal.

This review will explain the connections between all of the areas the researcher will examine in this study. Appendix A will provide a visual display of the flow within the literature review. The leadership styles that will be looked at are: 1) Distributed leadership, 2) Transformational leadership, and 3) Servant leadership.

Distributed leadership. Gibb (2009) began looking at the concept of multiple individuals influencing the entire organization. Prior to that, however, his emphasis was mainly on the individual within the group and not necessarily their impact on the organization. Groups were defined as the interaction of its members, in such a way that each unit was changed by its group membership and each would be likely to undergo a change as a result of changes in the group (Gibb, 2009). His philosophy examined an individual's dependence on others within the group. According to Gibb (2009), a group would not be considered functional without the interaction and interdependence of others. Gibb (2009) expounded this theory as he defined group interaction within an organization. His definition stated a group in which the members are differentiated as to their responsibilities for the task of approaching the group goal is commonly called an organization (Gibb, 2009). Gibb's (2009) definition advanced the emergence of leadership within the group.

Grove (2009) suggests that Gibb was one of the key originators of the concept coined distributed leadership. According to Grove (2009), Gibb started using the words distributed leadership in his writing on the subject about leadership in the Handbook of

Social Psychology in 1954. Gibb describes leadership that is not centered on the authority of one person, stating; “There is still a tendency among psychologists and sociologists to think of every group as having a leader . . . however . . . unequivocal unipersonal leadership rarely, if ever, occurs” (Gibb, p. 34, 2009). Gibb continues to explain that leaders and their followers trade roles while energetic followers instigate acts of leadership. Gibb (2009) affirms that leadership is the exemplification of many qualities by the followers and the relationship between the leader and follower is often so similar that it is difficult to determine who influences whom and to what degree they are influenced (Gibb, 2009).

Hauserman and Stick (2013) alleged that leadership components transfer upwards from subordinates to the entire organization. The exercise of influence on organizationally relevant matters by any member of the organization noting that organizations are more likely to be effective when the leadership tasks are distributed (Hauserman & Stick, 2013). The distributing of leadership roles can result in a more effective use of resources in an organization. The approach Hauserman and Stick imagined were that the leadership of an organization would use the forms of distributive leadership by delegating and shared the making of decisions that will put into effect the openness for followers to influence and increasing the environment the ability to share information.

Lucas et al. (2012) talked about how leaders and managers cannot perform multiple tasks without distributing the duties to other group members. Leaders must find a way to distribute the workload or decision-making on to the followers of the group. Distributed leadership used in schools as a synonym for democratic leadership by giving

more authority to teachers (Harris, 2009). Distributive leadership primarily implies a social distribution of the leader's power and decision-making is spread to all members of the school is collaboration of leaders (Harris, 2012). Distributive leadership implies interdependency rather than single leader dependency by leaders sharing responsibility with subordinates (Harris, 2009). In this situation, with the distribution of leadership, follower's positions will dissipate as leadership to many individuals in the group and organization.

The range of ideas in conjunction to distributed leadership display a total structural reinvention of the educational structure (Harris, 2009) to rebuilding the current systems with strong principal administrators (Quint, J 2012), to putting teachers in charge of their instructional improvements (Elmore, 2000). Although these ideas show intriguing thoughts of how this should be, none of the ideas provides insight concerning the participants' actual level of experiences, nor does it predict the expected behaviors of the teachers.

Leadership promotes the idea that members of the organization can share leadership activities (Harris, 2009). Grove (2009) states that leadership as a stream of influence rather than an explicit connection with a single leader. In a distributive environment, a larger number of constituents in the organization have a stake in the accomplishments of the school (Harris, 2009). Distributed leadership theory promotes the decentralization of the leader as collective episodes in the organization (Harris, 2009). Leadership in this context is fluid rather than individually fixed as a specific role defined phenomenon within an organization (Grove, 2009). Every individual can be a part of and demonstrate leadership in distributive organizations (Lucas et al., 2012). This type of

leadership does not imply that everyone in a group is a leader, but opens the possibility for a more collective leadership approaches (Harris, 2009). Distributive leadership is a collective trend where leadership is a stream of activities in which organizational constituent find themselves entangled (Grove, 2009). Leithwood et al. (2009) determined that the functions within a school system, which are 'distributed' by the school principal, include setting the school mission, professional development programs, redesigning the organization, and managing instruction.

Distributed leadership allows each individual to become a leader. Leadership does not arise from formal position; rather, it is evident by performing activities in collaborative manner with multiple individuals (Blankstein, Cole, & Houston, 2010). Shared leadership and distributed leadership are the same type of leadership, but also referred to as parallel leadership. Parallel leadership encourages relatedness between teacher leaders and administrator leaders that activates and sustains the knowledge-generating capacity of schools: Parallel leadership is a process whereby teacher leaders and their principals engage in collective action to build school capacity, which embodies mutual respect, shared purpose, and allowance for individual expression (Beavers, 2009).

An important limitation and one in need of further research, is the lack of evidence and knowledge on principal leadership style, professional development, and teacher motivation. A conceptual model that analyzes and provides insight into how principal leadership style influences teacher motivation, ability, and action is needed. Distributed leadership might be an appropriate perspective. Harris (2009) explained the ascendancy of distributed leadership as a powerful concept and a theory represents a significant shift in thinking about leaders, leadership, and leadership development. It not

only challenges the mythology of individualistic leadership but also reclaims leadership for teachers and others working in schools. Undoubtedly, more research is in need to give this new leadership perspective greater legitimacy.

As Gibb (2009) expanded leadership theories, each new theory elucidated previous ones and created a foundation for the development of distributive leadership. The following sub-sections discuss various forms of leadership theories that have shaped the educational platform. In the case of transformational and servant leadership, both theories are saturated with an emphasis on followers within the organization and their continuous development.

Transformational leadership. Transformational leaders attract followers by creating an environment that displays a clear and focused vision, self-confidence, and clearly calculated decisions that are in the best interest of the organization (Bass, 1985). In his book, *Leadership,* Burns (1978) stated that transforming leader recognizes and exploits an existing need or demand of a potential follower. However, beyond that, the transforming leader looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. Simply stated, leaders' responsibilities are to motivate followers to a higher level of engagement within the organization.

Bass (1985) contended that Burns' notion of hierarchy was not a necessary component of the transformational process. From this perspective, leaders stimulate followers to become more self-motivated, self-reliant, and proficient in their current position (Bass, 1985). Hence, the notion of inner-stimulation according to Maslow's hierarchy may not be needed in the transformational process. Both forms of leadership

practice seek to develop environments where each person (leader and follower) can flourish to their full potential.

Burns defined the characteristics of a transformational leader in moral terms and defined this leadership style as moral leadership. According to Burns, in transformational leadership approach, leaders and followers further take each other's motivation and morality to higher levels (Mees, 2009). Burns has based the relationships between leader and follower to a series of moral principles and developed rules regarding the nature of good leadership in terms of morality (Miller, 2010). Bernard Bass extended Burns' initial introduction of transformational leadership (Hulpia & Devos, 2009). Bass and Burns studied political leaders, army officers, and business executives (Bass, 1985; Burns, 2011; Hulpia & Devos, 2009). Leithwood and his colleagues extended the study of transformational leadership into the field of education (Leithwood, Harris, & Strauss, 2010). The concept of transformational leadership was first mentioned by Burns (2011) and got its name from the idea that a successful principal looked to transform the people who worked for him so that they would be motivated to improve (Hauserman & Stick, 2013).

This would naturally improve instruction in the classroom and the school environment. To ensure that employees are able to look beyond their self-interests for the good of the group, transformational leaders discover more than one way to meet the objective they set for the team. Transformational leaders do not view teachers as "subordinate to the system", but rather provide power to teachers to make decisions (Sergiovanni, 2009). Treating teachers as professionals "in command of a body of knowledge that enables them to make informed judgments in response to unique

situations and individual student needs" (Sergiovanni, 2009). Leaders can be charismatic in their thoughts about the followers and inspire them; they meet the emotional needs of each employee and/or provide intellectual stimulation (Miller, 2010). Building and achieving charisma with each of the employees is at the center of transformational leadership. Employees want to identify and associate with someone they can look up to and trust. By means of intellectual simulations, leaders teach handling old problems in new ways and seeing the difficulties in problem solving, and point out realistic solutions (Bass, 1985).

Northouse (2013) stated transformational leadership is the process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower. This type of leadership gets all of the school employees involved and working towards the same desired outcome. The transformational leader concerns themselves with the results rather than the process of how to get there. Each member of a school or organization has the opportunity to determine the most appropriate path to take to reach the goals, while being aware that the pathway is conducive with the organizational beliefs and purpose. By focusing on a shared vision and collaboration will build a stronger school culture and commitment from the faculty and all staff members. Nash (2011) found that components of transformational leadership (vision building and intellectual stimulation) had significant effects on teacher "commitment and extra effort within the context of educational reform" (p. 228). When transformational leaders find and understand what motivates individuals, they are better able to influence the organizational members to transcend their own self-interest for the

betterment of the organization (Burns, 2011; Leithwood, Patten, & Jantzi, 2010; Printy & Marks, 2003).

Another area that followers observe is the ethical behaviors of their leader. Ethical behaviors directly relate to the leadership in an organization. A leader conditions their employees by the way they present themselves. Ethical behaviors are the basis of transformational leadership (Brown & Conrad, 2009). Ethical climate exposes the management's conduct, and ensures that a confidence relationship develops between individuals and groups (Brown & Conrad, 2009). However, critics of transformational leadership argue that an unethical leader can actually pose a threat of potential abuse (Miller, 2010).

Leithwood, Patten and Jantzi (2010) have introduced transformational leadership research in educational environments. Having adapted transformational leadership models that were developed in non-school contexts to school environments, Leithwood have identified six dimensions to transformational school leadership, namely: identifying and articulating a vision, fostering the acceptance of group goals, providing individualized support, intellectual stimulation, providing an appropriate model, and high performance expectations (Leithwood, Patten, & Jantzi, 2010)). Research on transformational leadership has generally studied transformational leadership's effect on student, teacher, and organizational outputs (Miller, 2010).

Anderson, Leithwood, Louis, and Wahlstrom (2010) discovered that school leadership is second only to classroom instruction as the major factor that contributes to what students learn in school (Patton, 2011). Furthermore, three practices are identified as the 'core of successful leadership' in characterizing a transformational leader: (a)

helping staff members establish and understand the goals which are the foundation of a shared vision for the school, (b) building the capacity of those within the school and using their strengths in decision-making, and (c) changing organizational characteristics to strengthen the school culture and build collaborative processes (Patton, 2011). These practices parallel closely the conditions upon which principals have influence identified by Leithwood (2005) definition of leadership. The requirement for studying the ethical effects and aspects of transformational leadership in the past several years has become more important in context of an educational environment. Schools are the most normative ones among normative organizations and leadership in schools requires high level of moral efforts contrary to routine management because schools are typically moral organizations (Phillips, 2013). In considering the instructional leadership role of the principal, the transformational leadership style best meets the needs of the students to reach academic success (Patton, 2011). This approach advocates a shared leadership base in which school administration, along with faculty and staff, participate in decision-making focused on effective curriculum development and instructional practices (Sergiovanni, 2009).

Transformational leaders accept that the growth process will bring mistakes and empowers teachers to use those blunders as professional development opportunities (Avolio & Bass, 1992). This type of leader puts passion and energy into everything they are trying to accomplish. Results of several studies support the conclusion that transformational leadership has a positive impact on teachers' perceptions of school conditions, their commitment to change, and the organizational learning that takes place (Patton, 2011). These leaders care about the people at their school and want each

individual to succeed. Transformational leaders pursue three main goals: First, they help staff develop and maintain a collaborative, professional school culture; second, a transformational leader fosters teacher development. Finally, they help teachers solve problems more effectively (Hauserman & Stick, 2013). This leads to the idea of the four I's of transformational leadership: 1) Idealized Influence – which refers to how a leader would influence others, 2) Inspirational Motivation – which motivates people by inspiring them to believe in themselves, 3) Intellectual Stimulation – challenges people to do an act, and 4) Individualized Consideration – show that each individual is different and has different motivations and challenges that want to accomplish (Fitzgerald & Schutte, 2010).

Critics argue that the components of transformational leadership lack finite definition and are easily interchanged with other leadership styles (Northouse, 2013). Northouse (2013) further stated that Avolio and Bass describe four elements of transformational leadership are attributes inherent in one's personality. Transformational leadership does have its limitations. With the expectations of high achievement might also come a degree of expectations that were not easily met by followers of transformational leaders (Burns, 2011). Cherkowski and Brown (2013) discussed the views of Weber identifying how this strategy could create high expectations many followers might not be able to satisfy: The charismatic leader gains and maintains authority solely by proving his strength in life. If he wants to be a prophet, he must perform miracles; if he wants to be a warlord, he must perform heroic deeds. Above all, however, his divine mission must "prove" itself in that those who faithfully surrender to

him must fare well. If they do not fare well, he is obviously not the master sent by the gods.

Additionally, the transformational leader had much to accomplish and strive. This leadership style was most effective when there was a time of uncertainty and a single voice was needed to unite the diverse crowd. When there was chaos, people look for people whom they can trust and believe to follow automatically, and a charismatic leader can rally a big number of people (Collay, 2011). Transformational leaders promote an atmosphere where followers can flourish and add value to organizational pursuits and vision. Unlike distributive leadership, most interactions are based more on relationships and less on organizational goals. However, both forms of leadership allow individuals within the organization to perform leadership responsibilities; hence, a new formula for teacher leadership was established.

Servant leadership. The actual definition of leadership has changed dramatically in the last 100 years. In earlier years, the idea of leadership was the ability to force the will of the leader on followers in order to demand respect, loyalty, and cooperation (Suppes & Morningstar, 1969). By the 1970's, leadership was viewed as the ability to encourage individuals to not only meet the group's needs, but to look beyond the group. By the 1980's, leadership was viewed as the ability to inspire and to lead by example, not to order individuals on what to do. The individual was an important, creative part of an organization.

The phrase Servant Leadership was coined by Robert K. Greenleaf in *The Servant as Leader*, an essay that he first published in 1970 (Greenleaf Center for Servant Leadership, 2011). This type of leader is motivated to make changes because they have

first handedly seen opportunities where changes to improve a process or the way a process is currently done. Greenleaf (1970) described a servant leader as a servant first before they are place or given a leadership role. The natural feeling of wanting to serve is a mindset of many individuals. The leader-first and the servant-first refer to two completely different types of individuals. Between them there are shadings and blends that are part of the infinite variety of human nature" (Thompson, 2009). A servant-leader is any leader who focuses on identifying and meeting the needs of others, rather than trying to acquire power, wealth, and fame for oneself (Wong, 2010). Servant leaders love and enjoy helping people grow as individuals and future leaders.

The comparison between transformational leadership and servant leadership is common since they have many similarities. Stone, Russell, & Patterson, (2003) examined the similarities and differences between the two leadership styles. What they discovered is that leader focus was the major difference between the leadership styles. Servant leadership is not the conventional style of leadership. Up to modern day, many theorists have looked at the power and authority leader's hold and the follower's ability to follow. Instead of power and control, servant leaders use their power to lead by giving.

After the servant has served, then a conscious mindset changes and inspires them to become a leader. This concept is much different from a person who is a leader first. Leader first people have the need which is power driven or to obtain material possessions. Both the leader first and servant first are completely different from each other. The difference manifests itself in the care taken by the servant-first to make sure that other people needs are the highest priority (Greenleaf Center for Servant Leadership, 2011).

This type of leader is motivated to make changes because they have first handedly seen opportunities where changes to improve a process or the way something is currently done. Servants or followers have worked in environments and have been inspired or motivated to lead others to assist them make the new changes. They do not make changes based on personalities, factional politics, and competition between rivals (Thompson, 2009). Servant leaders will focus on the needs of the organization. Servants demonstrate the qualities of listening, consulting, and analyzing information so the changes the organization can be adapted are relevant to the changing needs. Niesche (2013), after reviewing the writings of Robert Greenleaf, named 10 major attributes of servant leadership; they are listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community. Other writers (Thompson, Kuhl, & Creem-Regehr, 2009; Stone et al., 2003) have added, updated, compared, and contrasted the original list.

When a person/follower is motivated to make a change and lead a team of followers that believe in the same idea. This will produce a higher success when making changes. Successful teams share many characteristics; they tap the diverse knowledge, skills, experience, and interests of members; they generate more creative responses to challenges than individuals; they catalyze fresh ideas for new products and services, better business processes, and profitable strategies; they hone the leadership abilities of members; they carry out their mission with dedication, energy, and efficiency; they engender feelings of satisfaction and pride among members; they channel conflict into productive directions (Rotherman, 2010).

Servant leadership seems to be a more popular type of leadership since followers in any industry can analyze the work they do and produce new ideas and ways to improve on what already exists. Miller (2010) described seven characteristics in which all servant leader possess. Each of the characteristics works well with servant leadership because these practices assist them in being effective leaders and obtain positive results for the organization. Seven of these key practices are self-awareness, listening, changing the pyramid, developing your colleagues, coaching not controlling, unleashing the energy and intelligence of others, and foresight (Rotherman, 2010). Mentors open doors to vast imagination and, yes, hope (Miller, 2010).

The education industry is one of many industries where followers have become leaders and tried to implement changes which motivated them to because leaders at their school or district. Sergiovanni (2009) spoke about many of the valuable servant leadership characteristics when he developed the term “moral leadership” as it relates to the field of education. Sometimes it takes a creative mind and determination to help others see that value of a particular need. This has created new positions within a district and applied at various schools. It is the motivation of the teacher to put them in the position as a leader. Teachers are only one example of servant leaders. Many teachers have come to the understanding that teaching is not a carrier path that will produce high monetary rewards, but will provide a high level of job satisfaction. The survey for the Trades Union Congress says teachers do an average of 11 hours of unpaid work a week, which would equate to nearly $10,000 extra in teachers and lecturers' yearly pay (Quint, 2012).

Principals are the organizational and educational leaders of a school. Sergiovanni (2009) stated that servant leadership describes the role of the school principal; writing that a principal is to a school, what a minister is to a church. Their leadership has many effects on the learning environment, teacher's motivation, student achievement, and the overall culture of the school. Sergiovanni (1992) developed two types of authorities, which a school administrator develops his/her, values: secular authority and sacred authority. Secular refers to "the authority of rule or law and to systems of bureaucratic rules and regulations" (p.12). Sacred refers to "the authority religious tracts, the authority of community norms, and the authority of the democratic ideal or other ideals" (p.12).

Prensky (2005) draws on similar leadership themes during his analysis of the work which Jennings and Stahl-Wert work, *The Servant Leader*. Bowman describes Jennings and Stahl-Wert's five pragmatic principles related to servant leadership in an education environment:

1) Educators, as servant leaders, pursue a truly significant, great purpose, which ultimately brings leadership issues and challenges into focus

2) The teacher as a servant leader unleashes the strengths, talents, and passions of those he or she serves

3) Teachers as serving leaders passionately and competently teach students the knowledge, skills, and strategies they need to succeed

4) Educational servant leaders address the weaknesses of followers, but focus far more on building up their strengths.

5) The servant leader places oneself at the bottom of the pyramid so that one can focus on unleashing the energy, excitement, and talents of others (pp.257-259).

There are significant issues when comparing the existing models to theory building criteria. Sound theory is internally consistent, generates testable hypothesis, is supported by the data; and describes, predicts or explains a phenomena (Nash, 2011; Murphy & Hallinger, 2012; Walker & Ko, 2011). Most comprehensive models to date are limited in scope or fail to make explicit the theory building methodology incorporated thus inhibiting scholarly debate or analysis (Walker & Ko, 2011).

A common theme among all of these conceptual models is that a servant leader is a servant first to a higher power, and out of that obedience and gratitude to that higher being or power, serves other people. Distinguishing features of this leadership approach included what the servant leader does, who the servant leader is, and being a servant leader rather than doing servant leadership (Murphy & Hallinger, 2012). However, scholars have yet to capture both servant leader and follower constructs while engaged in this interactive relationship, the characteristics of this system state, or how the follower developed into a servant leader-a clearly identified goal and outcome.

Teacher motivation. The word motivation invoked a multi-facetted concept with a myriad of descriptions and classifications. A study for school improvement in Nigeria defined teacher motivation in the following manner. Teacher motivation naturally has to do with teachers' attitude to work. It has to do with teachers' desire to participate in the pedagogical processes within the school environment. It has to do with teachers' interest in student discipline and control particularly in the classroom. Therefore, it could underlie their involvement or non-involvement in academic and non-academic activities, which operate in schools (Lubin & Ge, 2012). Although this definition provided great insight

into what kind of motivation this study wanted to research, there was little research on what specifically did motivate teachers.

One of the motivation theories, which may explain teachers' motivation to wanting to implement professional development, is the Self-Determination Theory developed by Deci and Ryan (1985). Deci and Ryan's Self-Determination Theory (SDT) (1985) states that autonomy (e.g., choice), competence (e.g., skills), and relatedness (e.g., collegiality) influence one's intrinsic motivation (i.e., being motivated to perform a task due to an internal desire to carry out the task, not for any external reward; Lubin & Ge, 2012). This study investigated the SDT elements at the school (e.g., principals' practices to facilitate or hinder teachers' implementation of professional development opportunities by providing them with autonomy supports, competence-supports, and positive relationships). In addition, the professional development training (e.g., the professional development trainers' practices that facilitate or hinder teachers' implementation through autonomy-supports, competence-supports, and positive relationships, which help to produce a high degree of teachers' intrinsic motivation and implementation, or may hinder teachers' motivation and implementation (Lubin & Ge, 2012).

The two different areas of teacher motivation are: 1) Intrinsic, or 2) extrinsic. Deci (1985) describes that intrinsically motivated behaviors are "behaviors which a person engages in to feel competent and self-determined" (p. 61) without external rewards. A teacher would be intrinsically motivated if he/she feels competent and self-determined to perform the behavior. For example, if a teacher feels he/she has the ability to make changes in classroom practice following a professional development workshop

that he/she attended, then he/she will feel intrinsically motivated to perform the behaviors of that workshop.

Much work has been done in relation to motivation research to demonstrate that extrinsic motivation: “motivation created by external factors such as rewards and punishments”, (Stiller-Ostrowski, Gould, & Covassin, 2009). This study demonstrated that when a person participated in an activity that provided an external reward, such as an increase in pay or seniority, the person might develop an intrinsic motivation to perform the activity. Later studies demonstrated that external rewards presented to a person for performing an activity made that person to feel as if they were performing that activity simply to receive a reward, and thus lowered their intrinsic motivation (Lubin & Ge, 2012).

In this study, the researcher is interested in what motivates teachers to attend, participate in, and implement professional development programs on new technology. The best way to collect the thoughts, ideas, and opinions pertaining to teacher motivation is to ask the teachers (Tewksbury, 2009). Tewksbury (2009) explained that a qualitative study is the most appropriate study when asking participants “what, why, and how” questions. Understanding teacher motivation is important to this study. Discovering what motivates teachers to seek out professional development on new technology is the base foundation of this study. The questions most psychologists connect with motivation are “what” and “why” (Deci & Ryan, 1985). The what’s (e.g., What is this? Aristotle, 980) and whys (Why do people do things?, Deci, 1985) that drive teachers’ behaviors to attend a professional development program.

Professional development. Professional development cannot be called "quality" if there is no positive impact on the students since the students should be either the direct or the indirect recipients of the teacher's learning opportunity. Guskey (2005) points out that "powerful professional development helps educators recognize that defining learning goals and identifying specifically how those goals will be measured are not new ideas" but have always been important to teacher effectiveness. So what constitutes a quality professional development activity? The literature shows it to have a "substance…stimulates the mind, and leaves much to think about afterward" (Educational Leadership, 2002, p. 92), features expressed needs, makes the learning active, and involves collaboration with experienced teachers.

During the 1990s, numerous people including teachers and legislators supported the shift that technology could transform the education industry by directly influencing teaching and learning. Technology would create different instructional options for students that would significantly affect their achievement in the classroom (Amori et al., 2011). Technology integration by teachers requires them to adopt an ethos that places technology at the core of their thinking when planning for and delivering instruction (Buckenmeyer & Hixon, 2009). Technology is a toll that can promote greater learning, but only if its use is planned and carried out with an established goal (Brooks-Young, 2009). In an effort to reform education, former President Bill Clinton proposed education reform involving technology. The 1994 Improving America's School Act (IASA) advocated the use of technology in the forefront of school reform (Miller, 2010).

The new push in education reform and teacher accountability with the enactment of the No Child Left Behind Act (NCLB) of 2001. NCLB passed with overwhelming

bipartisan support from Congress to improve student achievement and close the achievement gap between rich and poor, and white and minority students to improve academic performance of all students by 2014 (Deep Technologist, 2010). The public demanded a new model of education to prepare students to compete in an increasingly technology drive global economy, NCLB also elevated the implementation of instructional technology to the vanguard of school reform (Van Tryon, Slagter, & Schwartz, 2012).

The primary goal of the NCLB Title II part D: Enhancing education through technology was to increase student achievement using technology in elementary and secondary schools (Deep Technologist, 2010). The North Central Regional Education Laboratory (2005) discusses that the act included directives that all students become computer literate by their eighth grade year and assimilate technology into professional development to promote best practices with technology. This focus became crucial to meet the required competencies for students to use technology proficiently. NCLB Title II Part D also supported a new focus of integrating technology within curricular instruction thus shifting away from teaching computer related skills in isolation and minimizing a digital connection, which is a major cause of frustration among students (Miller, 2010, U.S. Department of Education, 2007).

Miller (2010) states prior to the passing of NCLB there was little to no attention placed on the roles and responsibilities of principals involving the implementation of technology in their schools. After the NCLB, the focus is on the challenges of the school principal and the implementation of technology. Anderson and Dexter (2008) reports that

there is much to learn about the responsibilities and roles of principals and the professional development needs of teachers to use various technologies.

Interactive technology is having a significant impact on teaching (Jacobs, 2010). Meta-analyses of studies at the elementary and secondary school levels reported a significant academic advantage for computer-based instruction (North Central Regional Educational Laboratory, 2005). The long established form of teacher directed pedagogy is transforming to a student directed instruction that involves interactive participative learning and collaboration through multisensory stimulation to access multimedia (Lemke, & Coughlin, 2009; Jacobs, 2010). Concomitantly, interactive technology is employed to improve students' basic academic skills such as the recall of math facts, vocabulary concepts, and to enhance targeted twenty-first century skills including collaboration, creativity, communication, critical thinking, and problem solving (Fadel & Trilling, 2009).

Professional development pertaining to instructional technology is challenging for designers because of the added difficulty inherent in training people to use specific technologies (Walker et al., 2012). These challenges greatly increase because of the resistance many teachers express when given the opportunity to learn about new instructional technology and techniques. Though techniques for determining the effects of technology professional development on student outcomes remain difficult to implement (Ham, 2010; Smolin, & Lawless, 2011), researchers have identified several characteristics shared by successful professional development programs for training teachers to use emerging technologies. Meaningful professional development for instructional technology requires a commitment by program leaders to dedicate the

resources required to deliver instruction and assistance to teachers in the context that the technology will be used (Harris, 2009; Keengwe & Onchwri, 2009). Professional development designers should also be mindful of creating opportunities for teachers to collaborate and scaffold their new skills slowly, ultimately encouraging teachers to have mastery experiences with technology integration (Alexander & Henderson-Rosser, 2010).

Several studies have demonstrated the value of technology and that professional development increases the level of classroom instruction. Phelps and Graham, (2013) studied a program with these features in northern Australia. Their study identified positive changes in teachers' attitudes toward technology, willingness to attempt to use technology during instruction, and outlook regarding the school community following a three-year technology professional development program that encouraged school-wide collaboration. Studies like this reflect the effectiveness of sustained, collaborative, and scaffold professional development for instructional technology.

The National Center for Education Statistics reported in 2012 that 75% of public school teachers were still only receiving eight hours or less of educational technology in a year (Gray, Lewis, Thomas, & Tice, 2010). Teachers have little to no experience with preparation for 21st century classrooms. Most professional development opportunities lack focus (Pop, Dixon, & Grove, 2010). Pop et al. (2010) also explained that the result of ineffective professional development has been information overload for teachers who are attempting to implement a variety of different suggestions from a variety of different sources, rather than participating in an organized and integrated effort for classroom improvement. Most teachers will use technology to simply automate existing lessons or traditional instruction, making digital the same essential experience rather than

transforming the experience through the technology (Brooks-Young, 2009). The connection between professional development and implementing the concepts is not automatic.

One question is how do you truly change the practices of teachers to integrating technology into classroom learning experiences? To find the best answer to this question, an examination must occur on the effectiveness of the professional development opportunities. In addition, what are the characteristics of those experiences and what do they have in common? A number of researchers have identified successful professional development practices. Institutionalizing technology in schools requires staff development that responds to teachers' concerns, supports the kind of collaborative relationships needed to sustain new teaching skills and 40 attitudes, and provides for the continuing development of personal and pedagogical skills (Dhimitri, Duri, & Dollma, 2014).

A study by Bredeson (1998) about union contracts and teacher professional development found that professional development for teachers continues to be top-down and primarily controlled and driven by administrators. The lack of teacher voice in decision making about their own professional development has resulted in a type of dependency among teachers. Bredeson found that out of 100 school districts observed, only 17 districts had a formalized contract language where district professional development committees were composed of teachers and administrators. However, Desimone and Long (2010) study, "The Effect of Professional Development on teachers' Instruction: Result from a Three-year Longitudinal Study" is very encouraging. Desimone and Long (2010) found that professional development that focused on specific

instructional practices increases teachers' use of those practices in the classroom. Desimone and Long (2010) also found there is five key features that are effective which leads to improve teaching practice. These features are the reform type of professional development (new school improvement initiatives), duration, collective participation, active learning and coherence. With this new finding, it is important to understand how much impact this type of experience can have on shaping teachers attitudes toward their own professional development (Hochberg & Desimone, 2010).

Technology support. Information Technology (IT) is a broad description for hardware, software applications, personnel, information systems (IS), and other computing services used by an organization. It is important to note IS are a subset of services provided by IT because much of the earlier research on IS success occurred when mainframe computers and centralized IS services were predominant. As noted by Choi & de Vries, (2011), the role of the IS department within the organization has broadened considerably over the last decade. Once primarily a developer and operator of information systems, the IS department now has a much broader role. IT in the broader sense, not just IS, has become critical to organizations and IT has been treated synonymously in service quality literature (Evans, 2011).

Vaughan & Lawrence (2013) explains that support for teachers learning to integrate technology is crucial for integration to be successful. Teacher support is imperative for the success of technology integration in schools, and according to (Dhimitri et al., 2014); there are four areas, Grappling's Four Cornerstones, which are the foundation of technology integration change support. The first area, Readiness for Change, suggests that the attitude, energy, and commitment of teachers are vital to

integrate technology. The second area, Teaching and Learning, states that technology is the center of student learning, not learning how to use technology. Technology Deployment is the third area and addresses the distribution of resources. The last area, System Capacity, focuses on the ability of school systems to put the right amount of pressure on teachers to use technology, so resistance does not happen.

Highlighting the importance of support personnel, six years of research about the Challenge 2000 Multimedia Project demonstrate the benefits (Johnson & Fargo, 2010). Teachers in this professional development program worked in teams to integrate technology into their classrooms by having students create projects for a multimedia fair. In addition to attending summer institutes and monthly workdays, each team was supported by a Technology Learning Coordinator (TLC). Researchers noted the intertwining of technical and instructional issues and that the ideal support person can offer assistance with both.

In a review of the 2003-2004 questionnaire data from the federal Schools and Staffing Surveys, (Hora & Holden, 2013) found that 65% of the teachers reported participating in professional development about the use of computers for instruction, yet only 43% rated the training as useful or very useful. Just 3 years later, the number of teachers that indicated they had some form of technology-related professional development jumped over 20 percentage points to 86% (U.S. Department of Education, 2009). In order to improve teaching, especially as they explore the uses of emerging technologies, instructors must continually reflect on their teaching practices (Li, 2013). Looking at how the emergence of new technologies such as Webinars, Web Xs, and

Smart Board technologies can improve the instruction level of teachers while at the same time increase student achievement.

Students in the 21st Century are more diverse in their learning needs. The expectation is to teach the same material to students at different learning levels. Students in middle schools are more technologically literate than ever before. They crave immediate responses, engagement, and experiences, and are visual and kinesthetic learners (Oblinger & Oblinger, 2004). Learners need realistic, active, learner-centered strategies and experiences to stay engaged, be motivated, and succeed. Students need to find their own interests and see relevancy and application to their lives and needs (Prensky, 2005).

Learners want more choices in how they learn and prove they are proficient in reading a book, writing a paper, or participating in a group project. With today's technological tools, the possibilities for creative expression expand and instructors need to be aware of, and reflect on, the potential use of these technologies (Li, 2013). The teachers are crucial in this process. Teacher must recognize the learning needs of their student and adapt or develop a set of instructional strategies including technology to meet the needs of the students. Strategies can include behavioral repetition and feedback until mastery is learned (drill and practice, jeopardy games, etc.), cognitive conceptualization and understanding of knowledge domains and schemas (outlining tools and concept maps), and social strategies for peer learning and creation (group collaborative projects) (Li, 2013).

Lecturing, questions, collaboration, discussions, and demonstration are different teaching practices in the classroom. However, the expansion of new instructional

technologies is giving students a more in-depth understanding of the teacher's instruction. A major focus for teachers is to not just use technology, but also understand how technology will support their teaching practices. A number of new technology based tools are too costly and the implementation of these technologies is extremely time-consuming. As stated in the *Horizon Report, 2010* "The abundance of resources and relationships made easily accessible via the Internet is increasingly challenging us to revisit our roles as educators in sense-making, coaching, and credentialing" Johnson, Levine, and Smith, (2010, p. 3).

Teacher collaboration. Collaboration is a crucial piece in the success of any school. The benefits occur within the school environment in higher test scores, better working relationships between teachers, and the higher standard of learning going on in the classroom. Collaboration works best when employees can tap many information sources, that way, like-minded groups of people can gather online, exchange data, and disband upon completion of the work (Nash, 2011). The achievement of this could not occur without teachers collaborating to improve their schools, especially after attending professional development workshops on new technology. Teachers can take opportunity to exchange both positive and negative encounters with new technology in their classrooms. When a teacher discovers an idea that may work, other teachers can add their thoughts to see if the idea will be a success.

Teacher to teacher collaboration cannot occur unless time made during the day for them to meet. It is no secret teachers spend a great deal of time planning and creating lesson plans, organizing the classroom, preparing the necessary worksheets or copies, and setting up the classroom to create a positive learning environment. Grounded in the

assumption that teacher growth does not happen in isolation, current professional development seeks to create learning communities where participants engage in meaningful activities collaborating with peers to co-construct knowledge about teaching and learning (Shulman & Shulman, 2004). By utilizing current technology, teachers can build a stronger, more cohesive PLC group. Communication amongst teachers at their own school is hard enough.

Collaboration has been the focus of extensive research across disciplines, especially from the perspective of the co-construction of knowledge in the context of shared enterprises (John-Steiner, 2000) and learning communities (Nash, 2011). Collaborative professional development workshops may need a significant change in teacher identity that integrates overall dimensions of teacher individuality. Professional development workshops need to create spaces for teachers to interact, teach to their content team, and educate each other. Research is needed which explores the impacts of the of the teachers role during interactions.

Researchers have studied collaboration across various educational organizational configurations to understand how educators may improve student achievement Neal, Mullins, Reynolds, and Angle, (2013) noted that the term collaboration implies the process of working together toward a common goal. It involves participant decision-making and goal attainment**.** Examples of collaborative instructional frameworks may include peer coaching, collaborative work teams and co-teaching for effective collegial support (Rowley, Desimone, & Smith, 2011).

Taylor, Pearson, Peterson, and Rodriguez, (2009) studied school leadership to implement school-wide reform by building collaborative professional development,

instructional reflection and change in 13 high poverty schools and 92 teachers throughout the United States. They looked specifically at how school leaders facilitated raising students' reading achievement by adopting the CIERA reform, an Internet based framework that stressed effective educational research to build a school's own reading reform initiative. Using both qualitative and quantitative methods of data analysis, their evidence demonstrated that collaborative decision-making was associated with schools where students' reading improved. Conversely, they found that the school making the least progress had been characterized by a lack of commitment to the reform programs. Moreover, the description of the school's faculty was lacking perseverance, and generally lacked the principal's support and teacher leadership to maintain momentum of the reform effort. Importantly, they concluded that principals need to improve shared leadership and collaborate in "job embedded professional development" (Taylor et al. 2009) Taylor et al (2009) admitted that the study included only randomly selected teachers who had agreed to participate, and that some achievement measures were informed only by teacher judgment. Nevertheless, they implicated the need for further research to examine appropriate curricular leadership roles for principals and teachers as they work together to build capacity.

Student achievement. The Education Journal (2012) stated that achievement of students is what all school are looking to improve on. However, it is not as easy of a task as some have thought. Gaytan & McEwen (2010) explained that there are two types of ways to evaluate student achievement: 1) Informal assessment such as homework, class discussions or participation, and worksheets; 2) Formal assessments refer to tests and quizzes on lessons or chapters. More notably, the annual state test is the main instrument

to evaluate student achievement. Gaytan & McEwen (2010) also stated that state tests are the same tests to give school their labels, which show their level of achievement. The labels a school receives from the State of Arizona are in order from highest to lowest: Excelling, Performing, Approaching, and Underperforming (Education Journal, 2012). Higher performing schools attract students from other district to attend their school through open enrollment.

Another way students can accomplish a higher level of success is from the efforts of the teacher and their level of instruction. Teachers spend the most time and have the greatest amount of influence on the students. As such, the expectations for teachers to perform at higher levels and look at new ways to present and create lessons, which engage in a high level of learning. Standards-based instruments that evaluate content area teachers find that content specificity within evaluation instruments may change the ability to evaluate teacher's scores to student achievement scores (Shough, 2010).

In the early 1990s, Lee and Smith (1993) performed one of the initial case studies that used an extremely large sample size, which focused on the connection between middle-school segments and student achievement. The sample originated came from a general study on the status and progression of approximately 25,000 middle school students in approximately 1,035 middle schools in the United States (National Educational Longitudinal Study (NELS), 1988). The study looked at the effects of restructuring school achievement (a composite score combining reading and math) and engagement (derived from two areas of focus): (1) the overall involvement of students in their academic work and (2) the number of at-risk behaviors of middle-grades students (Leithwood, Harris, & Strauss, 2010).

Following the study conducted by (Lee & Smith, 1993), four categories became present: 1) school restructuring, 2) school demographics, 3) student outcomes, and 4) student backgrounds. Lee and Smith connected that the elements of school restructuring had a positive influence with student achievement. Moreover, the modest improvements in student achievement were in mathematics and reading. In addition, the involvement level of the number of students also increased. In a similar study conducted by Lee and Smith (1993), revealed the impact of student achievement by middle-school reform. In response to educational reform mandates, almost every state has developed and adopted standards in the core academic areas of reading, writing, mathematics, social studies, and science against which to measure student performance (Leithwood, Harris, & Strauss, 2010).

As of March 2001, all 50 states require assessments of students and require or produce school report cards (Loke, 2001). Many states have mandated that local school districts incorporate state standards into curriculum, with assessments administered through state-approved district level strategic planning and mandated state assessment results (Lovegrove, 2009). All 50 states employ state implemented assessment programs (Printy & Marks, 2006). Each state's assessment will decide if the school has met the requirements or standards. The identification of high-stakes testing the way for assessing student outcomes and measuring school improvement is overwhelming (Lovegrove, 2009).

State mandated tests determine many things about a school. First, the school met, exceeded, or fell below the annual performance goals based on the criteria from the No child Left Behind Act of 2001. Second, the determination of which students will be

retained or promoted is based on meeting or not meeting the individual performance on the minimum competency exams (MCEs). Finally, the eligibility for high school graduation diplomas based on mandatory exit exams (Printy & Marks, 2006). Many states have established state standards in curriculum as a means to preparing students for high- stakes state assessments, there are many who share mixed views regarding the effectiveness of high stakes tests (Lovegrove, 2009; Eckman & Kelber, 2010; Phillips, 2013; Prensky, 2005).

A continuous discussion occurs pertaining to lower performing schools and low student achievement which is increasing the focus on the principal of the school and their administration. Printy and Marks (2006) explain the many factors that have changed the scope of school leadership due largely to the push for accountability (Lovegrove, 2009). More specifically, school systems are struggling to find qualified principals who are capable of leading the charge to increase student achievement (Loke, 2001). Lovegrove (2009) recognizes that schools in the United States will be facing a lack of people whom can provide effective leadership to their schools. In many cases, the evidence of the effective principal is by how successfully the leader promotes and sustains the achievement of all students (NCES, 2012, p. 12). The National Commission of Education Statistics (2012) stated that we must demand the best effort from all students, whether they are gifted or less able, affluent or disadvantaged, whether destined for college, the farm, or industry.

Summary

Professional development and/or staff development and technology are avenues principals can use to focus on what teachers need to increase the level of instruction in

the classroom (Amori et al., 2011). In addition, professional development on technology and the motivation for teacher to seek these workshops out is another avenue that the principal must utilize (Blankstein, Cole, & Houston, 2010). There is a gap in existing research to clarify the connection between principal leadership styles, as perceived by teachers, and teacher motivation to seek out professional development opportunities on new technology. This is the reason why the researcher has chosen a qualitative approach to this study. A qualitative study focuses on the participants' experiences in order to gain an understanding of the processes the participants engaged in to accept the technology (Mosley, 2012).

This research was grounded in Guskey's (1986, 2002) model of Professional Development and Teacher Change. In addition, this research looks to expand on Guskey's model, the areas of teacher motivation, principal leadership style, and technology have been included in this study to further clarify and expand on Guskey's model. By using Guskey's model, helped add to the current research of teacher change by discovering what motivates teachers to change. Discovering what motivates teachers to change can help principals and district leaders prepare better quality professional development on new technologies, which could lead to improved classroom instruction.

The importance of this study was to give further insight as to how the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. New technologies were available to teachers. However, how are principals motivating and providing these opportunities to the classroom teachers? Giving teachers more tools to use in the classroom and engage students in the learning process was crucial to the improvement of

students. This study examined the perceptions of both teachers and principals about their motivation on technology professional development courses. This research added to the body of knowledge on integration of technology in middle school classrooms. For these reasons, the four research questions created for this study were produced. The research questions give direction on the information that will help answer the questions, how do principals motivate and influence their teachers, how are teachers motivated, how teachers implement new technologies in the classroom learned from professional development workshops.

The literature review in this chapter presented popular leadership theories, including distributive, transformational, and servant. In addition, the presentation of the theories of professional development, teacher motivation, technology/support, and collaboration give further information relating to the study. Principals were not the only ones responsible for student successes and therefore teachers, community, parents, and school leaders must have worked collaboratively to promote relationships that would ensure school success (Johnson, 2009). The trajectory of principal leadership style has experienced great growth over the years, yet a tendency to rebound to traditional, top-down, authoritative and hierarchical forms of leadership persists (Harris, 2009). A leadership style that effectively bridges professional development on new technology and teacher motivation will increase the use of technology in the classroom. Principals and teachers, key players in schools, need to become qualitative and competent leaders (Datnow, Park, & Kennedy-Lewis, 2013).

There are many different types of leadership styles and several ways to define what leadership means. Leadership can be thought of in terms of relationships, influence,

results, and providing a purpose and direction for the organization (Sheppard, & Dibbon, 2011). Earlier in this chapter, three leadership styles focused on how they have affected education. Each of the leadership styles, transformational, distributed, and servant leadership, described how their different approaches affect the education industry by empowering the shareholders. As stated before, leaders facilitate the engagement of other constituents as leaders by being transformational and inclusive, and by providing opportunities for professional learning and collaborative engagement (Sheppard, & Dibbon, 2011).

While expectations about technology integration in education rise, research indicates that computers are not being used to their full potential in classrooms and that a number of conditions that may affect teachers' motivation to use technology (Hora & Holden, 2013). The information collected for this study will explore how middle school teachers in three public middle schools reported using technology and analyzed the potential relationship between teachers' use of computers and their reported professional development activities, access to computers, and support. The results of this study may provide insight into how certain types of professional development might facilitate middle school teachers' use of technology in the classroom.

Enhancing the motivation of teachers is an important administrative task. The review of the literature on leadership, teachers' motivation and professional development on new technology is imperative when determining the relationship between middle school principals' leadership style and teachers' motivation. To examine the effect of leadership style on teacher motivation, Chapter 2 discussed factors of teacher motivation. In addition, the different views of researchers on whether or not the type of leadership

style is a motivating factor for teachers were discussed. Further, Chapter 2 illustrated the concept of effective leadership styles from principals and teachers' perceptions.

Chapter 3 presents the research design and its appropriateness for studying the effects of principals' leadership style on teacher motivation. The following chapter addresses the methodologies associated with this research study. Information in regards to participants, data collection instruments and procedures, and possible risks were described in detail. It also includes a detailed explanation of why and how this qualitative research study research was conducted.

Chapter 3: Methodology

Introduction

The purpose of this qualitative research study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Looking at the leadership styles of the principal, and the opportunities they provided for professional development to their teachers, assisted and furthered the understanding of the skills needed to build and maintain a learning environment that promotes student achievement. The principal was the key to move teachers to a higher performance level in the classroom. In addition, the principal has evaluated their teachers' practices in an attempt to achieve a high quality teaching to improve student learning. Professional development opportunities were the responsibility of the school principal and district office leaders; however, teachers need to be empowered to lead and engage in professional development initiatives and change their teaching practices.

Experts provided data and insight that the central phenomenon of school principal leadership styles and influences on teacher motivation does exist (Rutledge, 2010). As the school leader, principals were the person in charge of establishing rules and guidelines that enhanced students' abilities and created a culture that promotes higher students achievement. There was a positive link between principal leadership style and teacher motivation; it provided knowledge of leadership behaviors and styles, leading to an increase in student achievement (Rutledge, 2010).

The information collected from this study may be used to train and teach principals the importance of their role in student achievement. This research also showed principals how important the professional development opportunities they provided are to teachers. Professional development, for both school administration and teachers, was critical to student achievement (Ono & Ferreira, 2010). Current research supported the belief that school principals play a critical role in improving student performance (Dillon, McCaughtry, & Hummel, 2010). Making principals aware of the importance they had on student achievement guided them to seek out additional training to help improve not only their skills, but learn how to improve the level of education at their school. Research showed that effective principals attract and retain good teachers, while poor leadership has the opposite effect (Rotherman, 2010). This ability in turn changed the school districts view when hiring prospective principals for their schools. Discovering the true impact principals had on their school was an important factor.

This study was timely and necessary because it addressed the significant role of the principal as it related to professional development on new technology and teacher motivation. In recent years, Alsafran & Brown (2012) explained the increased emphasis of accountability on teachers was to help improve student achievement. Teachers are not the only ones who are responsible for the development of a student; Hallinger (2013) detailed collaboration was an important tool, which schools used to improve the learning environment in and out of the classroom. Research showed that mandatory teacher collaboration, sometimes called professional learning communities, gets results (Burns, 2011).

School leaders who fostered collaboration among novice and veteran teachers improved teacher retention and teacher satisfaction; additionally, new teachers were more likely to stay in schools that had an "integrated professional culture" in which new teachers' needs are recognized and all teachers shared the responsibility for student success (Datnow et al., 2013). Principals were the leaders of their school and not only established the learning environment at their school, but also had the ability to create a positive school culture.

In this study, there were two groups of participants: 36 middle school teachers (12 from each of the three schools), and three principals (one from each school). The participants were all from the same school district in urban Arizona. The data collected examined the experiences of teachers directly or indirectly influenced by the leadership of the principal at their school, and the opportunities for professional development these principals provided. Critical principal actions included selecting capable teachers who embraced the school goals, protecting teachers' technical work with students, monitored performance, and offered assistance where needed, all means by which principals influenced the core instructional technologies, even if indirectly (Printy, Marks, & Bowers, 2009).

The researcher anticipated the findings in this study would advance understanding of the effects principals had on student achievement through the professional development opportunities they provided to their teachers. Understanding this connection provided principals and district leaders a better understanding of the importance of creating and building learning environments that assisted all students and increased their level of comprehension. Dillon, McCaughtry, & Hummel (2010) commented that current

research makes clear that school principals play a critical role in improving student performance. Therefore, Dillon, McCaughtry, & Hummel argued the quality of education delivered to students rests, in part, on a school district's ability to hire quality principals.

Since teachers were more accountable for the achievement of the students in their classroom, in addition, that principals should be accountable for the learning environment. The results showed that principals were directly responsible for the achievement of the students at their school through the professional development opportunities provided to their teachers. Understanding this in more detail helped this study to build a stronger connection between principal leadership style and student achievement. Principals are educational leaders. The focus of their time was on mentorship and on people management while concentrating on high achievement (Aelterman, 2009).

Chapter 3 includes discussions on many of the contributing factors for this research. Chapter 3 also contains a general and specific statement of the problem and a restatement of the research questions guiding the study. There will be a discussion of methodology used for this research, with the approaches for the study identified and an explanation for utilization of those methods, and how they align with the focus of the study. A description of the collected data and the collection process is included, along with some discussion outlining the expected results. It will include a discussion regarding the research design and the alignment to the selected methodology. Also included is a rationale for the design, identification of various conditions, and the relation of the conditions to the research questions. This section discusses the setting, population, and sample used for the research. A section discussing the validity and reliability will be

included, with a detailed discussion of the entire data collection process. This will include details about the approvals in place to conduct the study and the instrumentation used to collect the data. The final portion of this chapter contains a discussion on the ethical considerations for this study.

Statement of the Problem

It was not known how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate technology into classroom instruction. Aelterman (2009) detailed principal leadership contributed to a positive school culture that encouraged student achievement. However, the general problem of professional development still existed: did the leadership style of the principal affect or motivate teachers for professional development on new technologies? This study was needed is to establish a link between principal leadership style and how it affected teachers motivation for professional development of new technologies.

Accountability standards within NCLB required the overall percentage of tested students and each subgroup of tested students reach progressively higher Adequate Yearly Progress (AYP) targets each school year (USDOE, 2009). This created increased pressure on teachers to seek new ways to further the students' level of understanding in the classroom. Professional development opportunities on new classroom technologies were an option or tool for teachers to engage students in learning. Unfortunately, professional development opportunities were not available to focus specifically on what teacher were looking for or needed.

The importance of this research lies in the potential to provide a lens through which the effect of principal leadership style motivated teachers to seek out professional

development on new technologies. Professional development integrated with technology was a tool for teachers to get up-to-date resources to improve classroom instruction. Evaluating the leadership style of the principal assisted in discovering how to produce better quality professional development workshops for teachers. Studying principal leadership style provided additional information about the influences or motivation the principal had on teachers. School leadership and a culture of trust were widely recognized as important in promoting in-school processes and conditions that supported and increased student learning and achievement (Bryk et al., 2010; Louis et al., 2010; Robinson et al., 2008; Supovitz et al., 2009).

In order to be an instructional leader of a developmentally appropriate school setting, one of the expectations of a middle school principal was to be an expert in early adolescent education, in addition, to have a clear picture of what an effective middle school looks like (Lucas, 2003). This way, teachers with different years of experience and different content areas can get the newest professional development of technologies. Teacher with less classroom teaching experience tend to have more experience with the use of technology. Many existing educators do not have the same knowledge and ease of using technology that their students possess (Lindzey, Gilbert, & Fiske, 2011). The problem was the lack of effective professional development for training the middle school teachers to integrate technology in the curriculum. Researchers have found successful technology integration does not occur without meaningful professional development (Buckenmeyer & Hixon, 2009).

This research study could help principals in other middle schools and districts understand the power they had to educate their teachers via professional development on

new technologies. Managerial tasks take many hours have little or no direct bearing on improving instruction, a single administrator cannot fill all of the leadership roles in a school without substantial participation by other educators (Elmore, 2000). Strong administrative leadership was a key component of schools with high student achievement (Cotton, 2003).

Professional development was crucial in the teaching of 21st century learners. The North Central Regional Educational Laboratory (NCREL) reported that in order for educators to learn new technology skills and strategies, they must engage in professional learning that targeted educational technology and 21st century learners (NCREL, 2000). The time for progressing educational professional development was and continued to be a major challenge for many school districts and administrators across the country. Since teachers were teaching most of the instructional day, and as such, the time for ongoing professional development was limited. Technology was expensive, and when combined with education and the need for professional development; it was common for teachers to participate in very few hours of training related to technology integration within a calendar year (NCREL, 2000). Therefore, there was much room for improvement in understanding, designing, and implementing teacher education in technology integration.

Research Questions

This qualitative research study focused on four research questions. The formulation of the research questions was to support and better clarify the connection between principal leadership style, and how principals influence their teachers to seek out professional development opportunities. There were four research questions:

R1: What principal leadership factors influenced teachers to seek out professional development opportunities on the use of new technologies that facilitated learning in the classroom?

R2: How did principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices on classroom uses of technology?

R3: How did proactive teacher use of new technology influence the modification of teacher instructional approaches in the classroom?

R4: How did principal leadership style determine the process to be followed to meet the professional development requirements on the use of technology in the classroom?

The research questions were formulated to explore, how leadership style of the principal influenced and motivated teachers to seek out professional development opportunities on new technology. Discovering the answers to these questions assisted district leaders and school principals in facilitating better quality professional development on new technology. Research question one was aimed and discovering how their principal is motivating them to seek out professional development opportunities on new technologies. This was important to understand for two reasons: 1) Are principals influencing or motivating their teachers, and 2) Are teacher influenced and motivated by their principal. The second research question was geared toward discovering how the principal is promoting collaboration amongst teachers to share uses of classroom technology. This is important to understand because teacher collaboration could be an avenue or a way for teachers to incorporate technology in the classroom. If a teacher has

attended a professional development workshop, how is the information being shared with the other teachers? Research question three was important so it can be understood how teachers modify their classroom instruction to incorporate technology. The last research question was to understand how principals are following up with teachers on the requirements of the use of technology in the classroom was met. This is important to understand because it will reveal how teachers are incorporating the use of technology in the classroom.

Research Methodology

The nature of this qualitative research case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. The leadership of a school has been a main issue of leadership theory and practice throughout the development of leadership studies (Gordon & Patterson, 2006). This case study examined and attempted to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. The data collected for this study came from focus groups consisting of teachers, and principal interviews. A qualitative case study is the best way to understand the thoughts, ideas, and opinions of teachers (Yu, Jannasch-Pennell, & DiGangi, 2011). Effective teachers were an essential element if student achievement is to be maximized (Gaunt, 2011). Examining the principal's willingness to provide teachers with the ability to improve classroom instruction was a key factor in understanding the importance of the role of the principal. As school leaders, Cranston (2009) added that principals were the sole person to approve

the implementation of programs and other valuable resources to help students learn. This laid the burden on the principals to provide their teachers with the resources and opportunities that maximized the learning level in their classroom (Yu, Jannasch-Pennell, & DiGangi, 2011).

Cranston (2009) discussed that effective leadership practice on employees' performance and suggested more in-depth investigations of the issue of leadership style as a motivation factor. Effective leadership practice in schools took place when both principals and teachers shared leadership responsibilities (Printy & Marks, 2006). Studying the relationship between principals' leadership styles and teachers' motivation bought an attention to the influence of personal and professional leadership qualities on leadership effectiveness (Can, 2009). The significance of the case study came from its relevancy to a new approach of research. The case study focused on studying educational leadership within the interaction between principals' leadership practices and teachers' perceptions of effective leadership. For school leaders, identifying effective and ineffective teachers was an essential leadership skill that allowed principals to design leadership strategies based on skill inventory of teachers (Jacob & Lefgren, 2010). Understanding the way teachers perceived principals' leadership practices was crucial for examining the effect of certain leadership qualities on teacher motivation.

Examining leadership effectiveness from the perspective of teachers was important to leadership preparation programs because teachers' feedback helped identify essential skills for effective leadership (Lovegrove, 2009). Not only did the content of teachers' feedback make a difference, the concept of considering teachers' perceptions of effective leadership practice affected the design and strategy of leadership preparation

programs (Daresh, 2009). The case study contributed to an unconventional approach of leadership that focused on educational leadership instead of educational administration. Many leadership preparation programs have introduced new types of principal preparation programs that reshaped principals' preparation processes "through new collaborative opportunities" (Orr, 2006, p. 494).

The sample for this case study consisted of three middle schools selected from a population of six middle schools in one school district in urban Arizona. The three middle schools had a principal that had been at the school at least one year. The sample size of one principal and twelve teachers from each middle school was suitable for data collection methods. First, the typical number of participants in focus groups is 5 - 12 people (Gay, Mills, & Airasian, 2011). Purposeful selection of sampling provided a better opportunity to explore the phenomenon based on sufficient practical experience (Gay, Mills, & Airasian, 2011).

There are about as many definitions of qualitative research as there are books on the subject. Some authors highlight the research purpose and focus: Qualitative researchers are interested in understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world (Merriam, 2009). In short, qualitative research involves collecting and/or working with text, images, or sounds. Qualitative research is research-using methods such as participant observation or case studies that result in a narrative, descriptive account of a setting or practice (Parkinson & Drislane, 2011). Since the data collected for this study is from focus groups with teachers and principal interviews, then a qualitative study is the appropriate methodology for this study.

Nontraditional schools did not participate in the research sample to ensure a comparative sample. The schools that were not included have a characterization as private, detention, charter, and kindergarten through eighth grade schools. In addition, assistant principals and administrators other than principals did not participate because the purpose of the study was to explore the direct relationship between principals' leadership behaviors and teacher motivation on new technology.

Research Design

The nature of this qualitative research case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. This study explored three areas: 1) principal leadership style and 2) teacher motivation on professional development of new technology, and 3) teacher collaboration. By analyzing the responses of participants to interviews and focus groups questions, a qualitative case study was the appropriate methodology and design to use.

A qualitative case study examines a phenomenon(s) within its real-life context. Data are collected on or about a single individual, group, or event. In some cases, several cases or events may be studied. The primary purpose of a case study is to understand something that is unique to the case(s). Qualitative case study methods often involve several in-depth interviews over a period of time with each case. Interviews explore the unique aspects of the case in great detail, more so than would be typical for a phenomenological interview (Gay, Mills, & Airasian, 2011). A qualitative study allows a

space for interaction between participants and moderators and provides an opportunity for reflection (Gay, Mills, & Airasian, 2011).

The reason for selecting the qualitative case study method was to explore general themes by examining individuals' experiences (Burke, et al., 2011). A case study design provides in-depth data from one person or a group of people. This is why focus groups were performed with teacher. Focus groups allow teachers to interact with each other and comment on other teacher's thoughts and opinions, making for a more enriched experience with the group of teachers.

This allowed the researcher to analyze the thoughts, ideas, and opinions of teachers and principals about school leadership style and motivation. According to Cohen, Manion, & Morrison (2011) qualitative research was an adequate research method when there was little information about a phenomenon. An important limitation of qualitative research was that the method depended on participants' individual descriptions of a phenomenon, and findings were not be applicable for others out of the research study setting (Cohen et al., 2011). As the purpose of the study explained and attempted to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. A quantitative study was not an appropriate method in collecting and analyzing data. Using an instrumental approach would not fit the purpose of the study and the structure of participants for two reasons; 1) obtaining accurate statistical data for a quantitative study is difficult when collecting thought, ideas, and opinions of both teachers and principals, and 2) there was a lack of educational research in the selected geographic location. As a result, finding a tested instrument for the study was very

difficult and the timeframe of this study did not allow developing and testing a new instrument. In addition, exploring the perceptions of mostly experienced teachers and principals required purposeful sampling selection that best fit the qualitative rather than the quantitative approach (Gay, Mills, & Airasian, 2011).

The nature of the study included the research method, sample type and size, data collection method, and data analysis method match the purpose. The design and process of data collection helped present outcomes that listed general themes. The findings of the study provided a clear explanation of the phenomenon and determined the extent to which implementing effective leadership styles motivated teachers.

Population and Sample Selection

The selected school district in urban Arizona covered an area of approximately four million square miles. The school district employed nearly 1670 teachers, 280 that were middle school teacher. The make-up of the school district is 19 elementary schools, 6 middle schools, and 5 high schools. The student to teacher ratio in the middle schools are as follows: 6^{th} – 8^{th} grade is 34:1. Individual class sizes varied, but this was the average ratio.

The population for this study was all six middle school principals and 280 middle school teachers within in one school district in urban Arizona. In addition, the definition of a middle school for this research was a school that educated students from sixth to eighth grade. The total number of middle schools in the selected urban Arizona school district was six. Each of the six middle schools had a similar number of students. Each middle school had approximately 950 students enrolled during the 2013/2014 school year. In addition, each of the middle school has approximately 45 certified teachers.

There was also one principal at each middle school and each middle school had one assistant principal on staff.

The demographics for the population for the six middle schools in urban Arizona have some similarities and some differences. Each middle school is spread apart from the other middle schools in the district. This made for some similar and different demographics. Four middle schools shared similar characteristics. In addition to the information listed above, two of the four middle schools are classified as Title 1 schools. They have a high number of minority students compared to the other two middle schools with similar demographics in the district. These four schools also have a lower socioeconomic environment compared to the other two middle schools and are spread throughout the district and not located in only one area of the district.

The demographics for the last two middle schools in the district are similar. In addition to the information listed above, these two middle schools are not classified as Title 1 schools. Each middle school is located in the northern portion of the district; one is on the west side of the district and the other is located in the east side of the district. The majority of the student population is Caucasian students. The areas around these two middle schools have a high socioeconomic environment. Similar to the other four middle schools, these two middle schools also have one principal and one assistant principal on staff.

The sample for this study consisted of three schools selected from a population of six qualifying middle schools in one school district in urban Arizona. Each middle school had to meet four criteria to participate in the study; 1) each middle school had to have a minimum of 900 students enrolled during 2013/2014, 2) each middle school had to have

a minimum of 35 certified teachers, 3) each middle school principal had to have at least one year of administrative experience at their particular middle school, and 4) each of the certified teachers at their middle school had to have at least one year of experience under the principal at their school. If a middle school did not match each of these criteria, then they were excluded from the sample. Nontraditional schools did not participate in the research sample to ensure a comparative sample. The schools that were not included had a characterization as private, detention, charter, and kindergarten through eighth grade schools.

The fourth and fifth middle schools were not eligible since the middle school principals were in their first year of administration at their schools. While the sixth middle school qualified, it was deemed not eligible since it was the place of employment of the researcher. The researcher wanted to gain knowledge of the questions in this research in order to provide research-based data so these districts and others like it could improve student achievement (Phillips, 2013).

Once the middle schools, principals, and teachers were screened, and met the criteria to participate in the study, each participant signed a consent form. The consent form allowed the researcher to use their ideas, thoughts, and opinions collected either from a focus group (teachers) or from an interview (principal) in this research paper. The consent form also described the study they were participating in and informed the participants that they could withdrawal from the study at any time. In addition to the consent form, each participant signed a confidentiality statement form. The confidentiality form explained to the participants that the researcher would not disclose the names of the participants in this study. The confidentiality form also explained that

the names of the participants will never disclosed allowing participants to feel comfortable expressing their comments.

Sources of Data

Three types of data used in the qualitative research study came from, 1) focus groups, 2) interviews with principals, and 3) researcher field notes. The use of three sources of data helped ensure that the data collected was accurate in describing the phenomenon, and capture the perspectives and experiences of the study participants. Denzin & Lincoln (2013) explains that field notes can be crucial to any qualitative study, regardless of data collection tool or methods used. In field notes, qualitative researchers record in-depth descriptive details of people (including themselves), places, things, and events, as well as reflections on data, patterns, and the process of research (Cohen et al., 2011). These details form the context and quality control that shape multiple qualitative data points into articulated, meaningful, and integrated research findings. Field notes are a type of personal journal, written, in Thomas Schwandt's (1997) words, “for an audience of one” (p. 115). Thus, they are unique to each researcher, written in the first person and in a free-flowing, spontaneous manner.

The purpose of this qualitative research study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. By focusing on the skillsets, leadership abilities, and actions, a principal incorporated professional development and motivated teachers to attend the workshops. Interviewing principals helped discover how and what they were doing to motivate teachers to attend professional development

opportunities on new technologies. In addition, the discovery of how and what principals were doing to find professional development opportunities for teachers to learn new technologies to improve classroom instruction.

Overall, there were two groups of participants: 36 middle school teachers (12 from each of the three schools), and three principals (one from each school). There were nine focus groups with four teachers from the same middle school participating in each focus group. There were three principal interviews. Each of the three principal interviews were conducted separately. In addition, field notes were taken during and after each focus group and principal interview.

Validity

Validity is important in any qualitative study. The attributes of the research were factual and could be independently conducted or repeated by another researcher. In a qualitative study, addressing data validity might be through the honesty, depth, richness, the participants approached, and the disinterestedness or objectivity of the researcher (Cohen et al., 2011). The focus group and principal interviews were tested using a field test. The field test was conducted at one of the middle school not selected as a sample for the study. The focus groups questions were asked to participating teacher and the principal interview questions were asked to the school principal. The qualitative validity meant that the researcher checked for the accuracy of the findings by employing certain procedures (Cooper, 2009). The participants in this study provided the researcher with valid information, obtained during the focus groups, and personal interviews with the principals. Inferences came from analyzing and coding responses offered by the teachers on their overall satisfaction with the principal leadership style and professional

development activities (Gumus, 2013). The researcher asked several questions to the research participants and asked that they be truthful, honest, and forthright with their thoughts and opinions. Cohen et al. (2011) described that qualitative data was valid through the depth, honesty, scope, and richness of the data obtained. The participants in this study provided information that was valid during the focus groups. This was validated from the results of the field test on the focus group and interview questions. Validity also indicated that data employed throughout the study were dependable (Etowa, 2005). It also referred to the attribute of the research study rooted in contexts and people outside of the researcher (Etowa, 2005).

There were two distinct categories of validity: one was internal and the second was external. Lindzey at el. (2011) described internal validity as the confidence with which the researcher can draw conclusions from the research results. This study explained the leadership style of the principal affected or motivated teachers to seek out professional development opportunities on new technologies. External validity referred to the extent in which a causal relationship, once identified in a particular setting with particular research participants, can safely be generalized to other times, places, and people (Lindzey et al., 2011). Trochim, Kane, Chiang, Whitaker, Lawrence, Dietrich, Christopher, and Suda, (2009) identified external validity as the degree to which the research findings can generalize other people, or situations, or at other times.

Reliability

The technique by which a qualitative study can be evaluated or regarded reliable is to check whether how and to what extent consistent methods and procedures are used (Merriam, 2009). Merriam (2009) continues to explain, with proper tabulated participant

observation, ethnography, qualitative interviews, focus groups and conversation analysis research, tapes and transcripts are open to supplementary examination by both researchers and readers; this would allow both to verbalize their ideas about the standpoint of the people who have been studied. Also for reliability to be calculated, it is mandatory for qualitative researchers to document their procedure and to reveal that categories have been used consistently. It is possible for a qualitative research to be properly reliable. Since the duplication of these procedures was simple, the procedures of this study can also be repeated and similar conclusions reached. The researcher utilized a qualitative approach and the data was processed, analyzed, and presented. NVIVO 9 analyzed the open-ended responses from the focus groups and principal interviews.

Asking a question more frequently, leads to a higher chance that the participants' responses are reliable (Gumus, 2013). Reliability referred to the consistent quality and appropriateness of the research procedures, such that other researchers are able to recognize changes in the processes and concepts development (Etowa, 2005). The researcher established the same standards for each focus group and principal interview to gain constancy.

The entire population of the middle school participants in this study represented the responses from the focus groups and principal interviews. In addition, the data was a reflection of an overall picture of the entire population. The amount of responses from the participants in this study had an effected on the justifiability of the study (Thompson, 2009). In all studies, the researcher understands the risk of receiving insufficient data to conclude that the study had the highest validity, reliability, and justification. This did not mean the study was not significant.

Data Collection Procedures

Before any data was collected, the researcher gained the approval from IRB/AQR allowing data to be collected. The researcher also gained approval to collect data from one school district in urban Arizona from district's superintendent. Once the superintendent's approval was obtained, the researcher gained the approval of the three middle school principals to conduct the focus groups at their schools and gained their approval for interviewing. After all of the above approvals, the researcher started soliciting teachers to participate in the focus groups at their school. An email was sent to the entire staff of certified teachers at each of the three middle schools. The teachers that were interested were asked screen questions to see if they were eligible to participate in the study. The questions the teachers were asked; 1) how long have you been teaching, 2) how long have you worked for the principal at your school, 3) do you participate in professional development, and 4) do you use technology in your classroom. If the teachers answered the above questions correctly, then the researcher stated the title of the study and described the study. After the description of the study, the teachers were asked if they would like to be a participant. If the teacher said, "yes", then they were given a letter and a number and were signed up to participate in a focus group at their middle school. This same process occurred for all the participants at all three middle schools.

At the beginning of each focus group and principal interview, the participants were given two documents. The first documents was a consent form (Appendix C) allowing the researcher to audio record the focus group and principal interview and use their comments from the focus group in the research study. In addition, the consent form explained that the participants could withdrawal from the study at any time. The second

document was a confidentiality statement (Appendix D). This stated told the participants that they were not allowed to talk about the focus group or principal interview with any other teacher or principal. This allowed teachers and principals to remain anonymous throughout the data collection process. Once the documents were signed, each participant was given a letter and a number. The letters and numbers given to the participants were used in the study instead of the participants' name. Each participant received a number, participant I, participant II, etc. Each middle school in which the focus groups or principal interview occurred also had a number, middle school I, middle school II, etc. This assisted the researcher and organized the participant's statements from each focus group and their middle school. Only the researcher knows what letter and number was assigned to which particular teacher in a focus group. This process was performed at the start of each focus conducted for this study.

The first method of collecting data came from the audio-recorded focus groups. The nine focus groups were recorded and the participants' information was collected. Focus groups were more appropriate for the qualitative approach because the attention of the focus group was on the language and opinions of the participants rather than on numeric data (Maxwell, 2013). At the start of each focus group, the researcher turned on the recording device, Livescribe 8 GB Echo Smartpen, and recorded all the teachers' responses from a series of the open-ended questions (Appendix I). When the focus group was complete, the researcher stopped recording. Each focus group lasted approximate 60 to 90 minutes in length.

The second method of collecting data came from the audio-recorded principal interviews. The three principal interviews were recorded and the participants'

information was collected. Interviews were among the common qualitative data collection methods (Onwuegbuzie, Leech, & Collins 2010; Liamputtong, 2011). Interviews have different forms and methods that all seek to obtain data by exploring individuals' experiences (Liamputtong, 2011). At the start of each principal interview, the researcher turned on the recording device, Livescribe 8 GB Echo Smartpen, and recorded all the principals' responses from a series of the open-ended questions (Appendix J). When the principal interview was complete, the researcher stopped recording. Using in-depth interviews focused on the perspective of an interview as a central factor in the process that supported the appropriateness of the qualitative research method for the study (Holtslander, Racine, Furniss, Burles, & Turner, 2012). Each principal interview lasted approximately 45 to 60 minutes in length.

The third method of collecting data came from the field notes from the researcher. Once the focus groups and principal interviews concluded, the researcher recorded both the observations and experiences that occurred during the interview process in the researcher journal/ field notes. A researcher field journal was utilized to record observations of the surroundings, faculty reactions to the interview questions, including body language during the process and the researcher's perceptions about the interview process, which would become an essential element in data collection (Delunas & Rouse, 2014; Polkinghorne, 2005). There are four steps in the field note/ researcher journal process that are key to the credibility of the field notes process: a) take notes regularly and promptly, 2) write down everything no matter how unimportant it may seem at the time; c) try to be as inconspicuous as possible in note taking, an 4) analyze notes frequently (Denzin & Lincoln, 2011, p. 708).

At the end of each focus groups and principal interviews, the researcher asked participates if they wanted to change or revise their statements conducting member checking before the focus group or interview adjourned. Angen (2000) explains that member checking is when data, analytic categories, interpretations, and conclusions are tested with members of those groups from whom the data were originally obtained. This can be done both formally and informally as opportunities for member checks may arise during the normal course of observation and conversation (Angen, 2000). Typically, member checking is viewed as a technique for establishing the validity of an account (Lincoln & Guba, 1985).

Once a focus group and principal interview was conducted, audio recordings were backed up in case the data was lost or a malfunction occurred and the data was lost. The data was stored in a secured and locked area to ensure it authenticity. The researcher was the only person to have access to the data collected. This ensured the data was secure and valid.

Data Analysis Procedures

The process used for the analyses of the data was one used by Merriam (2009) in *The Step-by-Step Process of Analysis.* In this process, the use of the word category is the same as theme, pattern, finding, or an answer to a research question. During each focus group and principal interview, the responses to numerous questions assisted in answering what the research questions are seeking to discover. During each of the focus groups and principal interviews, the comments of all participants were audio recorded using a Livescribe 8 GB Echo Smartpen. The Livescribe 8 GB Echo Smartpen was a recording

device that recorded what the teachers in the focus groups and the principals stated during their interviews. The researcher transcribed all of the audio recordings.

The first step in this process was called category construction. Category construction began with the first reading of any document, i.e. transcripts from each focus group and principal interview; field notes from observations. Analyzing the data took place on multiple forms of coding. Merriam (2009) states, "Beginning the analysis is as expansive as you want in identifying any segment of the data that might be useful. Because you are being open to anything possible at this point, the form of coding is often called open coding" (p.178). The process of constructing categories or themes began with the assignment of categories - called axial coding. Throughout the process, notes, comments, and terms were written down for each set of transcripts. The notes were compared for consistency and for reoccurring themes or comments. The list was merged into one master list. This process was followed for each set of transcripts.

After each focus group, the coding and analysis of the data found possible trends that answered the research questions. This process occurred after each focus group. This way trends could develop based on each focus group, all of the focus groups from one middle school, and all of the middle schools together. This was the same process for each of the focus groups and the other two middle schools to participate in this study. Upon completion of all the focus groups, the researcher transcribed, coded all of the data, and analyzed it for trends that occurred in the three middle schools.

The second step was the sorting of categories and data. Using codes, field notes, and initial data, many original categories will become sub-categories (Merriam, 2009). Multiple revisions were made, as the information was better understood, then sorted by

categories. File folders or trays were labeled to sort the information according to those themes. In reviewing the coding, groupings and field notes, each unit of data will be separated in accordance to the proper category (Merriam, 2009). Each unit of data will include original identifying code such as respondents name, line numbers of excerpt, etc. The computers and data base programs (Word and Excel) were used to keep order. In continuing the analysis of the data, Merriam (2009) recommended the evaluation of data to further refine the categories with interviews, observations and or documents from the findings.

The third step was naming the categories. Merriam (2009) stated that "the category names can come from at least three sources: The researcher, the participants, or the sources outside the study such as literature" (p. 184). Qualitative research was based on fact and the categories should be responsive to the purpose of the research. The data was mutually exclusive to the greatest extent possible.

The fourth step in the analysis of data was the number of categories. The number of categories depended on the amount of data and focus of the research. At the beginning of the analysis, there were many categories. By this phase, the categories turned into sub categories gaining substance and definition (Merriam, 2009). The transcribed data from the focus groups and principal interviews was loaded into a qualitative data analysis program called NVivo 10 to be analyzed, interpreted, and identify different trends. NVivo 10 was software that supported qualitative research studies. In addition, NVivo 10 analyzed data collected from focus groups and principal interviews and; 1) uncovered subtle connections from the data collected, 2) justified the findings, and 3) created visuals

to make interpretation easy. Content analysis and identification of themes assisted in answering the research questions.

The fifth step was based on theory. There were many ways to arrange data analysis in a qualitative study to become more theoretical. Merriam (2009) suggested that this step allow the researcher to bring those concepts to a more abstract level in an effort to describe the phenomena. When theorizing the data, the researcher began making inferences to future activities, which explained some aspects of practice. Theorizing was defined as "the cognitive process of discovering or manipulating abstract categories and the relationships among those categories" (LeCompte, 1998, p. 11). At this stage, analysis created the formation of categories that left only theory to account for the immense number of phenomena and explain their relation (Merriam, 2009).

The research questions guided the analysis of the data. In addition, other words presented themselves during the coding process that the research questions were not looking to find. One of the first steps of the qualitative analysis was for the researcher to review the research questions. The data analysis from the principal interviews followed the same four steps as described above. The researcher individually interviewed the principals. When all of the interviews were completed, the researcher followed the steps listed above for data analysis.

Ethical Considerations

Participation in the study was voluntary and participants could withdrawal from the study at any time without penalty. According to the Belmont Report (1978), the three areas of respect for person, beneficence, and justice need to be considered when selecting and working with participants in a research study. In this study, all participants were

treated fairly and respectfully. All participants decided by their own judgment to participant in this study. There were no known risks from taking part in this study, but in any research, there was some possibility that study participants may be subject to risks. Although there may be no direct benefits to participants, the possible benefits of study participation in the research helped identify how to build a stronger school culture that encouraged student achievement.

All information obtained in this study is strictly confidential and stored in a locked area only accessible by the researcher. Confidentiality is extremely important so the participant know that their name will not be attached to their comments. Each participant in all of the focus groups was given a number to be referenced by instead of their name. This way no one knows the comments of another participant. To protect the identity amongst the participants in each focus group, every participant signed a confidentiality statement (Appendix D) stating that they would not disclose the identity of any member of their focus group. In addition to the confidentiality form, each participant also signed an informed consent form (Appendix C) explaining the nature, demands, benefits and any risk of the project. By signing this form, participants agreed knowingly to assume any risks involved. Participation was voluntary and participants were allowed to withdraw consent and discontinue participation at any time without penalty or loss of benefit. By signing the consent form, study participants were not waiving any legal claims, rights, or remedies. Each participant received a copy of his or her signed consent form.

A potential ethical concern that occurred during the data collection process was teachers repeating what a previous teacher stated in the same focus group (Ham, 2010).

The researcher informed all participants that the information shared with the group should be their own thoughts and ideas and to the best of their abilities not to restate another participants thoughts. Since more than one focus group occurred at a middle school, the participants of any focus group did not discuss the content with any other teacher at their school. This was also the same for the principals. Each principal did not discuss the contents of their interview with other principals. By signing the confidentiality statement and consent form, all participants acknowledged they would not talk or discuss their comments or other participant's comments with other staff members. To get the best possible responses to the interview questions, the participants were asked to be honest and forthright with their responses.

The only potential conflict of interest to the study was the level of the working relationship the participant had with their principal. If a participant had a friendship outside of school with their principal, the participant may have only disclosed information that is in the best interest of the principal. The researcher explained to each participant in the focus group that there were no names used during the focus group. Privacy was of high regard, so the participants were at ease to speak their true thoughts, opinions, and ideas. With the guidance of Can (2009), the identities of the middle schools, principals, and the teachers who participated in this professional development investigation remained confidential by de-identification. Each school, teacher, and principal used an alias or number during the data collection. The reporting of the results of the study were ethical and without bias or prejudice to any leadership style or method of professional development.

Limitations

One limitation to this study was that qualitative research usually involves relatively small numbers of participants, and this can mean that it is less likely to be taken seriously by other academic researchers or by practitioners and policy makes. Qualitative research often depends on the individual judgment of the researcher and is heavily dependent on the researcher's interpretation (Yu, Jannasch-Pennell, & DiGangi, 2011). Although this fact allows for research to reflect the complexity of a particular situation or the knowledge of the researcher, it can also allow the researcher's subjective opinions to bias the information presented or the conclusion drawn (Yu, Jannasch-Pennell, & DiGangi, 2011). A second limitation of qualitative research involved the ability to generalize results to other populations. Yu at el (2011) explains that because qualitative research is often exploratory and often tailored to the needs of one population (as when a researcher adapts an interview question to participant's prior knowledge, or when case-study analysis is specific to the person or situation under study), it is difficult to extrapolate findings to more broad populations or to draw general or far-reaching conclusions from the findings of a qualitative study.

A second limitation to this study is that focus groups are not as efficient in covering maximum depth on a particular issue because the researcher used focus groups to collect data quickly. A particular disadvantage of a focus group is the possibility that the members may not express their honest and personal opinions about the topic at hand (Tewksbury, 2009). They may be hesitant to express their thoughts, especially when their thoughts oppose the views of another participant. In addition, focus groups dominated by one or two participants can skew data and may cause others to hesitate in sharing their

insight. Another drawback to focus groups is that some individuals are shy by nature and do not readily address large groups or strangers (Tewksbury, 2009).

A third limitation of this study came from the personal interviews with the principals. During the interviews, the participants may say more than they intended to say (Gay, Mills, & Airasian, 2011). This can result in a very time consuming interview. In addition, qualitative interviewing requires considerable skill and experience. Gay et al., (2011) explains the interviewer may not have much experience in performing interviews. Also, a qualitative interview is more subjective than quantitative interviews because the evaluator/researcher decides which quotes or specific examples to report (Gay, Mills, & Airasian, 2011).

Summary

Chapter 3 has presented a discussion on the methodology that was used in this study. The focus groups and the interviews protocol used to examine the perceived leadership styles, teacher motivation, and professional development were discussed. The data analysis schema, participants/population/sample, and data collection procedures were also presented. The study provided a better understanding of the role of principal leadership style, teacher motivation, and professional development practices in the integration of technology in classroom. This provided support for specific professional development that enabled middle school teachers to use technology effectively in classrooms.

The participants of this study came from three middle schools in one school district in urban Arizona. The participants of this study were teachers and principals. The population of this study was all certified teachers and principals at the middle schools

within the one school district in urban Arizona. From that population, a sample size of three middle schools matched the criteria to participate in the study. Those three middle schools were selected from the six middle schools within this district. In addition, a sample size of 36 teachers from the three middle schools participating in the study, twelve from each middle school. Lastly, a sample of three principals, one from each of the selected middle schools, participated in the study. In total, there were two groups of participants: 36 middle school teachers (12 from each of the three middle schools), and three principals (one from each school).

After the participants were selected and signed the consent form and confidentiality statement, focus groups and principal interviews were scheduled to start collection data. The data collected for this study came from three different sources; 1) focus groups with teachers, 2) interviews with principals, and 3) field notes from each of the focus groups and principal interviews. Each focus group and principal interview was asked a series of open-ended questions. The responses from the focus groups and principal interviews were recorded and later transcribed. In addition, after each focus group and principal interview, the researcher wrote down field note to describe the feeling, mood, interactions that took place, and the overall experience of the focus group or principal interview. The association of focus groups and interview methods with the standing of qualitative inquiry was an important factor that drove the selection of data collection methods (Maxwell, 2013).

The data was analyzed using a two-stage analysis process. The first stage of coding was hand coding. Coding by hand made the researcher become physically involved with the data, touching pages, sorting sheets of notes, grouping notes, counting

pages dedicated to the various concepts, and connecting ideas (Cooper, 2009). The second stage of analysis was thematic coding. The basic purpose of thematic coding (or "tagging") is data retrieval. It is used to classify text according to theme, so that later on, when doing analysis, it easy to retrieve all passages that relate to a given topic (Cooper, 2009). The essence of thematic coding is classification. A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data (Saldana, 2013).

Chapter 4 presents the research findings, data collection, and data analyses. The process that was followed in interviews and focus groups was explained in an analytical sense that records the researcher's observations along with themes and quotes that were created in data analysis. Chapter 4 also included a clarification of the process used to establish the linkage among quotes, themes, and research questions. Examples of quotes from principals and teachers' responses that support the created themes are provided in the chapter. Chapter 4 illustrates the process of data interpretation that was incorporated not only the scientific sense of analysis but also used the researcher's experience and analytical sense (Schiellerup, 2009).

In Chapter 5, the data collected for this study aligned with the four research questions identified in this study. The interpretation of the data for each of the research questions are discussed, and conclusions were made. Implications of the study are also discussed. In addition, recommendations were made for future studies.

Chapter 4 – Data Analysis and Results

Introduction

The purpose of this qualitative research study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Looking at the leadership style of the principals, and the opportunities they provide for PD to their teachers, assists and furthers the understanding of the skills needed to build and maintain a learning environment that promotes student achievement.

Data collection for this study was derived from focus groups consisting of 12 teachers from the three participating middle schools, three face-to-face interviews with the principals from the same three middle schools, and the researcher's field note of observations and experiences during the focus groups and interviews. Focus groups were conducted to gain the teacher's perception on how their principal motivates them. Interviews with principals were conducted to gain the principal's perception on how they motivate their teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction. The process used to analyze the data acquired used coding procedures and two types of qualitative data analysis procedures: 1) hand coding (preliminary) of data transcribed from focus groups and principal interviews, and 2) use of NVivo software. Both male and female participants were included in the study. To maintain anonymity during data collection, each participant was assigned a focus group number and a participant number, which was

used consistently in discussion of all participant responses, across all the interviews that were conducted.

The formulation of the research questions was to support and better clarify the connection between principal leadership styles, how principals influence, and motivate their teachers to seek out professional development opportunities. This study was designed to provide answers to the four research questions. The first research questions targets teachers to discover how their principal motivates them. The second research question asks how principals promote collaboration amongst teachers. The third research question was designed to learn how teachers use new technology in the classroom to improve instruction. The last research question discovers how principal follow up to verify that teachers have met the professional development requirement.

This chapter includes an analysis of the validity of the data and an explanation of how the raw data relates to the questions asked in the study. In addition, an analysis of the participants' focus groups and principal interview responses were organized and coded around the four different research questions. Lastly, a summary was provided of the findings from the three sources of data collected; focus groups, principal interviews, and the researcher's field note of observations and experiences during the focus groups and interviews.

Descriptive Data

Participants in this study consisted of teachers and principals from three middle schools in one school district in urban Arizona. Overall, there were two groups of participants: 36 middle school teachers (12 from each of the three schools), and three principals (one from each school). There were nine focus groups with four teachers from

the same middle school participating in each focus group. Each focus group lasted approximate 60 to 90 minutes in length. There were three principal interviews. Each of the three principal interviews was conducted separately and last approximately 45 to 60 minutes in length. In addition, field notes were taken during and after each focus group and principal interview.

The individuals that participated in the study have more than one year of experience working in the same middle school together. All participants were provided information regarding involvement in the study and participation was voluntary, as described in the consent form prior to research implementation. All participant names were coded and kept confidential. Participant and case specific information was de-identified when presented in documents. The questions and responses were recorded and transcribed to create a permanent record of the information. All data including the transcripts was stored securely in a locked file cabinet. Summaries of each middle school participant's work experience are shown in Figure 1, Figure 2, and Figure 3. Figure 4 displays all three middle school teachers' number of years of experience. Figure 5 shows a summary of the three principals' work experience.

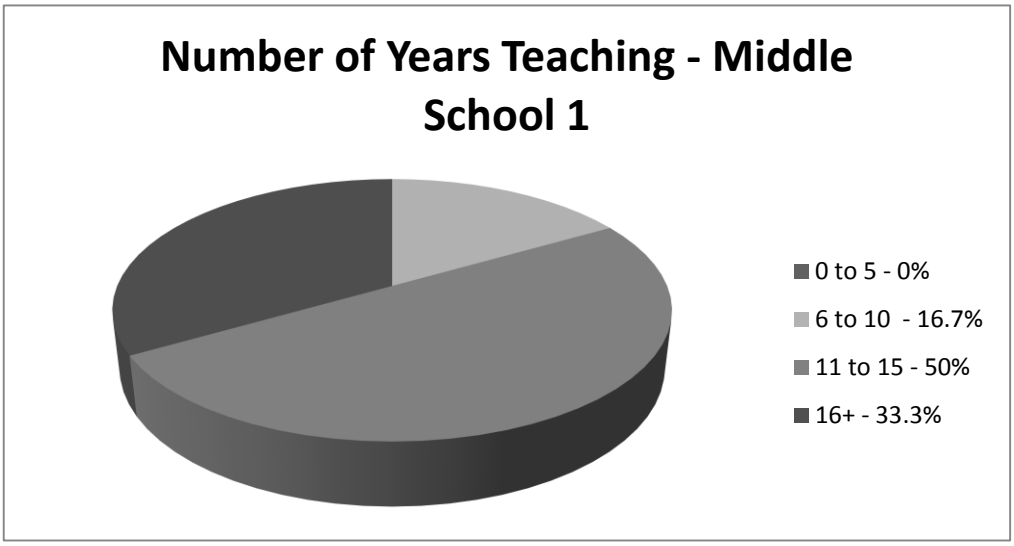

Figure 1. Middle School 1 Participants' Work Experience

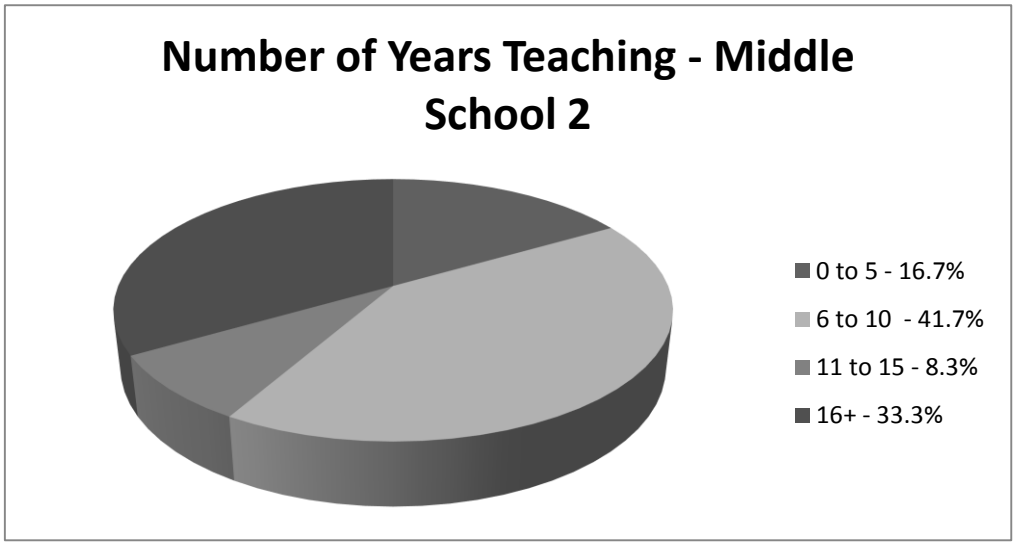

Figure 2. Middle School 2 Participants' Work Experience

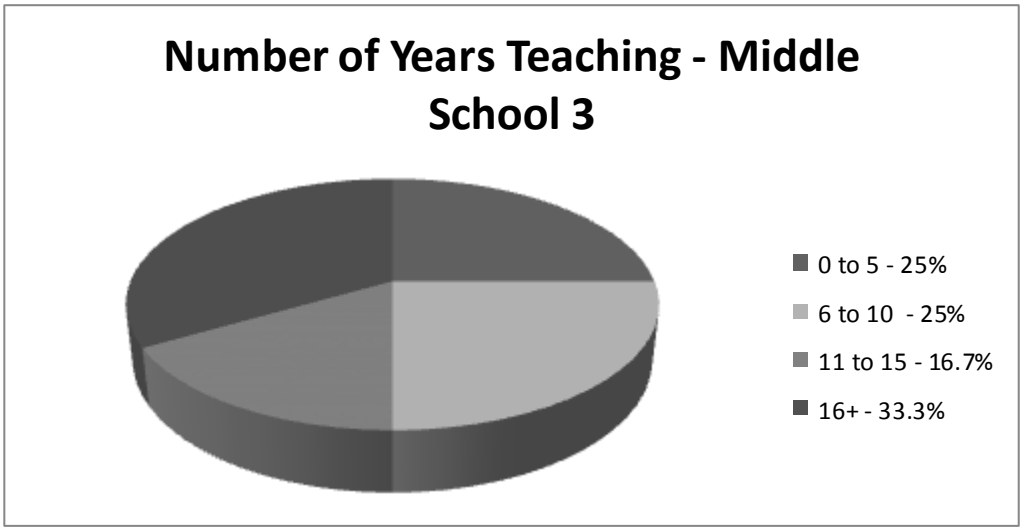

Figure 3. Middle School 3 Participants' Work Experience

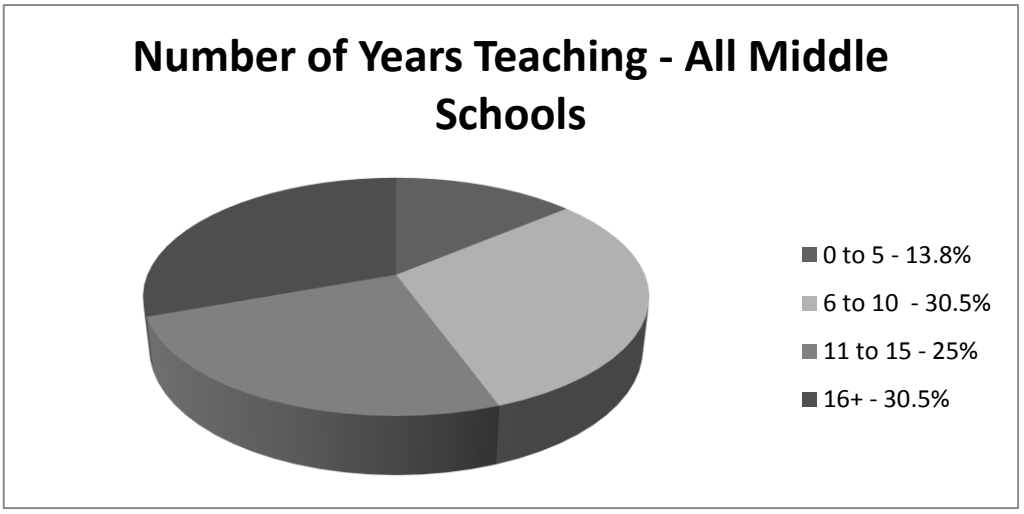

Figure 4. All Middle School Participants' Work Experience

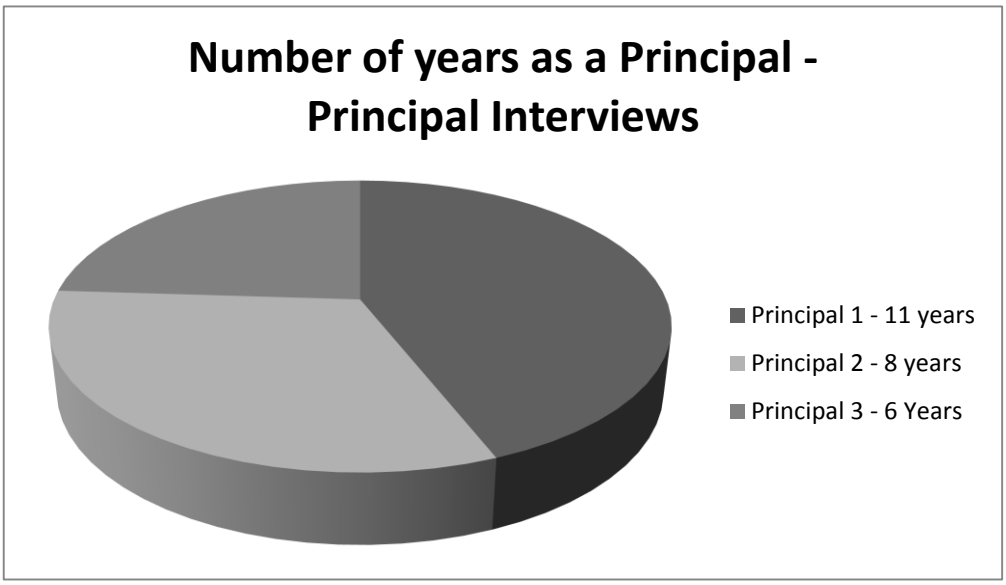

Figure 5. Principals' Work Experience

It was required that all teachers had at least one year of teaching experience and had the same principal the previous year. In addition, it was required that all principals had at least one year of administrative experience at their middle schools. This was a requirement because the teachers and principals would be able to answer the questions relating to their school's teachers and principal. Fortunate for this study, the 86% of the participants had over five years of teaching experience and all of the principals had more than five years of administrative experience.

Some characteristics that were noted from the researcher's field notes were the gender and age of the participants from each middle school. Tables 1, 2, and 3 display the genders and ages of all the participants from each middle school.

Table 1

Gender and Age of Participants from Middle School 1

Participant	**Gender/Age**
1	M/41
2	M/51
3	F/44
4	M/40
5	M/48
6	F/38
7	M/54
8	M/45
9	F/50
10	F/40
11	F/51
12	F/52

Table 2

Gender and Age of Participants from Middle School 2

Participant	**Gender/Age**
1	M/39
2	F/55
3	F/30
4	F/33
5	M/40
6	F/42
7	F/39
8	F/43
9	F/32
10	M/54
11	F/49
12	F/45

Table 3

Gender and Age of Participants from Middle School 3

Participant	Gender/Age
1	F/50
2	F/57
3	M/39
4	F/29
5	F/44
6	M/40
7	F/38
8	F/46
9	M/38
10	F/55
11	F/47
12	F/41

In all situations, processes were in place to ensure the accuracy of the data. The focus groups and principal interviews were audio recorded in an effort to transcribe the actual conversations of the participants. To avoid personal bias, detailed records were kept and recorded throughout the process as it happened. In addition, field notes were created after each focus group and principal interview to capture the mood, interactions, and feelings of the participants.

Data Analysis Procedures

The process used for the analyses of the data was one used by Merriam (2009) in his book, *The Step-by-Step Process of Analysis.* In this process, the use of the word category is the same as theme, pattern, finding, or an answer to a research question. During each focus group and principal interview, the responses to numerous questions assisted in answering what the research questions are seeking to discover. During each of the focus groups and principal interviews, the comments of all participants were audio recorded using a Livescribe 8 GB Echo Smartpen. The Livescribe 8 GB Echo Smartpen

was a recording device that recorded what the teachers in the focus groups and the principals stated during their interviews. The researcher transcribed all of the audio recordings. In addition, after the data was transcribed, the researcher listened to the audio recordings while rereading the transcription to verify accuracy.

The first step in this process was called category construction. Category construction began with the first reading of any document, i.e. transcripts from each focus group and principal interview; field notes from observations. Analyzing the data took place on multiple forms of coding. Merriam (2009) stated, "Beginning the analysis is as expansive as you want in identifying any segment of data that might be useful; because you are being open to anything possible, the form of coding is often called open coding" (p.178). The process of constructing categories or themes began with the assignment of categories - called axial coding. Throughout the process, notes, comments, and terms were written down for each set of transcripts. The notes were compared for consistency and for reoccurring themes or comments. The list was merged into one master list. This process was followed for each set of transcripts.

After each focus group, the coding and analysis of the data found possible trends that answered the research questions. This process occurred after each focus group. This way trends could develop based on each focus group, all of the focus groups from one middle school, and all of the middle schools together. The same process was followed for each of the focus groups participating in this study. Upon completion of all the focus groups, the researcher coded all of the data and analyzed it for trends that occurred in the three middle schools.

The second step was the sorting of categories and data. Using codes, field notes, and initial data, many original categories will become sub-categories (Merriam, 2009). File folders or trays were labeled to sort the information according to those themes. In reviewing the coding, groupings and field notes, each unit of data will be separated in accordance to the proper category (Merriam, 2009). Each unit of data will include the original identifying code such as respondents name, line numbers of excerpt, etc. The computers and data base programs (Word and Excel) were used to keep order. In continuing the analysis of the date, Merriam recommends the evaluation of data to further refine the categories with interviews, observations and or documents from the findings.

The third step was naming the categories. Merriam stated that "the category names can come from at least three sources: The researcher, the participants, or the sources outside the study such as literature" (p. 184). This qualitative research was based on the thoughts, ideas, and opinions of teachers and principals. The data was mutually exclusive to three middle schools in one school district in urban Arizona. The categories were identified to the point that the information contained in each category was sensitive in the name to what was in the data.

The fourth step in the analysis of data was the number of categories. The number of categories depended on the amount of data and focus of the research. At the beginning of the analysis, there were many categories. By this phase, the categories turned into sub categories gaining substance and definition (Merriam, 2009). The transcribed data from the focus groups and principal interviews was loaded into a qualitative data analysis program called NVivo 10 to be analyzed, interpreted, and identify different trends. NVivo 10 was software that supported qualitative research studies. In addition, NVivo 10

analyzed data collected from focus groups and principal interviews and; 1) uncovered subtle connections from the data collected, 2) justified the findings, and 3) created visuals to make interpretation easy. Content analysis and identification of themes assisted in answering the research questions.

The fifth step was based on theory. There were many ways to arrange data analysis in a qualitative study to become more theoretical. Merriam suggested that this step allow the researcher to bring those concepts to a more abstract level in an effort to describe the phenomena. When theorizing the data, the researcher began making inferences to future activities, which explained some aspects of practice. Theorizing was defined as "the cognitive process of discovering or manipulating abstract categories and the relationships among those categories" (LeCompte, 1993, p. 11). At this stage, analysis created the formation of categories that left only theory to account for the immense number of phenomena and explain their relation (Merriam, 2009).

The research questions guided the analysis of the data. In addition, other words presented themselves during the coding process that the research questions were not looking to find. One of the first steps of the qualitative analysis was for the researcher to review the research questions. The data analysis from the principal interviews followed the same four steps as described above. The researcher individually interviewed the principals. When all of the interviews were completed, the researcher followed the steps listed above for data analysis.

Validity

Validity was important in any qualitative study because it means the degree to which the study accurately answers the questions it was intended to answer. The

attributes of the research were factual and could be independently conducted or repeated by another researcher. In a qualitative study, addressing data validity might be through the honesty, depth, richness, the participants approached, and the disinterestedness or objectivity of the researcher (Cohen et al., 2011). The focus group and principal interviews were tested using a field test. The field test was conducted at one of the middle school not selected as a sample for the study. The focus groups questions were asked to participating teacher and the principal interview questions were asked to the school principal. The qualitative validity meant that the researcher checked for the accuracy of the findings by employing certain procedures (LeCompte, 1993). The participants in this study provided the researcher with valid information, obtained during the focus groups, and personal interviews with the principals. Inferences came from analyzing and coding responses offered by the teachers on their overall satisfaction with the principal leadership style and professional development activities (Gumus, 2013). The researcher asked several questions to the research participants and be truthful, honest, and forthright with their thoughts and opinions. Cohen et al. (2011) described that qualitative data was valid through the depth, honesty, scope, and richness of the data obtained. The participants in this study provided information that was valid during the focus groups. This was validated from the results of the field test on the focus group and interview questions. Validity also indicated that data employed throughout the study were dependable (Etowa, 2005). It also referred to the attribute of the research study rooted in contexts and people outside of the researcher (Etowa, 2005).

There were two distinct categories of validity: one was internal and the second was external. Lindzey at el (2011) described internal validity as the confidence with

which the researcher can draw conclusions from the research results. This study explained the leadership style of the principal affected or motivated teachers to seek out professional development opportunities on new technologies. External validity referred to the extent in which a causal relationship, once identified in a particular setting with particular research participants, can safely be generalized to other times, places, and people (Lindzey et al., 2011). Trochim (2009) identified external validity as the degree to which the research findings can generalize other people, or situations, or at other times.

Reliability

The technique by which a qualitative study can be evaluated or regarded reliable is to check whether how and to what extent consistent methods and procedures are used (Merriam, 2009). Merriam (2009) continues to explain, with proper tabulated participant observation, ethnography, qualitative interviews, focus groups and conversation analysis research, tapes and transcripts are open to supplementary examination by both researchers and readers; this would allow both to verbalize their ideas about the standpoint of the people who have been studied. Also for reliability to be calculated, it is mandatory to the qualitative researchers to document their procedure and to reveal that categories have been used consistently. It is possible for a qualitative research to be properly reliable. Since the duplication of these procedures was simple, the procedures of this study can also be repeated and similar conclusions reached. The researcher utilized a qualitative approach and the data was processed, analyzed, and presented. NVIVO 9 analyzed the open-ended responses from the focus groups and principal interviews.

Gumus (2013) stated, by asking a question more frequently, the higher the chances the response were reliable. Parkinson & Drislane (2011) shared, that the

responses from the participants toward the questions were as honest as possible. Reliability referred to the consistent quality and appropriateness of the research procedures, such that other researchers are able to recognize changes in the processes and concepts development (Etowa, 2005). The researcher established the same standards for each focus group and principal interview to gain constancy.

The entire population of the middle school participants in this study represented the responses from the focus groups and principal interviews. In addition, the data was a reflection of an overall picture of the entire population. The amount of responses from the participants in this study had an effected on the justifiability of the study (Thompson, 2009). In all studies, the researcher understands the risk of receiving insufficient data to conclude that the study had the highest validity, reliability, and justification. This did not mean the study was not significant.

Results

This section contains a non-evaluative presentation of the data collected for this study. The summary of the results are presented in the order in which the research questions are listed. Several themes emerged during the analysis of the focus groups, principal interviews, and the researcher's field notes.

Organization of data. The first research question (RQ1) relates to teacher motivation. The information that is described below will display the responses for the focus groups and principal interviews relating to teacher motivation. In addition, Table 7 will provide a visual of the number of responses and percentages from each middle school.

For the second research question (RQ2), the information explains how principals promote collaboration amongst teachers. A table below will reflect the responses of teachers from each of the focus groups and each middle school. The table will provide a visual for the main themes focused on RQ2. These answers are coded for the emerging themes: 1) collaboration, 2) how information is shared, 3) current use of technology, 4) teachers training fellow colleagues, and 5) how information is shared between teachers.

The third research question (RQ3) explains to what extent teacher use of new technology resulting in modification of instruction. The information of how and what uses of technology was being used in the classroom was the focus for this research question; what technology teachers were using, and how they perceive their principal was following up after professional development (PD) workshops have been attended.

The last research question, RQ4, reveals how the requirements for PD are met for the school year. In addition, RQ4 discovers how the information on what the requirements are for PD was explained to the teachers. A table below will provide a visual display of the results to this research question.

Research Question 1 (RQ1). *What principal leadership factors motivate teachers to seek out professional development opportunities on the use of new technologies that facilitate learning in the classroom?* Prior to commencement of the focus groups, copies of the focus group questions were provided to the participants. This allowed teachers to preview the questions asked and start to formulate their responses. The participants were unable to discuss the questions with other participants prior to the focus groups. In addition, at the commencement of each focus group, the researcher

collected the focus group questions from each participant to assure they were not distributed to other teachers.

The first research question began focusing on what motivates each of the participants to seek out PD opportunities on new technology. In addition, the participants were asked about the level of motivation they receive from their principal. Through further prompting and probing, the focus group participants (teachers) continued to clarify 1) how they are motivated, 2) what motivates them, and 3) how their principal motivates them to seek out PD on new technologies. The results of the data collected indicate that the sub-questions provided adequate data to satisfy and support the overall research question within this study.

Focus groups. The first question to answer RQ1 was focus group question number three: *How did your principal motivate you to seek out professional development opportunities on new technologies in the classroom?*

Middle School 1 (MS1). The overall data shows that 75% of the participants from MS1 voiced their principal did not motivate them to seek out PD opportunities. Therefore, 25% of the participants were motivated by their principal to seek out PD opportunities. However, each focus group produced different results. The four participants from MS1-FG1 all (100%) shared the same thoughts; their principal did not motivate them to seek out PD opportunities. Participant 3 states, “There is no motivation at all. I have very little contact with my principal.” Participant 1 also stated, “There are opportunities, but no carrot dangled or motivation to seek out these workshops.” Participant 2 felt, “Principal sends email out about opportunities, but no motivation to

participate," and participant 4 stated, "Not encouraged to seek out professional development opportunities, it's all on your own."

The second focus group MS1-FG2 shared similar thoughts as MS1-FG1. All of the four participants stated their principal does not motivate them. Participants 5 stated, "I get emails, but do not get motivated from the principal." Participant 6, 7, and 8 shared similar thoughts to participant 5; stating, "I receive emails, maybe during the post evaluation process, but my principal does not encourage me to attend," "my principal only make me aware of workshops, but does not motivate," "email to notify me and only on early release days, but not very motivated."

The third focus group MS1-FG3 did not share similar thoughts or opinions as MS1-FG1 and MS1-FG2. Three of the four participants in MS1-FG3 felt motivated by their principal. The only participant from this group that did not feel motivated was participant 9. Participant 9 stated, "The principal offers trainings on campus, but does not encourage me to attend. I may get an email that it is available, but no direct motivation from the principal." On the other hand, participant 10 shared, "my principal is very supportive and motivational when it comes to professional development. The principal has allowed us to take time as well as use school resources to help pay for either training or sub days." Participant 11 stated, "My principal motivates me to seek professional development opportunities by providing a sub day so I can go to a conference and not have to worry about using one of my own days. In addition, the principal supports me whenever I want to try something new, like a new program or technology in my classroom." Lastly participant 12 said, "The principal is motivational and knowledgeable with the opportunities offered by the district and will send out reminders of what is being

offered and when. The principal works with our PTO in offering money for teachers to attend workshops if there is a cost involved. The principal and PTO were able to pay for all the science teachers to attend one day at the National Science Convention in November."

Figure 6 below gives a visual of the responses for all of the twelve participants from MS1 whether or not they perceived that their principal motivates them to seek out PD workshops.

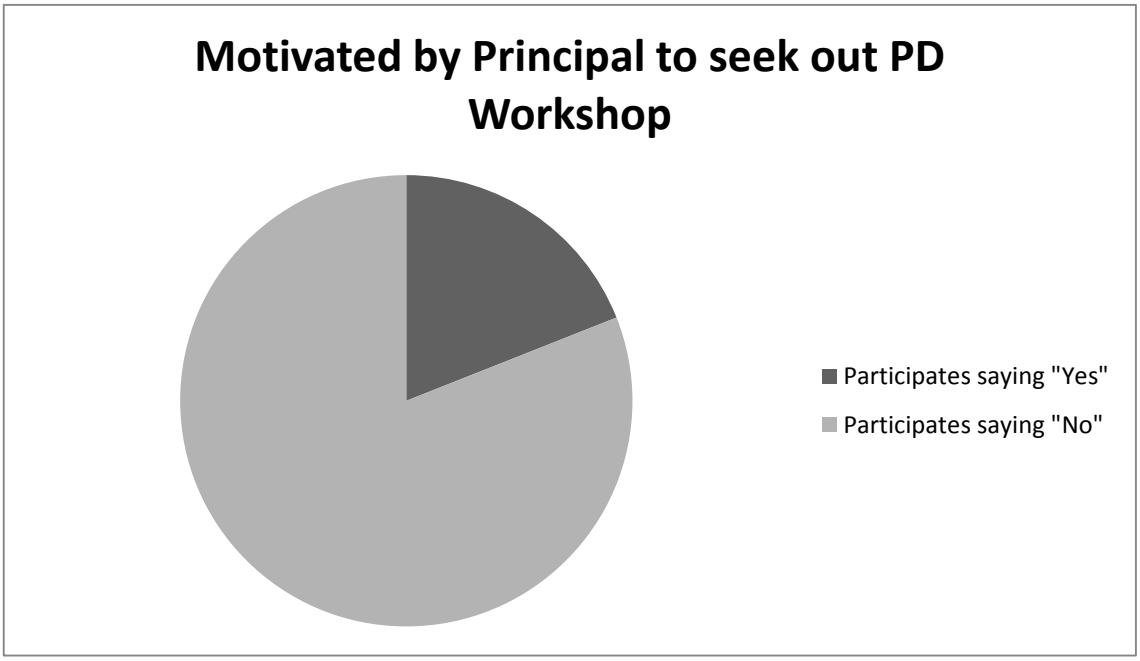

Figure 6. MS1 Motivation to Seek Out PD Workshops

Middle School 2 (MS2). The overall data shows that the participants were mixed in their opinions if their principal motivated them to seek out PD opportunities. One thing that did present itself in the collection of data from MS2 is that some participants stated they were "self-motivated" and did not state whether their principal does or does not motivate them, this is a response the researcher did not expect to hear from the

participants of this study. The participants ofMS2-FG1 all shared the same thoughts and opinions. Participant 1 stated, “There has been no motivation to seek out PD.” Participant 2 said, “My principal listens to my request. I am more self-motivated to better myself.” “I am not sure that they get motivated by their principal,” was the comments from participant 3. Participant 4 stated, “There has been no motivation.”

The participants of MS2-FG2 varied with their response with participant 5 the only member of this focus group not to feel motivated by their principal. Participant 5 stated, “It’s more informed than motivated. The principal sends out email, but I never hear from him.” While Participant 6 was the only member in the focus group to be self-motivated, stating that, “I am self-motivated. I have a science coordinator and a gifted coordinator that finds and solicits training.” The last two participants felt motivated by their principal. Participant 8 said, “I love my principal because he understands that we are being asked to do more work and deal with more students than ever before, so unlike former administrators, he does not pressure us to take on extra PD.” Finally, Participant 7 stated, “He emails us, provides opportunities for PD, and encourages us to attend.”

The final focus group (FG3) at MS2 displayed three of the participants were motivated by their principal, while one participant was self-motivated. Participant 9 commented, “My principal occasionally sends emails, but also follows up about upcoming professional development opportunities and encourages me to attend.” Participant 10 and 11 shared similar comments, “My principal has expressed the general expectation of excellence. In addition, he does occasional walkthroughs and makes it clear that he is looking for technology implementation.” “He also offers pay for PD on half days.” Participant 12 responded with the comment, “I am self-motivated.”

Figure 7 below gives a visual of the responses for all of the twelve participants from MS2 whether or not they perceived that their principal motivates them to seek out PD workshops.

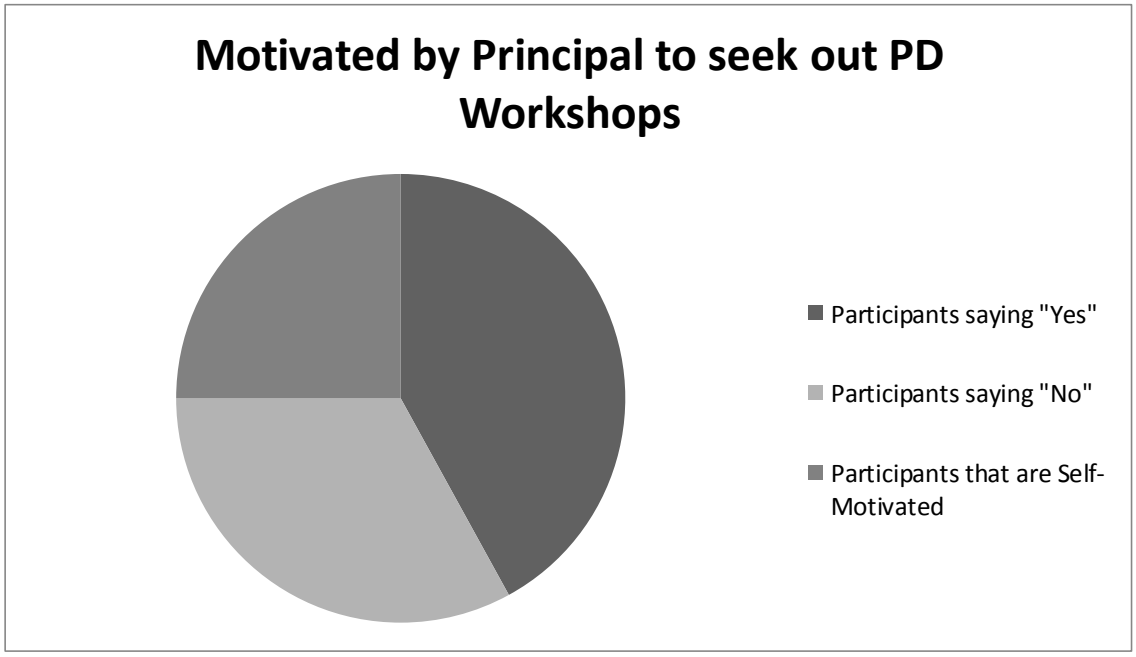

Figure 7. MS2 Motivation to Seek Out PD Workshops

Middle School 3 (MS3). The overall data shows that 84% of the participants from MS3 voiced their principal did motivate them to seek out PD opportunities. Therefore, 16% of the participants were either not motivated by their principal or self-motivated to seek out PD opportunities. The principal motivated the participants from MS3-FG1. Participant 1 commented, "My principal knows the vision of the school and finds PD opportunities and encourages us to attend." "Our principal is very encouraging at staff meetings. My principal sets up things for us to attend," said Participant 2. Participant 3 continued the comments by saying, "My principal has set a vision for all of us. He or she articulating that vision, she has put ideas in front of the teachers how to achieve the goal." Participant 4 felt more self-driven by stating, "I am a self-motivated person and I do not

need anyone to tell me to improve. I believe and support the school vision, but I do not need someone to motivate me to achieve it."

The second focus group (FG2) at MS3 felt the principal has motivated them to seek out PD opportunities. Participant 5 stated, "Our principal surveys staff regarding professional development interests, promotes on-campus morning, and after school specials with our data coach. In addition, communicates new and continued professional development opportunities within the district that are available, and promotes integration of technology into the classroom regularly through ongoing conversations about how we can use technology in our classrooms through staff and PLC meetings." Participant 6 contributed by saying, "I am encouraged to attend in-service workshops as much as I can." Participant 7 shared, "My principal emails from my learning plan to inform about new workshops, encourages to attend in-service workshops." The final participant of the MS3-FG2 was Participant 8 stating, "My principal encourages us to attend in-service meetings, listens to teachers plea to attend a workshop and finds the funds to get us there."

The final focus group (FG3) for MS3 shared similar thoughts to the other focus groups; however, their principal did not motivate one participant. Participant 9 stated, "The principal does not motivate us, she delegates it off to other people." Participant 10 commented, "Our principal gets us trained. The implementation of use requires in the classroom and on-site training and she has done that for all of us." Participant 12 agreed to Participant 11's comments, "The principal listens to ideas and needs from the teachers, students, and parents. Then, the principal asks the coaches for trainings. The principal shows interest."

Figure 8 below gives a visual of the responses for all of the twelve participants from MS3 whether or not they perceived that their principal motivates them to seek out PD workshops.

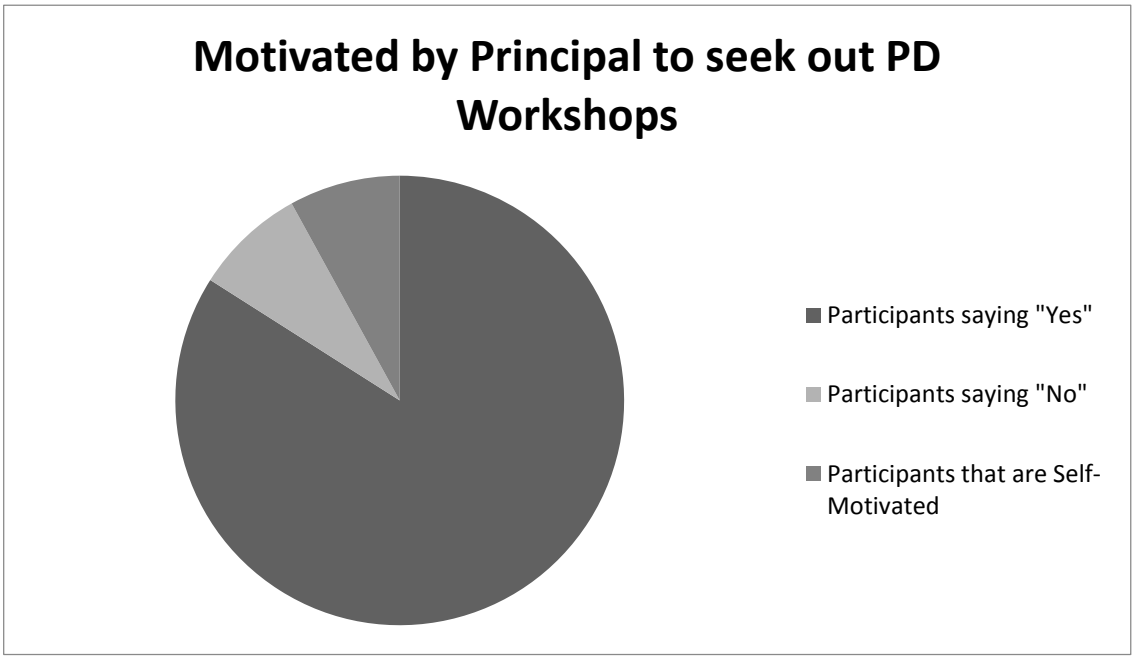

Figure 8. MS3 Motivation to Seek Out PD Workshops

Table 4 below compares the data collected from each focus group in reference to if principals motivate their teachers to seek out professional development opportunities. Looking at the data side-by-side displays the differences between the three middle schools participating in this study.

Table 4

Side-by-side Comparison of the Three Middle Schools

Question/Responses:	Middle School 1 (MS1)	Middle School 2 (MS2)	Middle School 3 (MS3)
How does your Principal Motivate you to seek out PD?			
They Don't	9 (75%)	4 (33%)	1 (8%)
They Do	3 (25%)	5 (42%)	10 (84%)
Self-Motivated	0	3 (25%)	1 (8%)

Table 5 below combines all of the middle school together. It is displayed that the principal motivates 50% of the participants in this study to seek out PD workshops. The remaining participants are either not motivated by their principal (39%) or self-motivate (11%) to seek out PD workshops.

Table 5

All Three Middle Schools Combined

Question/Responses:	All Middle Schools
How does your Principal Motivate you to seek out PD?	
They Don't	14 (39%)
They Do	18 (50%)
Self-Motivated	4 (11%)

The next question to discover more about teacher motivation was question number four from the focus groups questions. Focus group question four was: *How does your principal motivate you to improve your classroom instruction?*

MS1. The results for this focus group question displayed that 58% of the participants feel their principal is motivating them to improve classroom instruction, whereas, 42% of the participants are not motivated to improve classroom instruction. Not all of the participants from MS1-FG1 felt motivated to improve classroom instruction. Participant 1 stated, "We meet at the beginning of the year to get on the same page and come to a common understanding of what will be taught, but after that there is nothing." Participant 2 added, "No real motivation, more motivation during PLCs." Common thoughts were shared by participant 3, "No motivation, it's more individual motivated than principal motivated." Participant 4 expressed, "Observations and evaluations, but

that is district mandated. If it were not for that, I do not think I would see my principal in my classroom."

The second focus group (FG2) at MS1 showed different results from the first focus group. Three of the four participants shared that they were motivated to improve classroom instruction. Participant 5 said, "My principal gives me many ideas from walkthroughs and observations." Participant 6's comments were similar to participant 5's, "Observations and post evaluations is where I get suggestions from the principal. I also see in faculty meetings the principal models what should be happening." Participant 7 did not share the same thoughts, "Not motivated by the principal, but offers suggestions after their review." Participant 8 feels motivate because of one on one meeting with the principal, "I get suggestions from my principal via one on one conversations."

The results from the third focus group (FG3) for MS1 showed that all of the participants were motivated by their principal to improve their classroom instruction. Participants shared, "Walkthroughs with feedback, and observations with feedback are how I get motivated to improve. I get various tips." Participant 10 said, "My principal offers really great suggestions on things we can do in the classroom that will enhance student critical thinking and academic achievement." Participant 11 and Participant 12 shared similar thoughts stating, "I have been motivated by my principal to improve my classroom instruction by participating in a recent Thinking Maps workshop, which was led by my principal. I have been very excited to use these in my classroom, and appreciate knowing I can ask for help at any time since help is right on my campus," and "My principal is consistent with their classroom walkthroughs using the new program that sends the observations directly to my email with the principal's comments urging me

to go one-step further or maybe think about something in a new way when reaching my students."

Table 6 below gives a visual of the responses for all of the twelve participants from MS1 as to how their principal motivated them to improve their classroom instruction.

Table 6

MS1 Motivation to Improve Classroom Instruction

Question/Responses:	**Middle School 1 (MS1)**
How does your principal motivate you to improve classroom instruction?	
They Don't	5 (42%)
They Do	7 (58%)
Self-Motivated	0

MS2. The overall data shows that the participants were mixed in their opinions if their principal motivated them to improve classroom instruction. Some of the participants from MS2 mentioned one thing that did present itself in the collection of data, as stated earlier, "self-motivation", and the researcher did not expect this response.

Fifty percent of the participants of MS2 stated that their principal motivates them to improve on their classroom instruction. Participant 5 commented, "My principal models good instruction at our staff meetings and has very good follow through when you need something for your class/classroom." Participant 10 stated, "Our principal sets high expectations. Professionally trusts that we will do the best we can and detailed evaluations with specific feedback." Participant 9 continued with, "My principal holds relevant and engaging professional development and does classroom observation to discuss classroom instruction." Another thought came from participant 6, "My principal

offers help from resource teachers, overall motivating personality, finds out what we need, and comes to our PLCs." Participants 2 and 4 shared similar thoughts by stating, "My principal asks me to differentiate and do what is good for kids," and "My principal is encouraging, and works hard to get me what I need. This motivates me to work harder."

Four participants felt that the principal from MS2 did not motivate them to improve classroom instruction. Participant 12 stated, "The principal walks through my room, but does not offer feedback to improve instruction. Participant 8 commented, "There is no feedback on how to improve classroom instruction. The only time it is mention is during the two evaluations a year." Participants 3's comments reflect another area of focus, "Not specifically on instruction more focused on classroom management, more direct during the evaluation time." Finally, participant 1 stated, "There is no initiation except for the twice a year during evaluations."

The last two participants share thoughts that reflected more self-motivation than principal motivation. Participant 7 expressed, "I see my principal around campus, but not much in my classroom. I look to fellow teachers and see what they are doing in the classroom and incorporate it into my instruction." Participant 11 stated, "My principal walks through my class, but that does not motivate me to improve. I always want to do better as a teacher."

Table 7 below gives a visual of the responses for all of the twelve participants from MS2 as to how their principal motivated them to improve their classroom instruction.

Table 7

MS2 Motivation to Improve Classroom Instruction

Question/Responses:	Middle School 2 (MS2)
How does your principal motivate you to improve classroom instruction?	
They Don't	4 (33%)
They Do	6 (50%)
Self-Motivated	2 (17%)

MS3. The data from MS3 was very similar to the data from MS2. The only difference between the two was the data from MS3 shows one less participant that was not motivated and one more participant that is self-motivated. Participants 1 commented, "Feedback through walkthroughs is how my principal helps me improve my classroom instruction." While participant 5 stated, "This has been a continuous process of communication through staff meetings, PLCs, the evaluation process and professional development. Our principal has clearly communicated her expectations of what our classroom model should look like and has followed up." Participant 4 said, "Walkthrough and feedback, give ideas on how to engage the students or observe another teacher to see how something works well in the class." Participants 8, 11, and 12 commented that their principal motivates them. Their comments were, "Comments the principal makes in passing, casual conversation trainings that can be used immediately in the classroom, in-service workshops," "The principal's walkthroughs and input are meaningful. In addition, I also attend PLC meetings for each area I teach," and "I have weekly team meetings with my principal and get feedback."

Three participants were not motivated by their principal to improve classroom instruction. Participant 2 stated, "I get more information from my PLC team than my

principal." Participant 9 added, "I have not seen much of the principal in the classroom, he or she has not done much in my classroom this year." Lastly, Participant 10 commented, "I know from watching other teachers where I need to improve."

The last group of participants from MS3 stated that they are self-motivated to improve their classrooms. Participant 3 said, "I always self-reflect about my lessons and seek new ways to present and engage students in learning." Participant 6 stated, "I observe my fellow teacher and watch what they do and try to incorporate it into my lessons." Finally, Participant 7 commented, "I work with teachers to meet what is expected of me in the classroom."

Table 8 below gives a visual of the responses for all of the twelve participants from MS3 as to how their principal motivated them to improve their classroom instruction.

Table 8

MS3 Motivation to Improve Classroom Instruction

Question/Responses:	**Middle School 3 (MS3)**
How does your principal motivate you to improve classroom instruction?	
They Don't	3 (25%)
They Do	6 (50%)
Self-Motivated	3 (25%)

Table 9 below combines all of the middle school together. It is displayed that the principal motivates 53% of the participants to improve classroom instruction. The remaining participants are either not motivated by their principal (33%) or self-motivate (14%) to seek out PD workshops.

Table 9

All Three Middle Schools Combined

Question/Responses:	All Middle Schools
How does your principal motivate you to improve classroom instruction?	
They Don't	12 (33%)
They Do	19 (53%)
Self-Motivated	5 (14%)

The next question to discover more about teacher motivation was question number seven from the focus groups questions. All of the participants from the three middle schools are motivated by one of two things, 1) their students, or 2) self-motivated. Focus group question seven was: *How do you motivate yourself to improve your classroom instruction?*

MS1. The first focus group (FG1) revealed that three of the four participants were self-motivated compared to one participant who was motivated by their students. Participant 1 stated, "The basic idea that they are there for every child and wants the students' day to be enjoyable." Participant 2 made the comment, "I am highly motivated to self-improve and teacher to my best. I set standards and goals to get the best possible results for the students." Participant 3 shared, "Career ladder group has inspired to improve classroom instruction, self-motivate to make the teaching easier every year." While participant 4 felt, "Test scores and there outcomes, review of what they are doing motivates me to improve."

The second focus group (FG2) at MS1 had similar results to the first focus group. Participants 5 commented, "I self-reflection and evaluate what I can do better to make the students learn. I want to master my trade." Participant 6 shared similar thoughts, "I self-

reflection on how the students are doing in the classroom, and improve my teaching method." Participant 7 felt self-reflection is important, "Learning from what doesn't work and make it better, wants classroom instruction to improve so always looking to improve their lessons." The last participant in this focus group credited students for her motivation, "I look at the results from tests, reflection on lessons and set high expectations because I want better for them."

The last focus group (FG3) at MS1 was the most vocal about their motivation. Participant 9 felt, "I am not particularly motivated. State testing requirements, special education law, and parental demands require me to spend a great deal of time engaging in meetings and/or paperwork." Participant 10 shared, "I get bored teaching the same stuff every year. I like to look for things that will engage the students. The students have changed (their interests have changed) over the last 15 years so I must also change." Participant 11 shared their self-motivation by saying, "I am a member of National Science Teachers Association (NSTA), and I receive a monthly journal, and newspaper. Upon receiving, I relish reading these, as they have the latest and greatest in education. I incorporate much of what I read about into my classroom." Participant 12 shared similar thoughts, "I am also a member of NSTA. I try to read up on current trends going on in the science world and I want to keep up with what my students are doing. I am glad to see the district encourages students to bring their technology device to be used when appropriate in the classroom. I also like to try new things – doing the same things year after year becomes mundane." The data in Table 10 gives a visual of the results.

Table 10

Self-Motivation to Improve Classroom Instruction—MS1

Question/Responses:	**Middle School 1 (MS1)**
How do you motivate yourself to improve classroom instruction?	
Students	4 (33%)
Self-Motivated	8 (67%)

MS2. The results from the three focus groups were split between being motivated by students or self-motivated. The first focus group (FG1) revealed that their students motivate all participants. Participant 1 shared, "Ultimately it is up to my students, but has dwindled in recent years." Participant 2 continued by saying, "I do what my students need and how I can better teach them is what motivates me." In addition, Participants 3 and 4 stated, "Change and empower students motivates me," and "Seeing others perform that are better motivates me to improve, give students more help."

In the second focus group (FG2), the four participants were all self-motivated to improve classroom instruction. Participant 5 shared, "I am a very creative person naturally and like to do things outside the box so the idea of crafting a lesson/activity is something I do because I like it. I am also good a relating to kids and they make me want to engage them." Participant 6 added, "I am just self-motivated." "I look for things that students are interested in and incorporate them into my lessons," stated Participant 7. The last participant of this focus group commented, "I just completed National Board Certification. The whole process is self-reflective and looks for lesson improvement." The third focus group (FG3) revealed the group was split. Half of the participants were self-motivated and half were motivated by their students. Participants 9 and 11 shared similar thoughts, "I always feel intrinsically motivated to improve my instruction," and "I

continuously look for lesson improvement every day." Participant 10 stated that, "Students motivation is a given if you are a teacher." Participant 12 said, "The achievement of the students is what drives me to improve." Table 11 below display the results from MS2.

Table 11

Self-Motivation to Improve Classroom Instruction—MS2

Question/Responses:	Middle School 2 (MS2)
How do you motivate yourself to improve classroom instruction?	
Students	6 (50%)
Self-Motivated	6 (50%)

MS3. The results from the three focus groups showed that the students were more motivating for the teachers than being self-motivated. The first focus group (FG1) from MS3 revealed their students motivated three of the four participants. Participant 1 disclosed, "Student reaction is what I look for. I also talk to other teachers to see what works for others." Participant 2 shared, "I am a traditional style of teacher, some change in my strategies but comes from myself or a professional coach." Participant 4 shared, "Seeing the reaction of the students, try different ideas to see what interests the students." Participant 3 shared, "Education needs to constantly change to meet the needs of the students, self-motivated.

The second focus group (FG2) was similar to the results from FG1; three of the four teachers were motivated by their students. Participant 5 stated, "I want to make a positive difference in these students' lives and our future society. This motivates me, scares me and excites me all the same. I do get overwhelmed often with some of the many challenges our school community faces, but use my determination and passion often drive my motivation to keep on pushing to the next level. I also believe autonomy is

the key to my desire and motivation to improve myself through my profession." Participant 6 shared, "I like reading about all kinds of things that interest me, which is my motivation." Participant 7 commented, "Student achievement, passionate about providing a quality service to the students who do not have to ability to have the technology." "If the students are excited then I get excited," said Participant 8.

The last focus group (FG3) revealed that two participants were student motivated and two participants were self-motivated. Participant 11 stated, "My motivation is the academic growth of my students. They need so much support and a big gap to close." Participant 12 continued with, "I watch my kids and see what they need." Participant 9 shared their motivation, "I self-assess weekly and daily. I try to improve on the level of instruction that occurs." Finally, Participant 10 said, "Observation of other classrooms, reading journals, discussing with other staff members." Table 12 below display the results from MS3.

Table 12

Self-Motivation to Improve Classroom Instruction—MS3

Question/Responses:	**Middle School 3 (MS3)**
How do you motivate yourself to improve classroom instruction?	
Students	8 (67%)
Self-Motivated	4 (33%)

Table 13 below combines all of the middle school together. It is displayed that their students 50% of the time motivate the teachers, while the other 50% was self-motivated to improve their classroom instruction.

Table 13

All Three Middle Schools Combined

Question/Responses:	All Middle Schools
How do you motivate yourself to improve classroom instruction?	
Students	18 (50%)
Self-Motivated	18 (50%)

Focus group question nine was: *What would motivate you to seek out professional development opportunities on new technology in the classroom?* The data that stood out was from MS2. Forty-four percent of the participants from MS2 stated that money or compensation is what would motivate them to seek out a PD on new technology. Meanwhile, 6% of the participants from MS1 and MS3 viewed compensation as a motivation factor. MS1's primary motivation, 44%, came from having support for the new technology. MS3's main motivation, 31%, knows the technology was proven to work and improve student achievement. All of the data was displayed below in Figure 9:

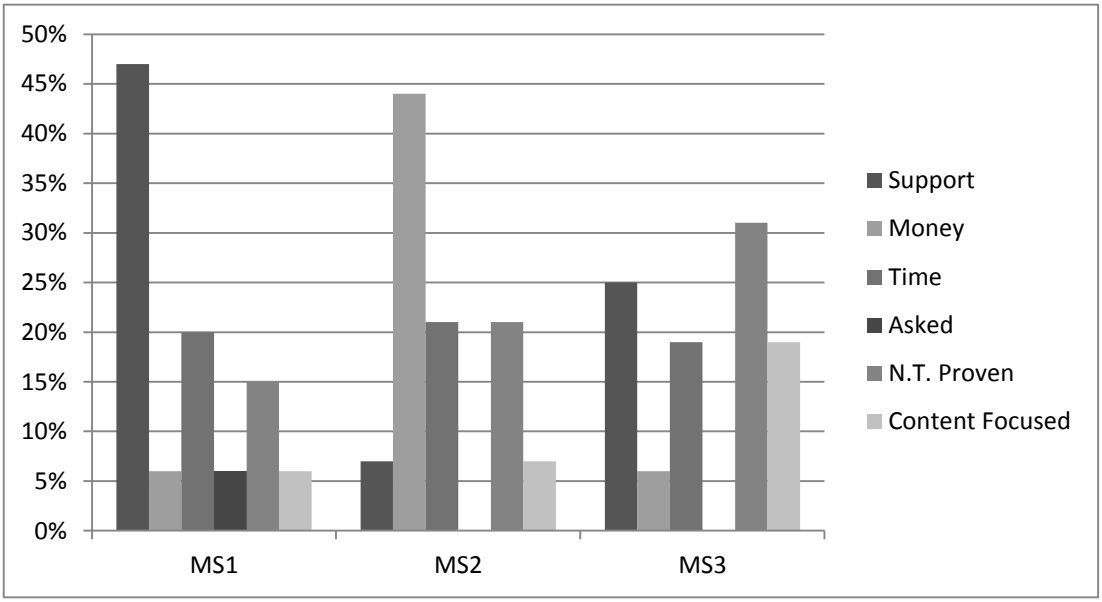

Figure 9. Technology Used in the Classroom

The next question to discover more about teacher motivation was question number 13 from the focus groups questions. Focus group question 13 was: *What would motivate you to use new technology in the classroom to ensure student achievement?*

MS1. The three focus groups from MS1 shared specific items that would motivate them to use new technology in the classroom. The response varied, but did provide insight into what they need to use new technology. The first focus group (FG1) shared different thoughts from the other participants in this group. Participant 1 stated, "I have not seen any new technology in my area of teaching. There are items that can be used like an IPad, which gives real-time feedback, but not being used." Participant 2 shared, "If the new technology was proven by data to improve student achievement, easy to use, able to be used during the class hour." Participant 3 felt, "There is not much content area technology, but must be able to be used during the class hour, easy to use and reliable." Participant 4 explained, "Technology must be reliable, dependable, beneficial, applicable, and easy to use in the classroom.

The second focus group (FG2) shared one common thought between all four members of the group: infrastructure to support the technology. Participant 5 stated, "Knowing the technology will work, support structure, on-site support." Participants 6, 7, and 8 all shared similar thoughts, "The infrastructure must be in place," "The infrastructure is in place and support for my needs," and "Support, infrastructure is in place, and it is beneficial to students."

The third focus group (FG3) shared different thoughts. Participant 9 said, "If I thought it would enhance student achievement. If every student had a laptop or a keyboard, we could do wonders." Participant 10 stated, "If the actual technology was able to be used." In addition, Participant 11 continued with, "Provide me the tools, and I will use them." Lastly, Participant felt, "Having follow-up meetings with the technology specialist is crucial if I get into trouble."

Figure 10 gives the visual of the responses the participants from MS1 gave for this focus group question. Half of the participants from MS1 needed to know the new technology was supported by the district.

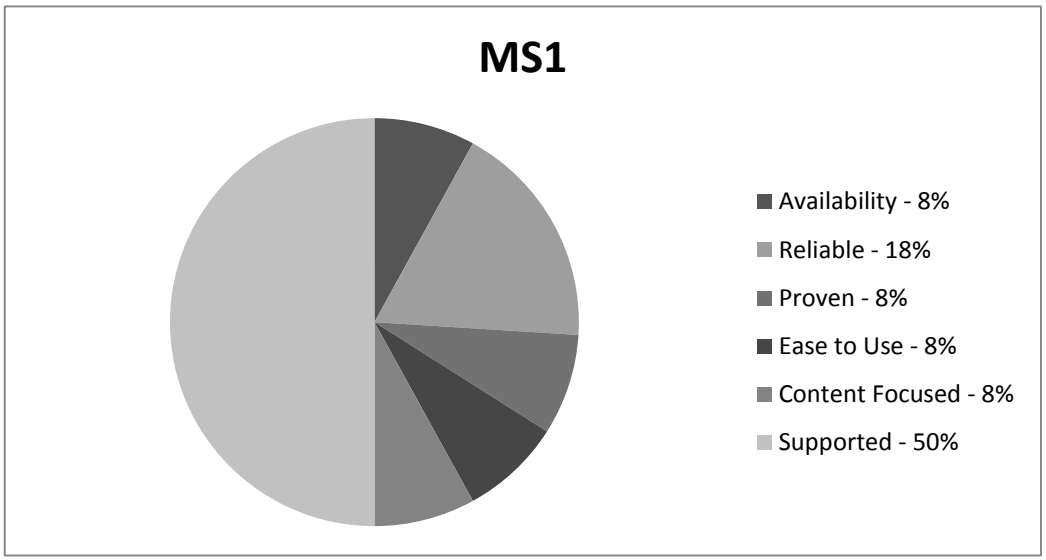

Figure 10. MS1's Motivation to Use Technology

MS2. MS2 shared a variety of thoughts. The first focus group (FG1) revealed that training was the largest area of need. Participant 1 shared, "I need assurance that the new technology was available and worked." Participant 2 continued the same thoughts, but added, "If I had the technology and were trained on it. I would like more training or a manual." Participants 3 and 4 stated, "I would need time to get to know the technology and work with it," and "I need time to understand how the technology works and can be used."

The second focus group (FG2) all shared different thoughts. Participant 5 shared, "I need enough technology to cover large class sizes; 32 answer clickers in a class of 41 does not work." Participant 6 added, "I need access. I have laptops 3 days a week and I use them 3 days a week, even if it hinders my schedule." Participant 7 added, "If kids had equal access and the student, computers were fast and not so slow. Participant 8 felt, "Not much, I have already been directed to teach Spring Board with fidelity. Finding time for other activities is extremely difficult."

The third focus group (FG3) shared their thoughts. Participant 9 said, “If I was trained appropriately on technology that I felt was relevant to the state standards and curriculum, then I would definitely feel motivated to use it.” Participant 10 added, "It is my professional standard of operation to include technology into my lessons.” Participant 11 added the simply statement, “Introduce it to me, and if I like it, I will look to be trained.” Participant 12 shared, “I need time to understand the new technology. Compensation would be a benefit too.”

MS2 had different idea of what was needed for the participants to use new technology in the classroom. Forty-one percent of the participants felt Training on the new technology is important for new technology implementation. Figure 11 displays the rest of the data.

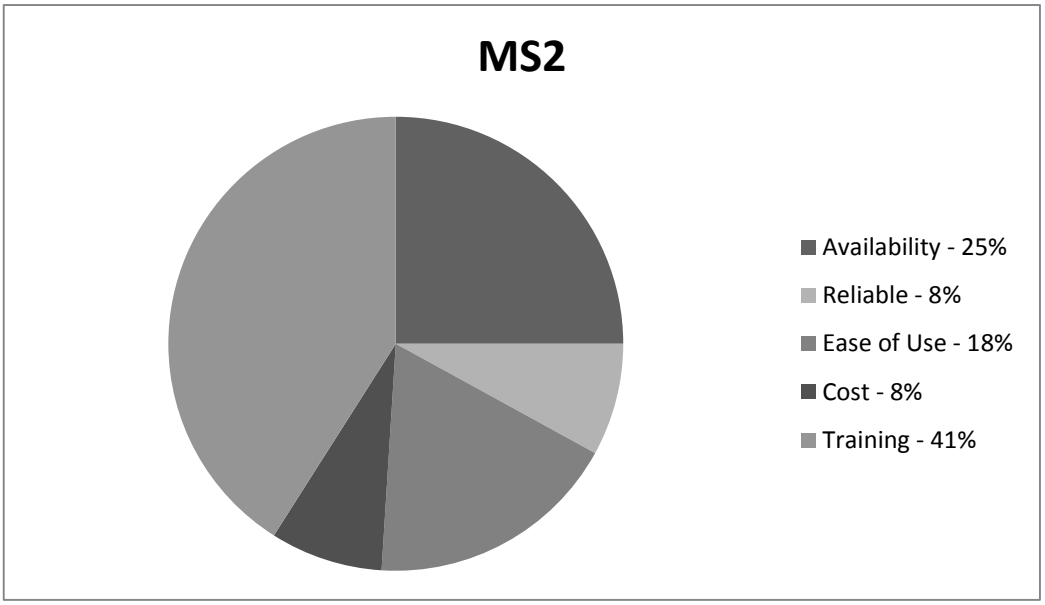

Figure 11. MS2’s Motivation to Use Technology

MS3. The results from MS3 shows the comments from the participants are much more concentrated on certain areas. The first focus group (FG1) all shared similar thoughts; the technology must engage students and increase achievement. Participant 1

stated, “The technology must relevant to the classroom and gets students engaged.” Participant 2 continued the same thought as Participant 1 by adding, “When it engages the student in the lesson, then I will use it.” Participant 3 shared, “Technology must ensure student achievement before I actually used it. It must be proven to improve student achievement.” Participant 4 agreed with the thoughts from Participant 3.

The second focus group (FG2) revealed different needs if they were to implement; time and availability. Participant 1 stated, “I would require thorough training and understanding of the new technology. I would need to see that there is a valued use of the technology in promoting the academic success of our students.” Participant 6 shared, “I would need time to use it and the availability to work hands on with the technology. Participant 7 simply stated, “Availability” as their main need. Participant 8’s thoughts were similar to Participant 7, “I need availability and time.”

The third focus group (FG3) all stated different thoughts. Participant 9 said, “Getting the technology, students are excited about technology and getting it would be motivation for me.” Participant 10 shared, “Training on a Saturday and the needed Wi-Fi memory and materials.” Participant 11 expressed, “My biggest motivation to implement new technology is having the materials and time to implement it. In addition, having a computer for each student and offer open library lab hours would be beneficial.” Finally, Participant 12 shared, “If kids had equal access and the student computers were fast and not so slow.”

The participants from MS3 felt Ease of Use (36%) was important to them. Figure 12 will display the participant’s responses.

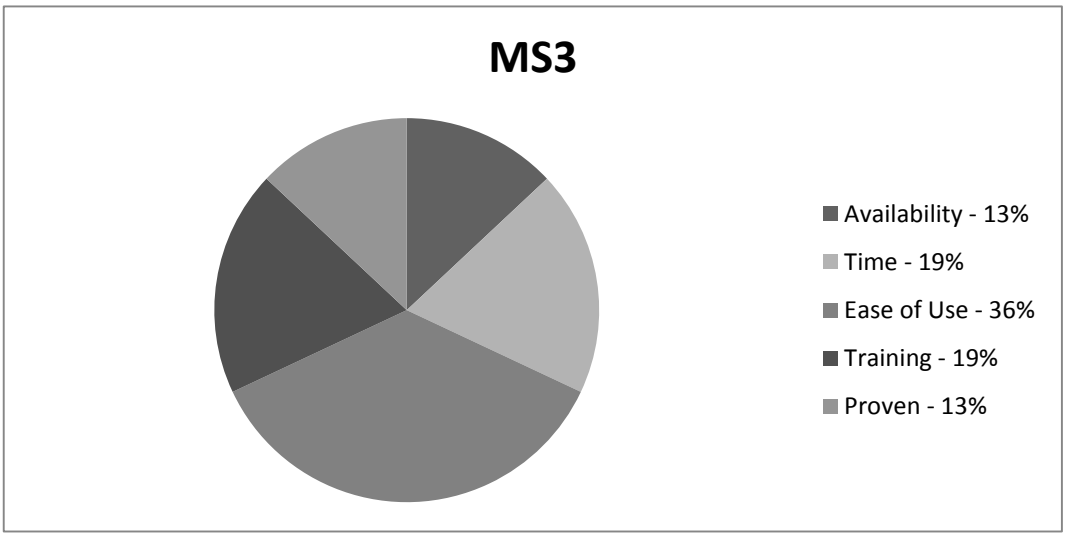

Figure 12. MS3's Responses to Focus Group Question 13

The final question to discover more about teacher motivation was question number 32 from the focus groups questions. Focus group question 32 was: *At the end of a professional development workshop, how are you evaluated on your understanding of the workshop?* The majority of the participants from all of the focus groups gave very similar response. They stated the only evaluation they receive at the end of a workshop is an exit ticket or no evaluation of understanding at all. An exit ticket is described by participant 12 from MS3, "We give the presenter a reflection on an exit ticket, but other than that there is no evaluation or check for understanding. Table 14 below displays the information provided from each focus group.

Table 14

Understanding PD Workshop Content

Question/Responses:	Middle School 1 (MS1)	Middle School 2 (MS2)	Middle School 3 (MS3)
How are you evaluated on your understanding of a P.D. workshop?			
No Evaluation	7 (58%)	4 (33%)	4 (33%)
Exit Ticket	5 (42%)	8 (67%)	8 (67%)
• Not for Understanding	3/5 (60%)	6/8 (75%)	8/8 (100%)

One note about Table 14, the last focus group question under the exit ticket heading was a subcategory called Not for Understanding. This is based on the number of participants who responded with "Exit Ticket", but acknowledged the exit ticket was not to evaluate their understanding of the material learned in the PD workshop.

Principal interviews. *Research Question 1: What principal leadership style factors motivate teachers to seek out professional development opportunities on the use of new technologies that facilitate learning in the classroom?*

The information in the principal interview section is the data collected from the principal interviews. The data provided for each principal are listed for each of the each principal interview question that relates to the research question is listed below. The information collected is used to get each principal's perception for each of the four research questions.

Principal Interview Question 4 was: *How do you as a principal motivate your teachers?*

Principal 1: "Sometimes I do not, I am always a teacher first, I respect where they are and help them move forward from there. I try to absorb the outside troubles so teachers do not have to worry about outside factors."

Principal 2: “Walkthroughs in the classrooms, I see what the teachers have to deal with and it is a hard job, been out of the classroom for 8 years. I keep in perspective what the teachers are experiencing in the classroom. I can be a better principal knowing what the teachers are experiencing. This help scheduling for the teachers day. Let teachers know we are a team and feel supported. I ask teachers what they need and what can I get you to teach better.”

Principal 3: “I try to model positive reinforcement, show best practices, walk the walk and talk the talk, and get input from the PLC team of what to focus on for improvement.”

The first principal interview question to help answer RQ1 asked of the three principals discovered that principals are either not motivating their teacher, principals motivate their staff by modeling, or they supporting their teachers.” Principal 1 stated, “Sometimes I do not. I try to absorb the outside troubles so teachers do not have to worry about outside factors.” Principal 3 shared, “I see what teachers have to deal with and it is a hard job. I let them know we are a team and make them feel supported.” Principal 3 said, “I try to model positive reinforcement. I get feedback from PLC teams to focus on areas of improvement.”

Interview Question 10 was: *How do you motivate yourself to improve the level of classroom instruction at your school?*

Principal 1: “The students at my school deserve to have the best level of instruction, look and see what the needs of the teachers are and look to see how we can improve on those ideas.”

Principal 2: “It’s all about the school report card, high stakes accountability, cannot go backwards with the school grade. It’s all come down to improving teacher instruction and student understanding.”

Principal 3: “I must improve, corrective action school, and focus on our five core programs. Needs to see data and see growth of students.”

The second principal interview question to help answer RQ1 discovered how principals motivate themselves to improve the level of classroom instruction at their school. Principal 2 was forward with their thoughts by saying, “It is all about the school report card. It all comes down to improving teacher instruction and student achievement.” Principal 3 stated, I must improve and focus on five core programs.” Principal 1 said, “The students at my school deserve the best level of classroom instruction.”

Principal Interview Question 16 was: *What motivates your teachers?*

Principal 1: “Success from the students, time to share success, time to talk with other teachers, use time wisely.”

Principal 2: “I treat my teachers like a professional and they need to be compensated. I like doing what they are doing and do not make my staff regret being a teacher.”

Principal 3: “I promote positive reinforcement, student achievement, and doing best practices in the classroom.”

The third principal interview question to help answer RQ1 asked principals if they knew what motivated their teachers. The principals shared their thoughts and opinions, and although their comments were different, each principal felt that personal relationships and treating teacher like professional is crucial. Principal 1 shared, “Time to talk with

teachers and using time wisely." Principal 2 said, "I treat my teachers like a professional and they need to be compensated." Principal 3 stated, "I promote positive reinforcement and best practices in the classroom."

Principal Interview Question 21 was: *What would motivate you to facilitate a professional development workshop on new technologies to use in the classroom to ensure student achievement?*

Principal 1: "I am not good at technology, intimidated. I like to learn how to use the new technology and work with it before I model it to the teachers. I have to feel comfortable."

Principal 2: "If we know it is going to help increase students achievement and differentiated instruction, then we will look into it. Make students understand at a deeper level. It would make it easier for teachers to meet the needs of 35 students in 52 minutes."

Principal 3: "I want to see the technology in action. I want to have data to show that it works. I am reluctant to introduce anything new to my teachers because they are already busy. I want time to understand how the technology works."

The fourth principal interview question to help answer RQ1 asked principals how they are motivated to facilitate a PD workshop on new technology. Two of the three principals shared they were reluctant to share technology with their staff. Principal 2 stated, "If I know it is going to help increase student achievement and differentiates instruction, then I will look into it." Principal 3 added, "I want to see the technology in action. I want to have data to show that it works. I am reluctant to introduce anything new

to my teachers because they are already busy." The last principal shared that technology is not their strong point. Principal 1 explained, "I am not good at technology, intimidated. I like to learn how to use the new technology and work with it before I model it to the teachers.

Principal Interview Question 26 was: *How do you as a principal motivate teacher's classroom instruction to facilitate student improvement?*

Principal 1: "This is my job, be in the classrooms, see what teachers are doing, and ask what I can do to support you. Build trust with the teacher and let them know I am on their side. Spending time with teachers is important."

Principal 2: "I try to build trust with teachers so they can engage in a conversation and improve instruction. I have more of a candid conversation and focus on what can "we" do instead of what can "you"."

Principal 3: "Time, structure, and student-teacher time is very important. We have blocked scheduling to increase that time."

The fifth principal interview question to help answer RQ1 discovered how principal motivate teachers to facilitate student achievement. Each of the three principal shared a different approach. Principal 1 explained, "This is my job. Build trust with teacher and let them know I am on their side." Principal 2 stated, "I build trust with teacher so we can engage in conversations to improve instruction." Finally, Principal 3 said, "Time and structure. Teacher to student time is very important."

Research Question 2 (RQ2). *Research Question 2: How did principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices?* The second research question focused on the

collaboration amongst teachers. Teachers continue to look for ways to improve the level of instruction in the classroom. Principals allowing teachers to share information resulting in PD "best" practices can be one avenue of achieving that goal. With the decrease in available funds to send teachers to PD workshops, school districts search for ways to provide PD to their teachers.

Focus groups. The first question to answer RQ2 was focus group question number six: *After attending a professional development workshop, how do you share the information with your fellow teachers?* The data collected showed two major themes. The teachers are getting either formal time or informal time to share information from a PD workshop. Figure 13 shows the definition of what are informal and formal lines of communication.

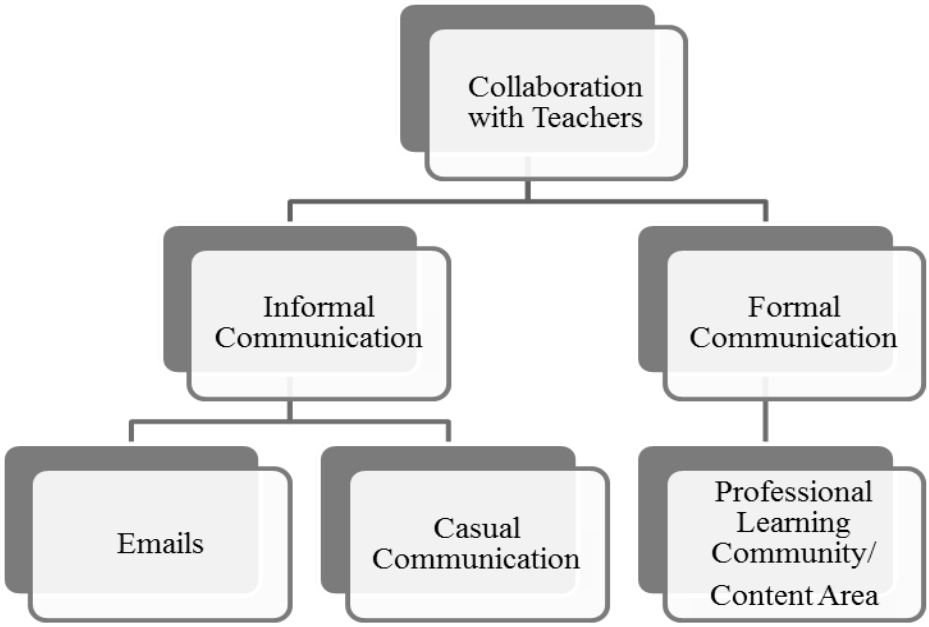

Figure 13. Breakdown of Informal and Formal Communication

MS1 was split between formal and informal collaboration with their fellow teachers. Six participants shared that the only way information is shared between teachers is via informal communication. Participant 10 shared, "Usually I communicate through

email, we do not all share the same plan nor do all the content area teachers have the same lunch. This is the most effective way to share information." Compared to seven participants felt formal communication was how they shared information. Participant 1 discussed, "content area teachers talk about how PDs apply toward them and how they can use it in the classroom." Participant 9 added that, "I do not share information with other teachers. There is just not enough time in the day to have a quality conversation."

Sixty-five percent of the participants at MS2 felt that informal communication is the way information is shared. Formal communication received 21% of the participants from MS2. Participant 1 shared that there is not enough time for them to share information with other teachers.

The data collected from MS3 was different from the other middle schools. The participants from MS3 disclosed that 67% shared information with other teacher during PLC groups. The PLC groups consisted of content area teachers. In addition, if appropriate, PD workshop information was shared with grade level teachers. "Information from PD opportunities is shared through content-specific PLCs or all-staff meetings. We either discuss the value and possible uses of the PD provided and plan on ways to implement strategies learned into our classrooms in both settings," said participant 5. The other percentages for MS3 was 17% shared there is not enough time to share PD information and 17% only shared information during monthly staff meetings.

The second question to answer RQ2 was focus group question number eight: *How do you collaborate with teachers to share classroom uses of technology to improve instruct and student achievement?* Figure 14 displays the data that was collected from MS1. The data in MS1 shows that five participants use their PLCs as the way they share

information about new technology with other teachers. Four more participants disclosed that information was shared during casual conversation or in a less formal setting. The remaining participants felt they did not share information with other teachers, while one participant shared information via email. Participant 4 added, "I do not share information, I am kind of a lone wolf."

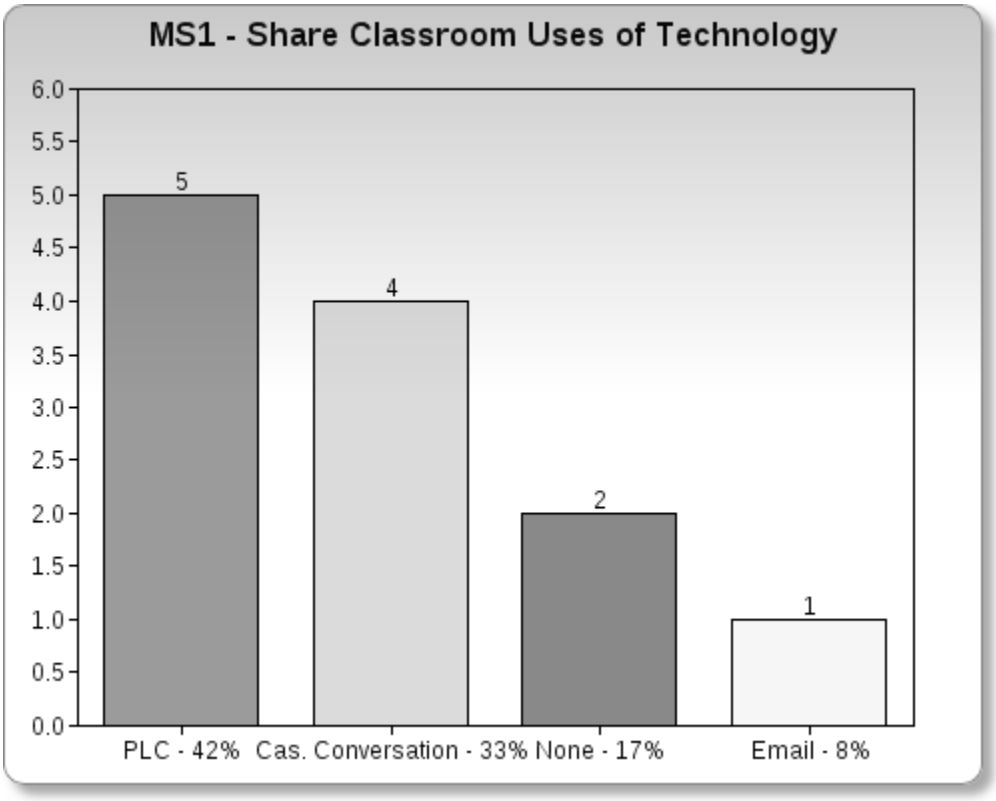

Figure 14. Collaboration Amongst Teachers–MS1

The participants from MS2 disclosed that their main time to share information is while in their PLC groups. Figure 15 will display this data, in addition, to the responses from the other participants. Participant five stated, "I am lucky this year to have prep with the math teachers. Content prep is crucial for lesson/strategy sharing, but does not follow the "team" model of middle school."

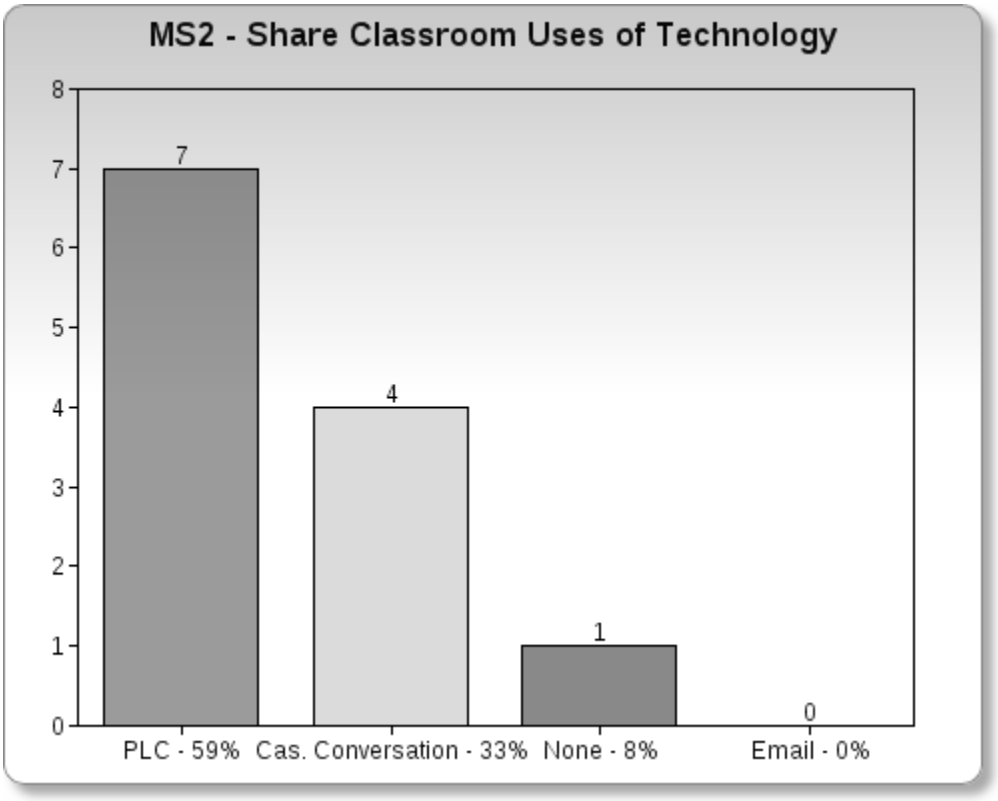

Figure 15. Collaboration Amongst Teachers–MS2

MS3 shows the largest percentage (67%) of teachers who feel that PLC groups are where information is shared with other teachers. The remaining percentages are; 17% by email, 8% by casual conversation, and 8% do not share information. Participant 9 comments, "I have not had much opportunity to utilize any type of sharing of information this year." Figure 16 displays a comparison of the data from MS3.

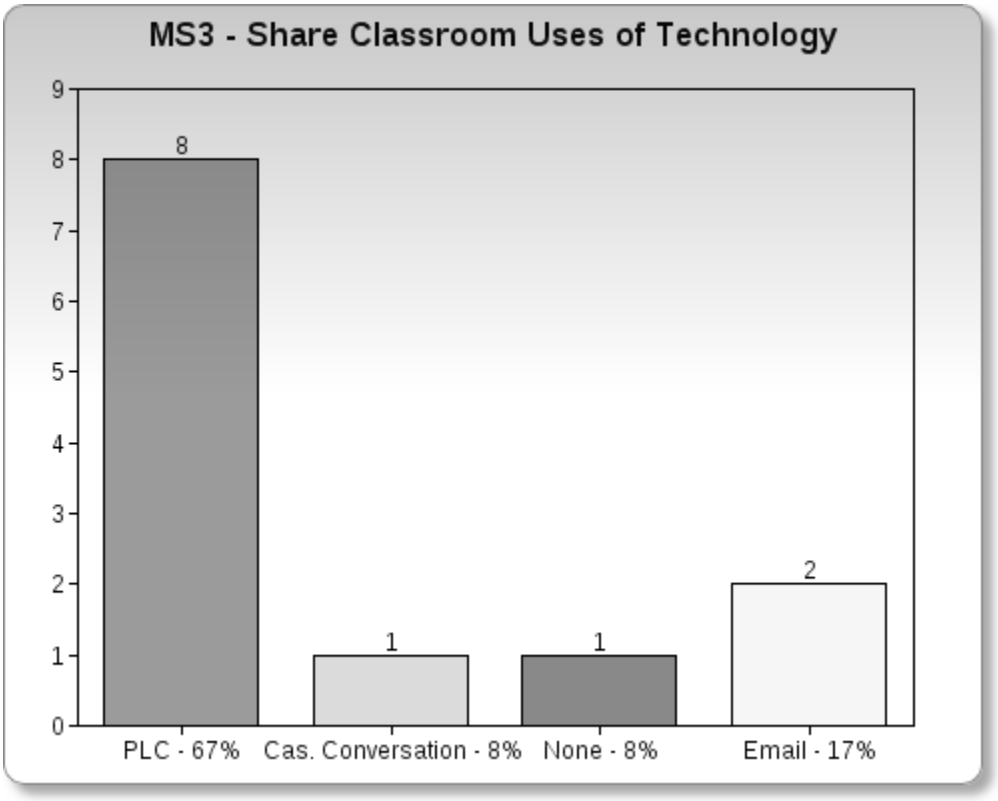

Figure 16. Collaboration Amongst Teachers–MS3

The third question to answer RQ2 was focus group question number 12: *What uses of technologies have you incorporated or use in your classroom that you learned from collaborating with teachers?* For this question, teachers gave more than one response. This displays that teachers are using multiple forms of technology in the classroom. In MS1, the breakdown of the teachers and the technologies they are using is as follows; 10 teachers are using the grading systems Synergy, five teachers are using Smart Board technology and Document Cameras, four teachers are using Discovery Education, and one teacher is using Success Maker. MS2 has similar uses of technology as MS1. Twelve teachers are using Synergy, seven teachers are using Smart Board technology, and four teachers are using Discovery Education and the Document Camera. MS3 disclosed that 10 teachers are using Synergy, seven and using Smart Board

technology, five teachers are using iPads, three teachers are using Discovery Education and the Document Camera, and one teachers uses Success Maker or no technology at all.

The forth question to answer RQ2 was focus group question number 16: *How does your principal encourage teacher collaboration to share professional development "best" practices, thus benefiting other teachers?* When the participants were asked how their principal encourages teacher collaboration, eight of the teachers from MS1 stated that their principal schedules PLC meetings for the teachers to collaborate. Three participants from MS1 felt their principal does not encourage collaboration, while one teacher stated that collaboration was done via email. Participant 1 said, "I have no experience with teacher collaboration, but I do motivate myself to seek out other teachers."

MS2 shared that they have two forms of collaboration their principal utilizes, 1) PLC time with fellow teachers, and 2) schedule common prep periods. Scheduling common prep periods allows teachers to have embedded time to meet during the school day. Figure 17 show a breakdown of the date from MS2.

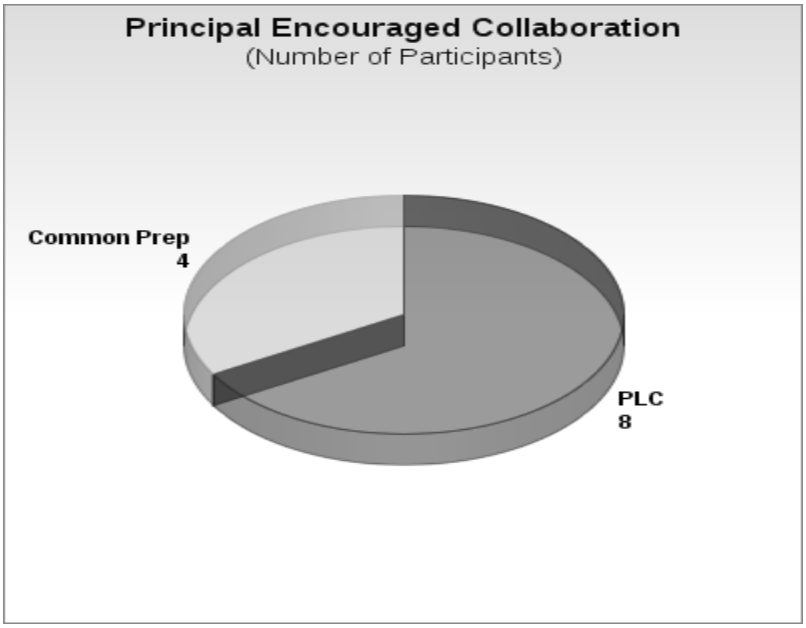

Figure 17. MS2 Collaboration

The participants at MS3 shared similar results. One item that presented itself during the focus groups is the number of participants who mentioned that the principal is present during their PLC meetings. Participant 4 said, "Our principal attends PLC meetings to help lead the discussion on how to use technology in the classroom. The principal is always involved, going into other classrooms to see other teachers and creating an atmosphere and culture of collaboration at the school." Nine of the teachers stated that PLC time is when their principal encourages collaboration. The other three participants stated common prep was how they are encouraged to collaborate with fellow teachers.

The fifth question to answer RQ2 was focus group question number 20: *What professional development opportunities has your principal facilitated to improve instruct and student achievement?* This focus group question was aimed at discovering what PD workshops the principals are facilitating for their teachers to improve the level of classroom instruction.

MS1 was split between the principal has not facilitated any PD workshops and the principal does provide information during monthly staff meeting. Fifty percent of the participants (6) from MS1 stated there are no PD workshops facilitated by their principal. The other 50% of the participants (6) stated this was done during their monthly staff meetings. Participant 12 disclosed, "Early release days are used to discuss AIMS results and review Galileo test scores." Participant 12 continued to say, "These assessments are analyzed to find the areas of deficiencies the students have and need to improve. Small group and whole group instruction to discuss what to do next to help students get to the next level."

The data collected from MS2 showed that three-fourths of the participants felt their principal has not facilitated any PD workshops to improve classroom instruction. Nine participants shared there is no facilitation on behalf of the principal. Participant 10 said, "What is offered to us is done through the school district, not the principal. The principals have little to do with the PD offered to teachers." Three participants believed that staff meeting are the time their principal facilitates PD. "Guest speakers brought in by the principal discussed different reading strategies and differentiated instruction at staff meetings," said participant 7.

The data collected from MS3 shows this middle school has a different tool to help improve classroom instruct. This tool is an Instructional Coach. An Instructional Coach is a former classroom teacher whose main purpose is to act as a liaison between the principal and the classroom teachers. Five participants said the instructional coach is the person whom facilitates the PD workshops for the teachers at MS3. Participant two said, "Since day one I was put in touch with the instructional coach. When I need anything, I

talk to the Instructional Coach. The Instructional Coach is my go to person." Another five participants shared their principal does not facilitate any PD for the teachers at their school. Two participants revealed that all PD is directed from the district office.

Figure 18 shows a side-by-side comparison of the data collected for this focus group question.

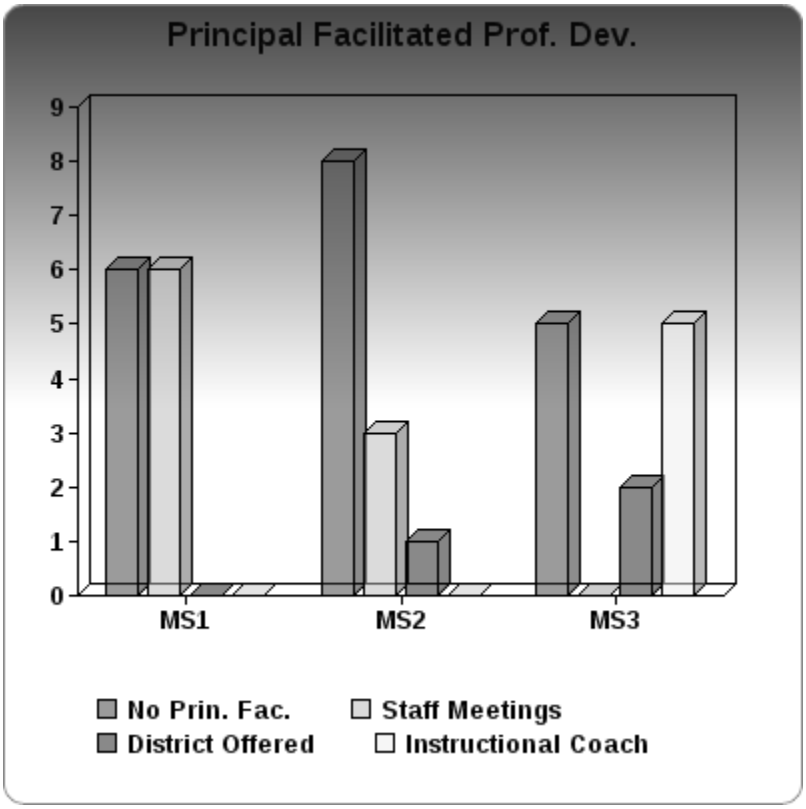

Figure 18. Principal Facilitation of PD

Principal interviews**.** *Research Question 2: How does principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices?* The information in the principal interview section is the data collected from the principal interviews. Each principal interview question that relates to the research question is listed below. The information collected was used to get the principal's perception for each of the four research questions.

Principal Interview Question 5 was: *After teachers attend a professional development workshop, how do you as a principal allow teachers to share the information with their fellow teachers?*

> Principal 1: "Sharing is a huge part in the half days. I promised the staff they will be given PLC time during half days. After something is presented, they always allow teachers to absorb and talk about it."
>
> Principal 2: "Time is an issue. We try to set up PLC groups and talk about what is related to what is taught and how students learn in the classroom."
>
> Principal 3: "I have three coaches on campus to spread the leadership to the teachers. If someone is good at something, then they can present it to the school"

The first principal interview question to help answer RQ2 discovered that PLC groups, PD workshops on half days of school, and through the instructional coach were how teachers shared information. Principal 1 said, "Sharing is a huge part of half days. I have promised the staff they will be given PLC time." Principal 2, shared. "Time is an issue. I try to set up PLC groups and talk about what they have learned and what is working in their particular classroom." Lastly, Principal 3 expressed, "I have instructional coaches that spread the leadership to the teachers and if someone is good at something, they will share it with the staff."

Principal Interview Question 12 was: *How do you as a principal allow teachers to collaborate with other teachers to share classroom uses of technology to improve instruct and student achievement?*

Principal 1: “I need time during staff meetings, common planning periods, and early release days.”

Principal 2: “PLC with teams meet on a weekly basis. I attend every meeting to hear what the teacher is encountering and what resources do they need. In addition, I help teacher stay focused during the meeting and make the time a quality meeting.”

Principal 3: “Instructional coaches will fill in for teachers to meet. I also fill in for teachers so they can meet. This allows teachers to see new ideas happening in other classes.”

The second principal interview question to help answer RQ2 focused on how teacher share classroom uses of technology. All of the principals expressed how they schedule time for teachers to collaborate. Principal 2 stated, “PLC teams meet on a weekly basis.” Principal 1 said, “I need time during staff meetings, common planning periods, and early release days.” Principal 3 shared, “Instructional coaches fill in for teachers so they can meet.”

Principal Interview Question 18 was: *What uses of technologies have you incorporated at your school for teachers to use in their classroom to improve student achievement? How have you allowed teachers to collaborate to improve the use of this technology?*

Principal 1: “Bring your own technology group, used this group to help teachers introduce new technology. Using Google docs, but I have to manufacture the time to collaborate.”

Principal 2: “None, but have used the technology that was already in place and made that more of a focus to help under achieving students. In addition, I borrow additional resources from other schools or departments.”

Principal 3: I am careful with technology. I need to know it is used with fidelity for best practices and teacher instruction.”

The third principal interview question to help answer RQ2 revealed that two of the three principals are cautious about incorporating technology in the classroom. Principal 3 stated, “I am carful with technology. I need to know if it is used with fidelity.” Principal 3 also felt that technology must be proven before given to teachers. Principal 2 said, “None, but have used the technology that was already in place and made that more of a focus to help under achieving students.” Principal 1 shared they rely on the Bring Your Own Technology group to help introduce new technology to the classroom.

Principal Interview Question 23 was: *How do you as a principal encourage teacher collaboration to share professional development “best” practices, thus benefiting other teachers?*

Principal 1: “I expect teachers to collaborate and discuss students. I know gripe sessions always happen, but should try to stay focused.”

Principal 2: “Time focused on teachers meeting, two days before the start of school, about 13 hours; we need to meet more than seven days during the school year. Not enough time is focused on this area and PLC groups embedded in the school day.”

Principal 3: “Yes, my teachers work in PLC teams and content area teams to share information.”

The fourth principal interview question to help answer RQ2 unanimously showed that teachers rely on PLC time for information to be shared. Principal 1 said, “I expect teachers to collaborate and discuss students.” Principal 3 explained, “My teachers work in PLC teams and content teams to share information.” Finally, Principal 2 shared, “Time is focused in teacher meetings.” Principal 2 also shared that there is not enough time during the school day for teachers to meet.

Research Question 3 (RQ3). *Research Question 3: To what extent did proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom?* This research questions examined teachers and what technologies they are using in the classroom. In addition, this research questions looked to see how teachers modify their instruction to incorporate technology in the classroom. There are technologies teachers can choose from; however, teachers may not be able to use them for various reasons. Some participants from the three middle schools gave more than one response to the focus groups questions. These additional responses were recorded in the data.

Focus groups. The first question to answer RQ2 was focus group question number 5: *What factors would encourage or motivate you to facilitate a professional development workshop on new technologies for other teachers to attend?* The answers collected from the participants of MS1 had a wide range of responses. The largest number of participants stated that time was the biggest factor. Participant 10 stated, “TIME! Most of what keeps teachers from wanting to facilitate new PD was the time that

it takes to plan workshops. Teachers have so much already on their plate it was difficult to find time to plan workshops." Participant seven had the same feelings, but added some additional thoughts, "Time, money and support for the new technology was what would encourage me." Figure 19 displays all of the participants' responses.

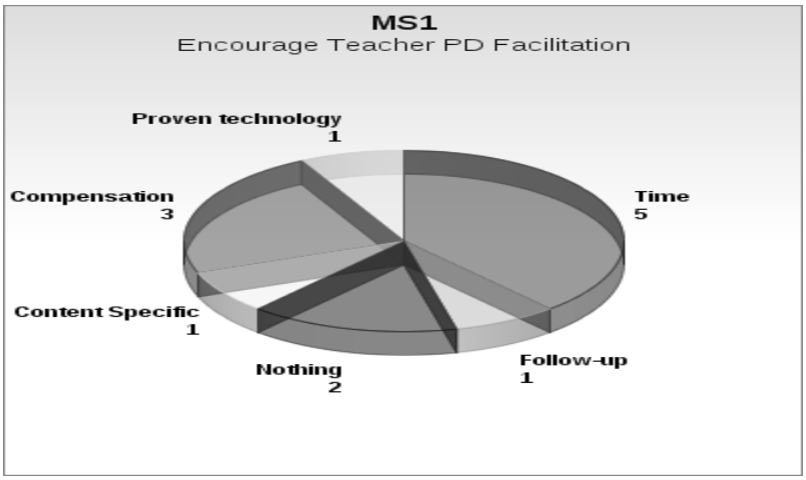

Figure 19. Encourage Teacher PD Facilitation–MS1

The main motivating factor that would encourage the participants at MS2 is money/compensation. Of the 12 participants, eight stated they would need to be paid or compensated for their time and effort. "If I were to be paid for my extremely valuable time, then I would consider it. I can make $50.00 an hour tutoring. I do not think the district will pay that kind of money to facilitate a PD workshop," said participant 8. Participant 9 shared the thoughts of participant 8, but added, "Compensation is important. I would not want to do this unless I was very familiar with the technology already and felt that I was an expert and using it." Figure 20 displays all of MS2 responses.

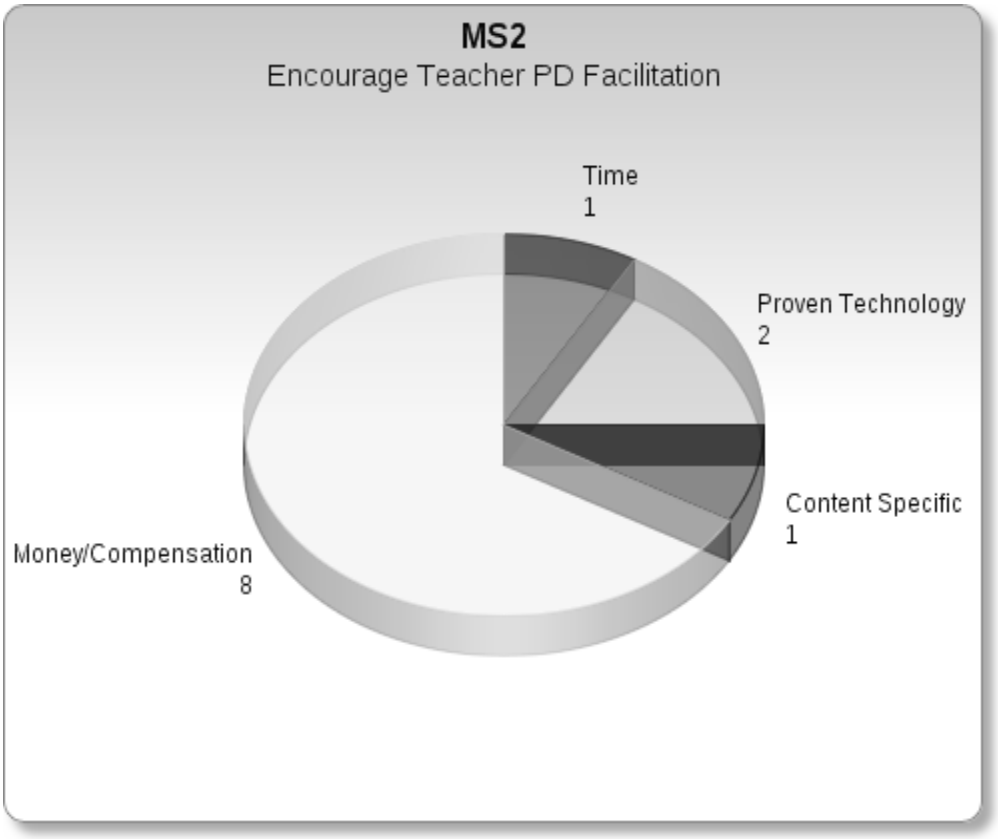

Figure 20. Encourage Teacher PD Facilitation–MS2

The data collected from MS3 was not as concentrated in one specific area. MS3 participants provided a range of motivating factors. Participant 2 said, "I am not a technology person, so I would not be interested in teaching others." Participant 1 shared, "The technology needs to be something I would use and relevant in my classroom. I would need time to use it before I presented it to my fellow teachers." Participants 1 continued to say, "I would want to invite the staff instead of making the staff attend. That makes a big difference." Figure 21 shows all of the response from MS3.

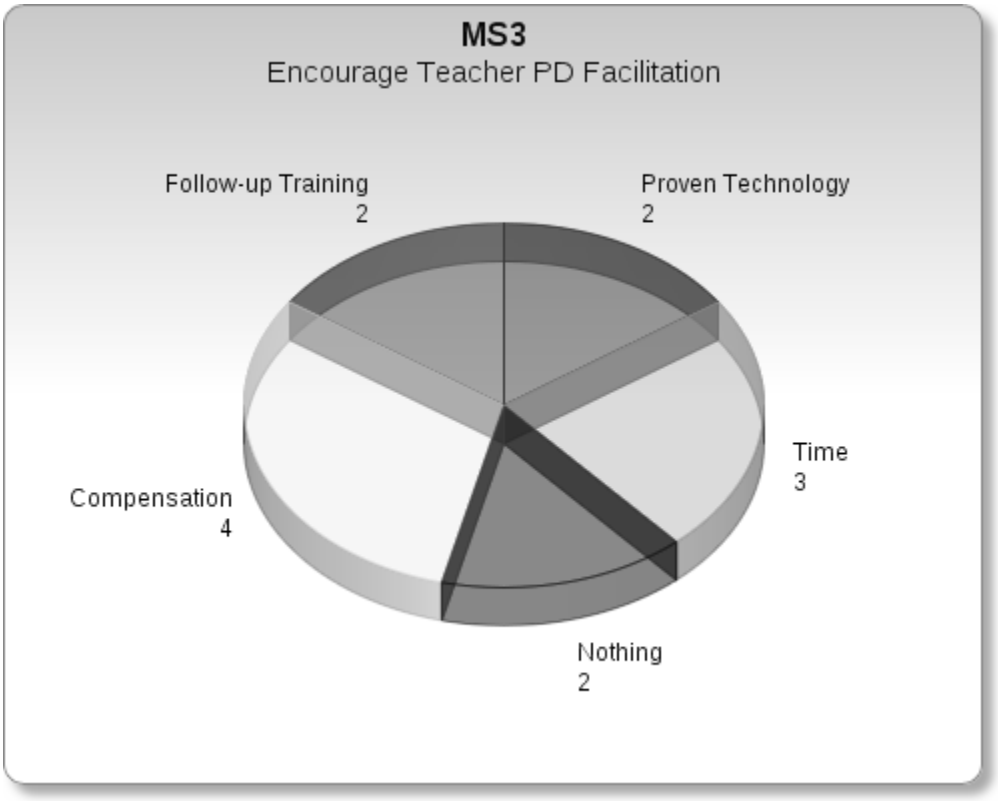

Figure 21. Encourage Teacher PD Facilitation–MS3

The second question to answer RQ2 was focus group question number 15: *How does your principal seek out or identify professional development workshops on new technologies and recommend them for you to attend?* MS1 stated that 25% (three participants) were unsure how their principal sought out and identified PD opportunities. Participant 6 said, "I am unclear how they seek them out, but feel it is district directed." Not all of the participants shared the same thoughts as participant 6. Fifty-eight percent (seven participants) believed that a spam email from the principal is how they are recommended for a PD workshop. Their principal never asked the remaining two participants (17%). Figure 22 displays this information.

MS2 had the three same categories as MS1, but their percentages were different. Seven participants (58%) do not know how their principal identifies PD opportunities for

the teachers to attend. Twenty-five percent (three participants) have not been asked by their principal to attend a PD workshop. The final 17% (two participants) believe they are sent via spam emails by their principal. Figure 16 displays this information.

The participants from MS3 felt differently about how their principal identifies PD opportunities. Five participants (42%) were unsure how the principal seeks out PD opportunities. One participant (8%) stated they are self-motivated and do not need their principal to seek out PD opportunities. "I do not think she does, but I am more self-directed and do not rely on someone else to seek out information that I am interested in," said participant 8. The final six participants (50%) shared that all of the PD opportunities are sent from the district office and not their principal. Figure 22 displays this information.

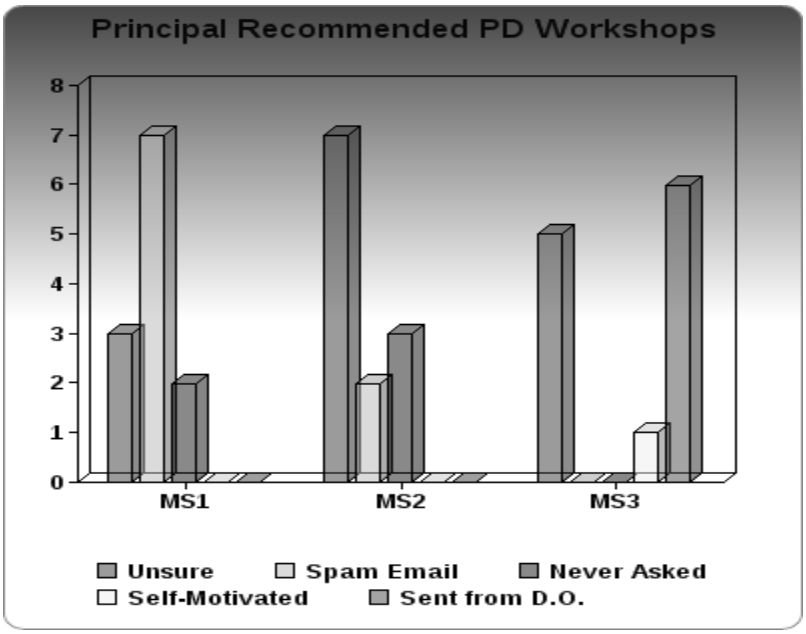

Figure 22. Principal Recommended PD Workshops

The third question to answer RQ2 was focus group question number 19: *What technologies do you currently use in your classroom?* This focus group question

prompted the participants to give more than one answer to the question. Teachers can be using more than one technology in the classroom.

The participants from MS1 acknowledged six different technologies currently used in the classrooms. Figure 17 displays the six technologies and the number of participants using the technology.

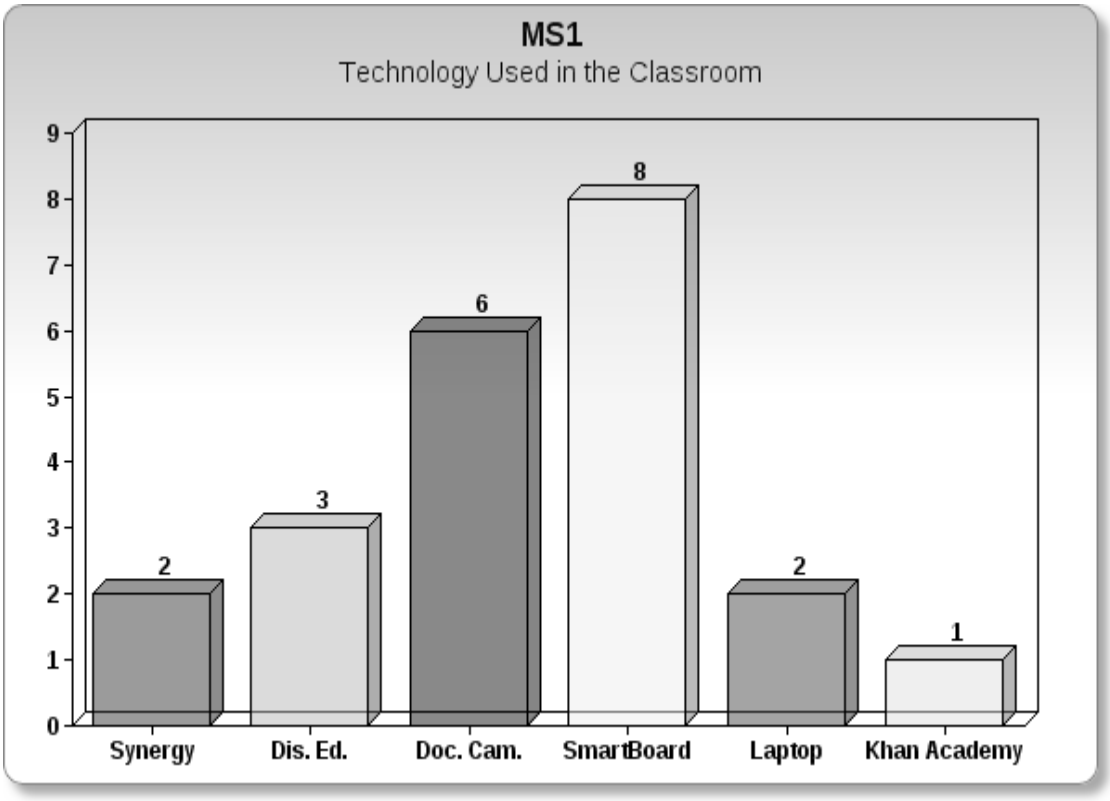

Figure 23. Uses of Technology in the Classroom–MS1

In MS2, the participants referenced similar technologies, but only had four different technologies being used in the classroom. Figure 24 will give a visual and the number of teachers using the technology in the classroom.

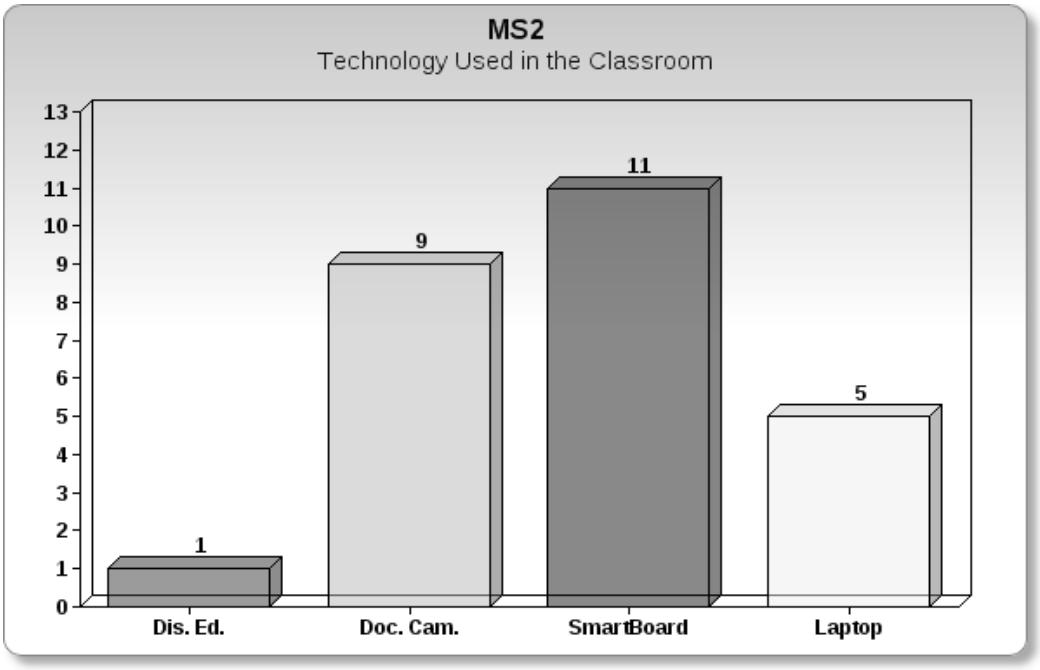

Figure 24. Uses of Technology in the Classroom–MS2

MS3 also utilizes six different technologies in the classroom. This is similar to MS1. However, only four of the six technologies are identical. Figure 25 displays the technology used in the classroom and the number of participants using the technology.

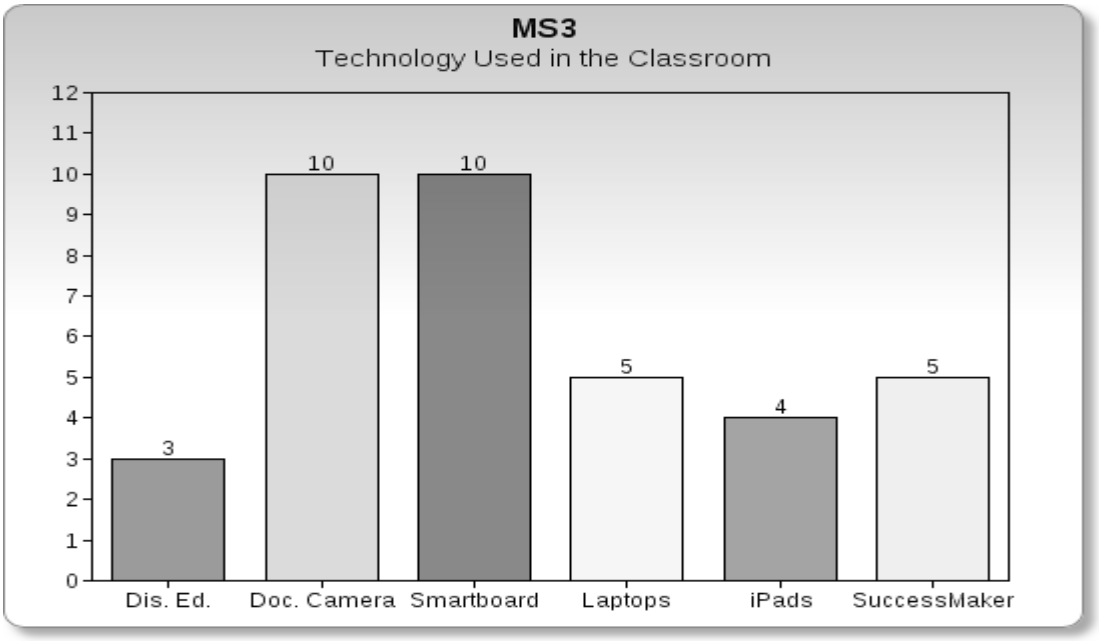

Figure 25. Uses of Technology in the Classroom–MS3

The fourth question to answer RQ2 was focus group question number 22: *How are you using new technologies in the classroom to ensure student achievement?* The data collected for this question from MS1 shows the participants are utilizing the technology in different ways. The highest numbers of participants (4) from MS1 are using the interactive Smart Board to assist in student learning. The next three categories; enrichment, document camera, and student-selected technology each had two participants selecting these areas. The last two participants chose differentiated instruction and none. Participant 1 stated, "My technology use is slim to none, not used much in the classroom."

MS2 displayed similar results to MS1. The top categories selected by the participants were none, enrichment, and interactive Smart Board. Each of these categories had three participants each. The last three participants responded with; limited technology use, document camera, and data tracking. Participant 7 disclosed, "Use spreadsheets to

track grades. This gives me a look at where students do not understand the material I am presenting to them."

The participants at MS3 only gave three areas of focus; enrichment, differentiation, and interactive Smart Board. The number of participants who use technology for enrichment is seven. Three participants use technology to differentiate their instruction. The last area of interactive Smart Board had two participants. Participant 11 stated, "I also use the Smart Board tools for participation of every single student. This gets the students engaged in learning.

The fifth question to answer RQ2 was focus group question number 26: *How does your principal follow-up after a professional development workshop to know if the workshop content is being used in the classroom?* Seven participants from MS1 disclosed an overwhelming response of 58% that there was no follow-up after a PD workshop has been attended. Twenty-five percent (3 participants) were unsure if there was follow-up. Participant 9 said, "I do not know. I assume the principal is checking the sign-in sheet to see who attended." The last two participants felt the follow-up came from classroom walkthroughs. Participant 12 stated, "Through her classroom walk-throughs and formal observations, I guess."

The data collected from MS2 shows the majority of the participants (10) fell into one of two categories; 1) No follow-up (five participants), or 2) Unsure (five participants). The last two participants were split, one each, between casual conversation and formal evaluation. Participant 1 shared, "In all of my years teaching, I have never really focused on how the principal follows-up. I am not sure the principal does."

MS3 shared a couple of similar responses to MS1 and MS2. However, the participants from MS3 gave two different responses, email and trust. Figure 26 will show a breakdown of the participants' responses.

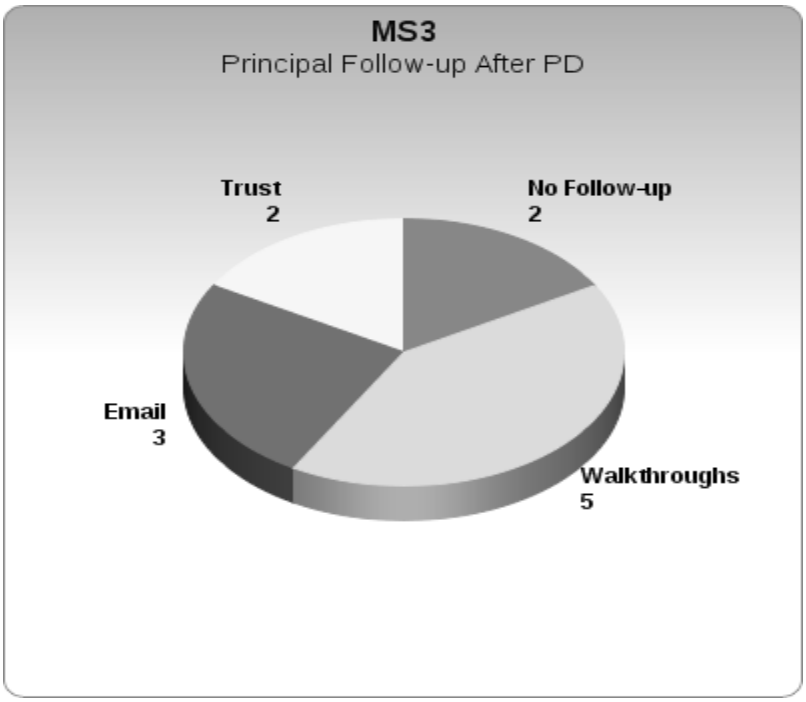

Figure 26. Principal Follow-Up–MS3

The sixth question to answer RQ2 was focus group question number 28: *To what extent does follow-up professional development workshops help you better understand new technologies used in the classroom?* The data collected for this focus group questions was dramatically skewed in one direction. The results from MS1 show that 92% of the participants feel there is no follow-up training. The last participant from MS1 stated she they were unsure of any follow-up. Participant 10 said, "I guess they would help a lot but unfortunately that doesn't every happen." The data from MS1 further showed that of the 11 participants who stated there was no follow-up training, nine of the 11 participants felt that follow-up training would be a benefit.

MS2 had an overwhelming response with 100% of the participants stating that there is no follow-up training. Participant three felt, “There is no follow up, but would be helpful. This way, teachers can get questions answered for what the different teachers were encountering.” Participant 3 was not the only teacher to feel that follow-up training would be beneficial. Nine of the 12 participants (75%) believed that follow-up training would be helpful.

MS3 was different from MS1 and MS2. One hundred percent of the participants feel there is no follow-up training for PDs. Similar to MS1 and MS2, 10 of the 12 participants 83%) feel that follow-up training is important to understand and implement new technology. Participant 3 stated, “It would be great to experience the technology and get answers to questions or troubles I encounter. The first time through I may have missed something.”

The seventh question to answer RQ2 was focus group question number 20: *Does your principal identify various workshops for teachers to attend and bring the concepts and ideas back to teach the other teachers at your school about those ideas and concepts? If so, how has that worked at your school?* The results from MS1 are displayed in Figure 11. The data will show that 50% of the participants (6) did not think their principal identified workshops for teachers to attend. The other six participant responses will be displayed in Figure 27.

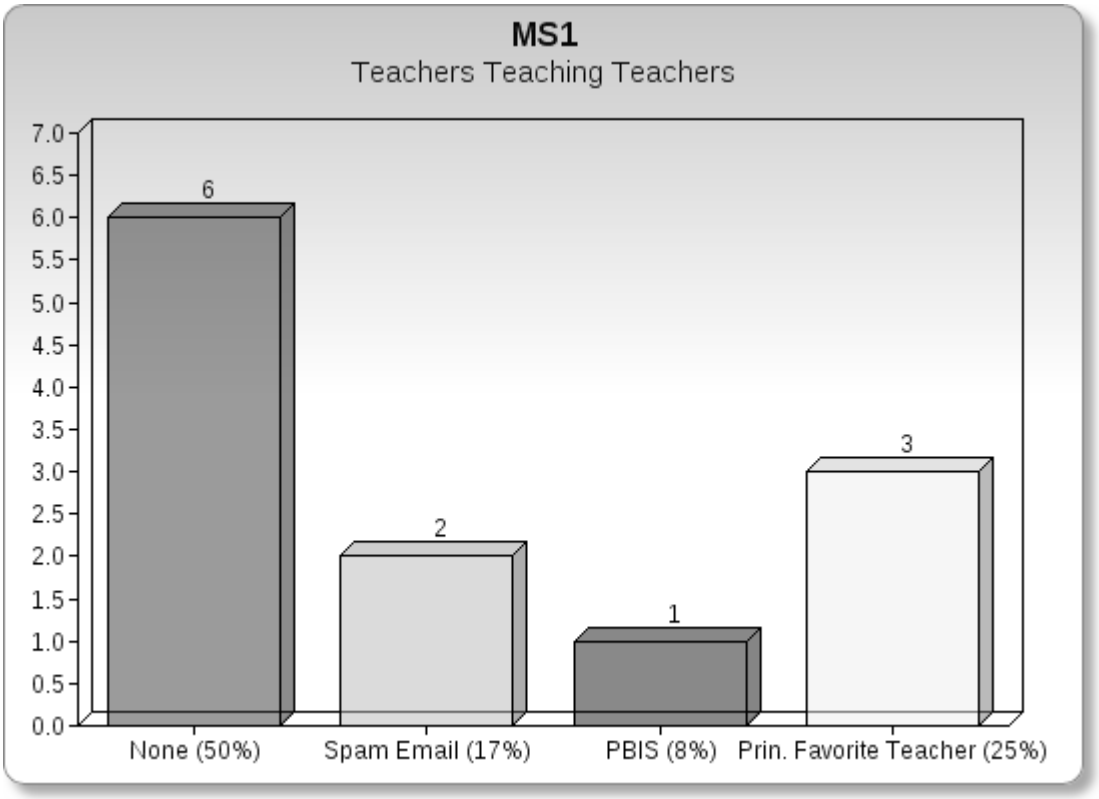

Figure 27. Principal Identified Workshops–MS1

The data collected from MS2 show that 50% of the participants feel their principal does not identify PD workshops for teachers to attend. “None, I asked to attend a PD workshop, but there has been no follow through. I initiated it and not my principal,” said participant 2. The other data collected from MS2 will be displayed in Figure 28.

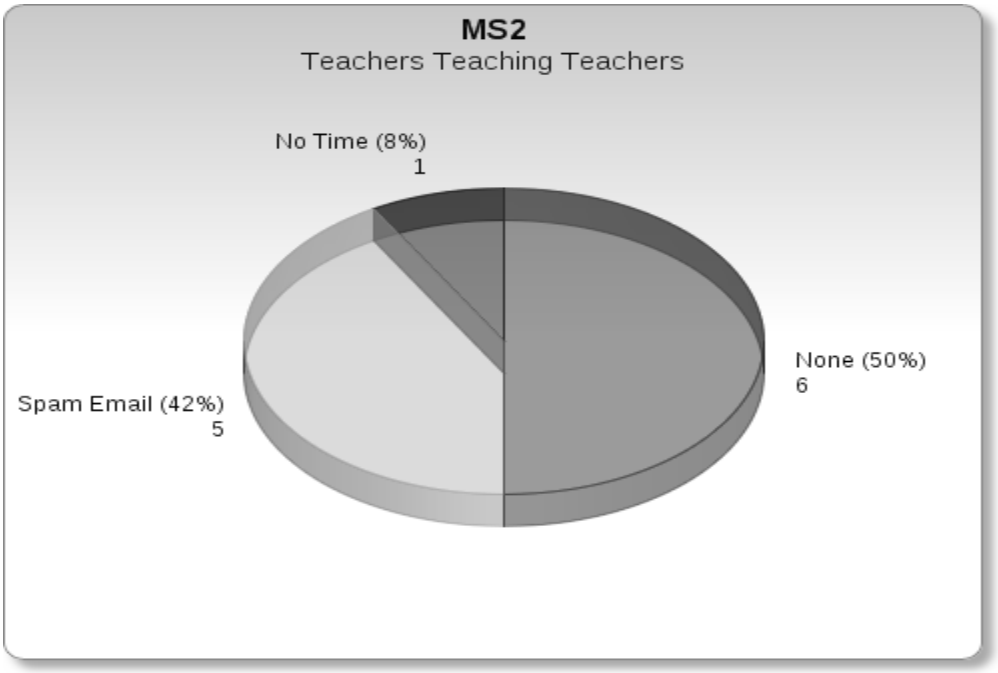

Figure 28. Principal Identified Workshops–MS2

The largest number of participants for MS3 shared the same idea that their principal does not identify workshops for teachers to attend. Participant 8 shared, "The principal has never asked a teacher to attend a workshop and teach the staff." The data collected is displayed in Figure 29 below.

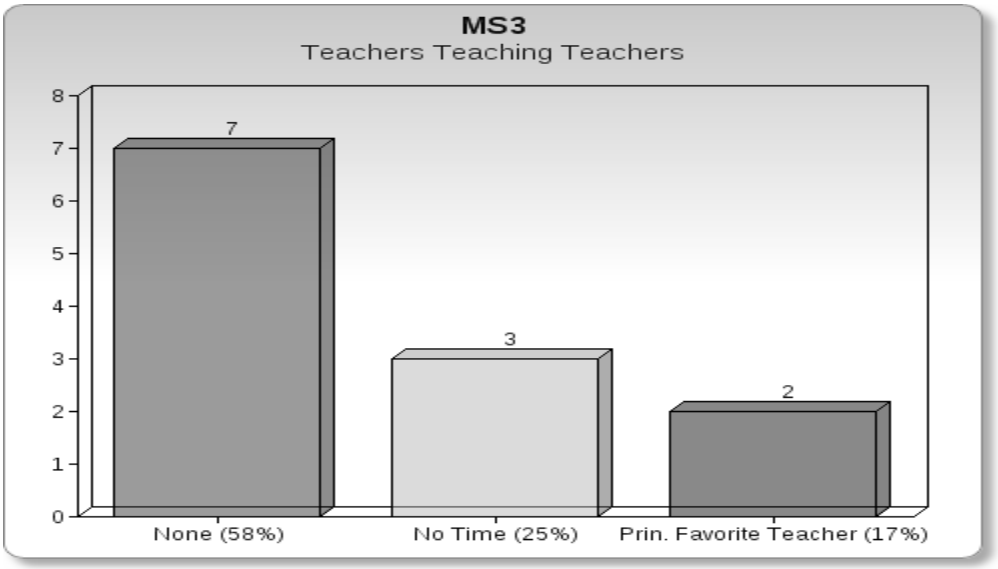

Figure 29. Principal Identified Workshops–MS3

Principal interviews. *Research Question 3: To what extent did proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom?* The information in the principal interview section is the data collected from the principal interviews. Each principal interview question that relates to the research question is listed below. The information collected is used to get the principals' perception for each of the four research questions.

Principal Interview Question 7 was: *How do you as a principal seek out or identify professional development workshops on new technologies for your teachers to attend and train other teachers?*

Principal 1: "Technology has been the focus of the learning community, collaborating with another middle school, and finding out what teachers are interested. I will try to make that happen."

Principal 2: “It begins with the district office; what are their directions? I want to align with district initiative. I have limited time to train – 12 hours for the year. This is not much time to get quality training done.”

Principal 3: “Yes, I am focused on common core. I send a group of teachers to that, AVID campus. They must present this information to me before I approve of teachers seeking out a PD.”

The first principal interview question to help answer RQ3 revealed three different approaches by each principal. Principal 3 shared, “I have sent teachers to PD workshops. They must present the information to me before I approve them to attend a PD workshop.” Principal 1 explained, “I collaborate with other middle schools and find out what are their teachers interest.” Principal 2 stated, “It begins with the district office; what are their directions? I want to align with the district initiative.”

Principal Interview Question 11 was: *What factors would encourage or motivate you to empower your teachers to facilitate a professional development workshop on new technologies for other teachers to attend?*

Principal 1: “Teachers come to me and ask to share information with the staff, knowing that a teacher is using something in the classroom. Other teachers are not using the same technology and that encourage me to get them in front of the other teachers and present.”

Principal 2: “There must be more time after school hours. This was created by the culture of the school; teachers supporting other teachers and being interdependent to each other. Utilizing new technology could be a benefit.

> More cross curriculum. A teacher has mastered a technology and will present to the staff."
>
> Principal 3: "I try to empower each teacher. If I see a workshop that will help a teacher at my school, then I will talk to them about it. This could be used as a directive to help improve classroom instruction."

The second principal interview question to help answer RQ3 displayed that their teachers coming to them and asking, or talking about a technology that can be used in the classroom motivates principals. Principal 3 added, "I try to empower each teacher. If I see a workshop that will help a teacher, then we talk about it and see if there is an interest." Principal 2 shared, If a teacher has mastered a technology, then I will see if they want to present to the staff." Principal 1 stated, "If I know a teacher is using a technology in their classroom that other teachers are not, then that would encourage me to get them in front of the other teachers."

Principal Interview Question 17 was: *How do you as a principal follow-up with teachers after they attend a professional development workshop to know if the workshop content is being used in the classroom?*

> Principal 1: "For district PD days, the teachers are spread out and I do not follow up because it is difficult to know what is talked about in every workshop. I ask the teacher to see if that is what they learned from the PD workshop."
>
> Principal 2: "It can be during a formal observation or post conference. I ask and verify that they used the new information. Informally, casual conversation and gage the teachers excitement about what they learned and how are they going to share it with the other teachers."

Principal 3: “We do exit surveys. The instructional coach is the main person to if they are being use. This coach is the liaison between me and the teachers in this area.”

The third principal interview question to help answer RQ3 showed that the follow up principals do is through casual conversation or buy an instructional coach. In addition, the one principal explained that they do not follow up with teachers. Principal 1 explained, “I do not follow up because it is difficult to know what was talked about in every workshop.” Principal 2 shared, “Informal or casual conversation will gage the teacher’s excitement about what they learned.” Principal 3 expressed, “The instructional coach is the liaison between me and the teachers.”

Principal Interview Question 24 was: *How would you as a principal encourage teachers to be proactive and seek out professional development workshops to improve student achievement at your school?*

Principal 1: “If I see something that a teacher may like, then I will present it to them. I worry about teachers because their jobs are getting harder and we need to keep PD alive. I have the luxury to send teachers to workshops.”

Principal 2: “I try to create a culture of “yes”. Teachers come to me with an idea and a resource they are excited about it, and then they will look into seeing what they can do to get money. If teachers are always told “no”, then they will stop looking for new ideas because the answer is always no.”

Principal 3: “I choose what they need, but if a teacher comes to me, I will send them. I see things and evaluate if a teacher could benefit from the workshop.”

The fourth principal interview question to help answer RQ3 showed that principals leave the decision up to the teacher, except in one case. Principal 3 explains, "I choose what they need, but if a teacher comes to me, I will send them. I see things and evaluate if a teacher could benefit from the workshop." Principal 2 shared, "Teachers come to me with an idea and a resource they are excited about it, and then they will look into seeing what they can do to get money." Principal 1 stated, "I have the luxury to send teachers to workshops. If I see something that a teacher may like, then I will present it to them."

Research Question 4 (RQ4). *Research Question 4: How does principal leadership style determine what the nature of the process is that will be followed to determine just how teacher requirements for professional development are fully met?* RQ4 examines the process that is followed to meet the requirements of PD for the year. In addition, RQ4 will look at how principals follow-up to verify teacher have met the PD requirements.

Focus groups. Focus Group Question 11 was: *How does your principal follow–up with teachers at your school to verify professional development requirements are met?* The participants from MS1 gave five ideas as to how their principal verifies the PD requirements are met. Forty-two percent of the participants stated there was not follow-up. In addition, 25% (3 participants) were unsure how the principal verified they attended a PD workshop. Two participants thought that the exit sign-out sheet at the end of a workshop is how principals verify they were there. The last two participants felt walkthroughs were one way to verify, or the school district tracks the information not the principal.

The data from MS2 is heavily focused on two areas, no follow-up (42% - five participants) or unsure (50% - six participants) how the tracking is done. The remaining 8% (one participant) felt the district office does the tracking of this information. Participant 5 said, “I don’t know how my principal follows up to verify that I have net the PD requirements.” Participant 1 added, “I have work with my principal for several years and I don’t know what is done to verify this.”

MS3 disclosed four different areas they felt were how their principals verified PD attended. The largest area that MS3 participants (seven – 58%) stated was that the principal asks questions about what they learned in the workshop. Two participants felt that there was no follow-up through casual conversation with the principal. The last participant said the district office tracked the information about PD.

Focus Group Question 17 was: *What steps do you take to meet the professional development requirements at your school?* The data collected for MS1 was displayed in Figure 30. The main area of focus from nine participants was “only if they are told.” Participant 1 stated, “If I am told to do something then I will do it, but beyond that it’s hard to do anything else because so much of the time it does not apply toward my content area.”

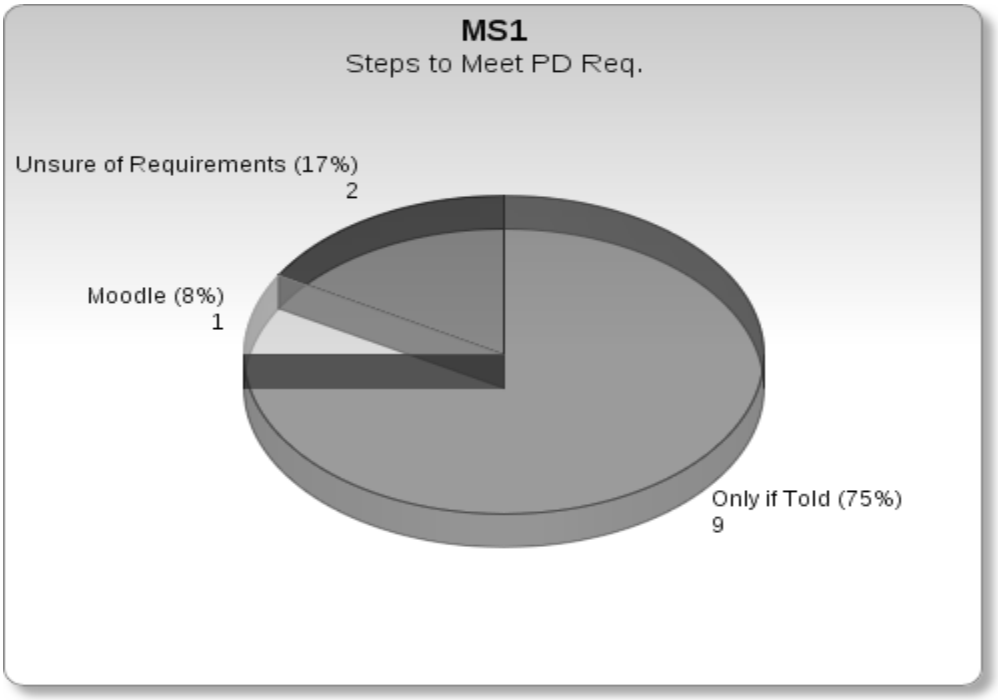

Figure 30. Steps to Meet PD Requirements–MS1

The data from MS2 was concentrated on two areas of focus. Both are displayed below in Figure 31. Ten participants (83%) said they only fulfill their obligation when they are told. The other two participants (17%) were unsure of the PD requirements. Participant 12 from MS2 stated, "I only attend the required meetings. I am sent an email from either the principal or someone in the district office where I need to go."

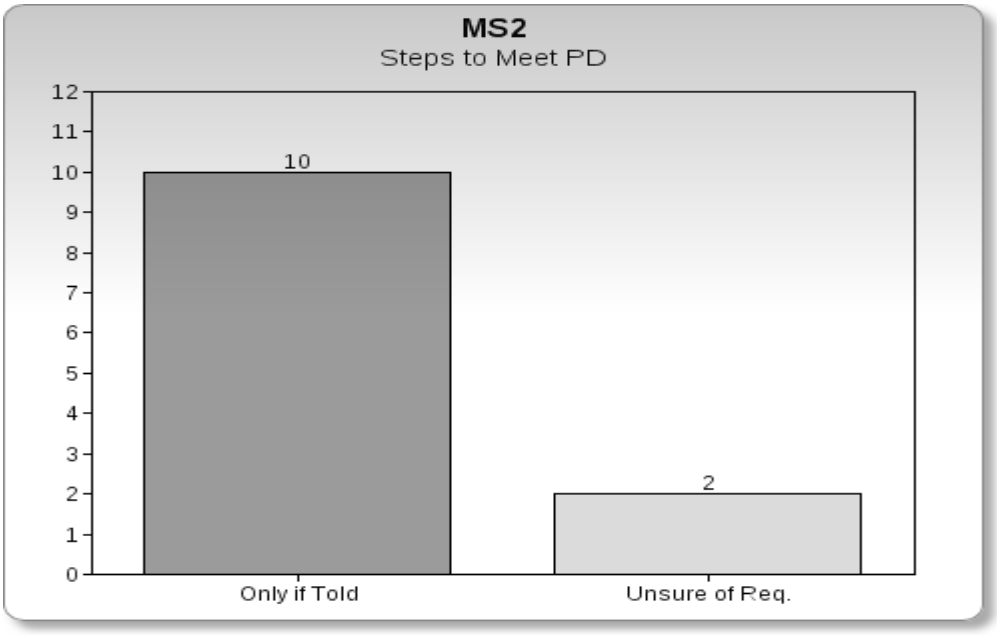

Figure 31. Steps to Meet PD Requirements–MS2

MS3 had the most (five) areas of focus for this question. The five areas are; only if told, Moodle, unsure of requirements, content focused, and self-motivated. A breakdown of the data is shown in Figure 32.

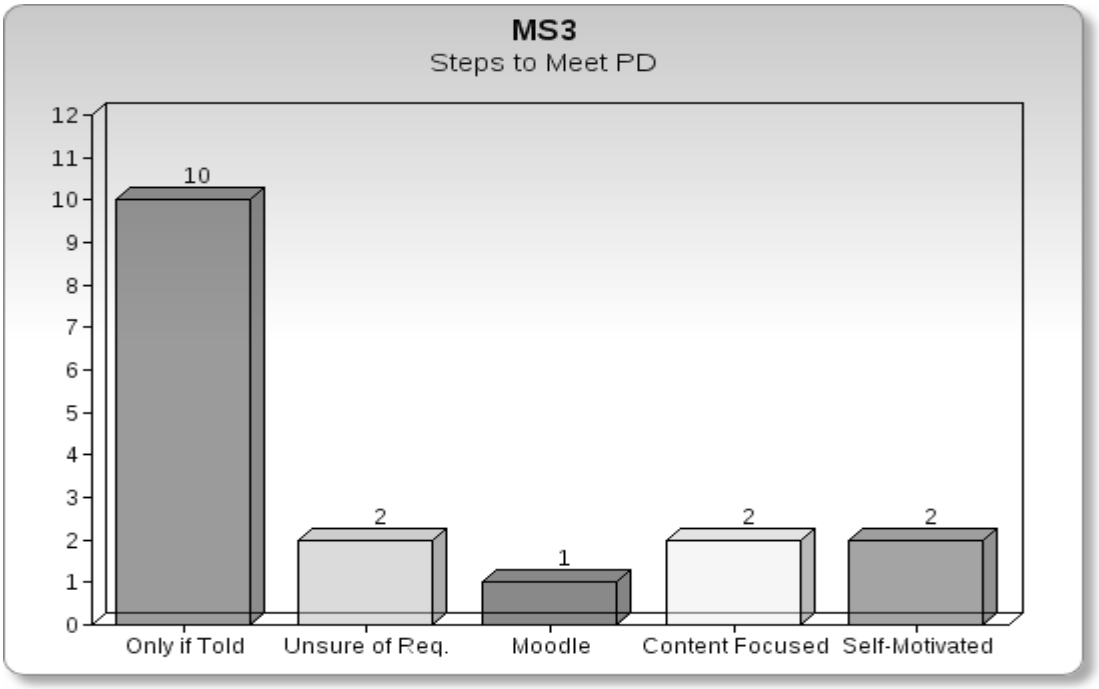

Figure 32. Steps to Meet PD Requirements–MS3

Focus Group Question 25 was: *How does your principal explain the process or requirement for professional development each year?* Sixty-seven percent of the participants (eight) from MS1 stated that all of the PD requirements are explained on the first two days before school starts. The next group of participants (three) explained that the requirements are emailed to them during the school year. Participant 9 stated, "It's not really explained. A lot of it is dictated at the district office, rather than at the school level. So, it is emailed to us." The last participant (one) was unsure of what the process was to meet PD requirements. Participant 1 added, "I was not explained the process because I did not attend the two PD days before school started."

MS2 shared the same areas of focus as MS1. The data collected shows that 50% (six participants) felt the requirements are emailed to them and not explained. Twenty-five percent of the participants (three) said they were unsure what the requirements are. Participants 1 explained, "The requirements for PD are not explained face to face to the

teachers, but they are emailed. Either the principal or someone from the district office sends out the information after the start of school." The last three participants (25%) explained that this is done on the first two days of school before the students arrive.

MS3 had two areas of focus when responding to this focus group question. Forty-two percent felt they were unsure what the requirements are for PD. Participant 5 explains, "Although new teachers have been provided with a lot of communication and support in this area, I believe that this piece could be improved for the veteran teachers on site." Participant 5 continued, "PD opportunities are communicated, but not too often are any specifically focused on as being recommended unless requested by the teachers." The other participants (seven) felt the requirements are in a district software called My Learning Plan (MLP). Fifty-eight percent believed that MLP was where they need to look and see what is expected for PD.

Focus Group Question 27 was: *What is the process for meeting the professional development requirements at your school?* The data collected from MS1 showed that eight-three percent of the participants (ten) feel that by attending district meetings was how they meet the PD requirements. The other seventeen percent believe there is no process to meeting the PD requirements.

MS2 also had two areas of focus, but were different then MS1. The two areas of focus were either unsure or by Moodle/MLP. Eight participants (67%) believe they were unsure of the process. Participant 12 stated, "I am not aware of any process to meet the PD requirements." Participant 10 added, "All you do is sign up and show up." The other four participants (33%) stated that signing up and taking the online Moodle/MLP coursework is how they meet the requirements.

MS3 had four areas of focus for this focus group question. The largest area (58% - seven participants) felt that by attending district meetings is how the requirements are met. The next area (17% - two participants) was unsure of any process to meet the PD requirements. Another 17% of the participants (two) said the process is emailed to them during the school year. The last area of focus was from one participant saying, "There is a section on our formal evaluation that covers if PD requirements are met."

Focus Group Question 31 was: *What changes would you recommend to make the process flow more efficiently than the current process to meet the requirements of professional development?* Table 15 displays the entire data collection from this focus group question. It shows all the responses to this question for MS1, MS2, and MS3.

Table 15

Recommended Changes to the Process

Question/Responses:	Middle School 1 (MS1)	Middle School 2 (MS2)	Middle School 3 (MS3)
Responses to Focus Group Question 31:			
Content focused	2 (17%)	2 (17%)	-
None	5 (42%)	3 (25%)	7 (58%)
Better quality PD	1 (8%)	7 (58%)	1 (8%)
Full Days/Not half days	3 (25%)	-	1 (8%)
Unsure, but change is needed	1 (8%)	-	-
More Selection	-	-	2 (17%)
Summer PD	-	-	1 (8%)

Principal interviews. *Research Question 4: How does principal leadership style determine what the nature of the process was that will be followed to determine just how teacher requirements for professional development are fully met?* The information in the principal interview section was the data collected from the principal interviews. Each principal interview question that relates to the research question was listed below. The

information collected was used to get the principals' perception for each of the four research questions.

Principal Interview Question 6 was: *How do you as a principal follow–up with teachers at your school to verify professional development requirements are met?*

> Principal 1: "This question is the key to PD and I do not always do it well. I look for items during walkthroughs, informal conversations, and the evaluation process."
>
> Principal 2: "I do not do this well enough. I can see whom Moodled, but I will not stop and see that has done it. I will do that at the end of the year. I do walkthrough to see is they are using the newly learned material, are they teaching different. Must be able to practice and try, so time is important."
>
> Principal 3: "I refer back to workshops and reflect. I am not in the business that follows up; teachers should know what should be done. Give the initial direction, but if it is not done then it becomes a directive."

The first principal interview question to help answer RQ4 revealed that all of the principals do not follow up to verify teachers have met the PD requirements. Principal 3 expressed, "I am not in the business that follows up; teachers should know what should be done. Give the initial direction, but if it is not done then it becomes a directive." Principal 2 shared, "I do not do this well enough, but I will not stop and see that has done it." Principal 1 explained, "This question is the key to PD and I do not always do it well."

Principal Interview Question 14 was: *What steps do you take to meet the professional development requirements at your school?*

Principal 1: “I take PD very seriously, always use staff meeting and half days to be focused and not talk about things that could be emailed.”

Principal 2: “I shot from the hip and ask, what are the directives from the district office? I want to be line with that, but situations come up and may have to meet that need, doing the best you can to meet those needs but not following up every time.”

Principal 3: “Participate in PDs as required by the district.”

The second principal interview question to help answer RQ4 showed the principals varied between a hands on versus a hands off approach. Principal 3 explained the rules are very simple, “Participate in PDs as required by the district.” Principal 1 stated, “I take PD very seriously, always use staff meeting and half days to be focused and not talk about things that could be emailed.” Principal 2 shared, “I shot from the hip. I want to be line with that, but situations come up and may have to meet that need, doing the best you can to meet those needs but not following up every time.”

Principal Interview Question 20 was: *How do you as a principal explain the process or requirement for professional development each year?*

Principal 1: “This is a good goal for me. I focus on the school goal which is every student must be challenged. Not done formally, but remind teachers of what the focus is – student achievement.”

Principal 2: “I let the teacher know what the directive of the district office is. Many teachers do not know what is expected. I share that with them.”

Principal 3: I knew what needed to happen at this school. PD is not teacher driven, they know what is out there and available to use.”

The third principal interview question to help answer RQ4 showed that principals are relying on the policies already put into place. Principal 2 added, "I let the teacher know the directive of the district office. Many teachers do not know what is expected. I share that with them." Principal 1 stated, "I focus on the school goal which is every student must be challenged. Not done formally, but remind teachers of what the focus is – student achievement." Principal 3 expressed, "PD is not teacher driven, they know what is out there and available to use."

Principal Interview Question 25 was: *What processes have you as a principal implemented for meeting the professional development requirements at your school?*

Principal 1: "I do what I am told from district office leaders, no formal requirement. The boss wants me to email what we are doing as a school to see if they are in line with the district goals."

Principal 2: "I have been involved in district administrative group, wants to be at the front end of the district initiatives, so can guide the school better knowing what is going to be expected of the school. Try to stay at the front of district initiatives and inform the teachers of what should be focused on."

Principal 3: "Time on early release days for teachers to spend time with their PLC teams is crucial."

The fourth principal interview question to help answer RQ4 showed that two of the three principals relied on the district office to direct their action toward the PD requirements. Principal 1 shared, "I do what I am told from district office leaders, no formal requirement. Principal 2 explained, "I have been involved in district

administrative group, wants to be at the front end of the district initiatives, so can guide the school better knowing what is going to be expected of the school." Principal 3 stated, "I utilize Time on early release days for teachers to spend time with their PLC teams is crucial."

Principal Interview Question 28 was: *What changes would you recommend to make the process flow more efficiently than the current process to meet the requirements of professional development?*

Principal 1: "I need more time; time during half days or early release days. It is more of an event for PD where it should be part of what we do. Teachers dread PD, it should be mode to engage and better the teachers."

Principal 2: "Time! I need more time with teacher and more time in a formal structure. Increase the length of the school year, pay teachers more, but allow more time and better quality PD. We need to utilize more time to better focus the PD days."

Principal 3: "I am a less is more kind of person; committed to the teacher. I would not put any more on their plate."

The fifth principal interview question to help answer RQ4 discovered principals need additional time during the school day, week, or year. Principal 2 shared, "I need more time with teacher and more time in a formal structure. Increase the length of the school year, pay teachers more, but allow more time and better quality PD." Principal 1 shared similar thoughts as Principal 2 stating, "I need more time; time during half days or early release days. It is more of an event for PD where it should be part of what we do."

Principal 3 explained, “I am a less is more kind of person; committed to the teacher. I would not put any more on their plate.”

Researcher reflection and observations from field notes. This researcher used field notes that were a combination of the reflections, feelings, anecdotes, observations and other notations made during the process of data collection with the participants for this research study. The use of field notes enabled this researcher to identify the main themes, concepts, issues, and questions raised in the course of the focus groups, principal interview, and data collection process with the faculty participants (Calabrese, 2009).

***Time constraints*.** The researcher placed a time limit of 60 to 90 minutes on all of the focus groups and principal interviews. Some participants were reluctant to participant in this study, but when informed of the time limit, they were willing to attend a focus group or principal interview. At no time did the researcher notice any participant looking at their watches or the clock to leave the focus group or principal interview. In addition, the researcher observed all of the participants discussing their thoughts and ideas with every participant in the focus group. Once the participants were engaged in conversation, all participants were focused on the conversation and not the time. There were strong conversations, but each member was respectful of the other’s opinions.

MS1. The researcher’s note for this middle school noted that the feeling or mood of each focus group were different from the other focus groups at the same middle school. The mood or feeling of focus group one toward the end of the focus group is described as frustrated and to some degree upset. At the conclusion of the focus group, Participant 1 stated, “I did not think of the topic we talked about during the school year,

but now that I have been asked these questions, why am I or my principal not supporting me the way that I should?"

The second focus group had a feeling that was more serious and engaged in what the other participants were saying. Each member of the group, at some point, would ask another participant for clarification of their statements. This added to an enriched conversation amongst each other. However, toward the end of the focus group, it was observed that two participants started using the comments, "I agree with the other participant" as an answer to the question.

The third focus group seemed anxious. Three of the participants were short and quick with their comments. However, after the first couple of questions, these three participants were sharing more information about their thoughts and opinions. His could be from being nervous at the start of the focus group, but they were more relaxed after a few questions were asked.

MS2. The researcher's note for this middle school noted that the feeling or mood of each focus group were similar to the other focus groups at the same middle school. All of the focus groups were extremely candid with their thoughts and ideas. The research observed the participants' answers as "angry" or "frustrated". All of the participants from the three focus groups shared their frustration with not only their principal, but also decisions the district has made that affect them.

MS3. The researcher's note for this middle school noted that the feeling or mood of each focus group were similar to the other focus groups at the same middle school. All of the participants were excited to share their opinions of their school principal. The majority of the participants shared their enthusiasm for the effort their principal has made

to improve the school, but also improve classroom instruction. Two or three participants did not share the same opinion, but did state that they have worked with an instructional coach to help improve their classroom instruction.

Principal interviews. Three principal interviews were conducted, one for each principal. Each of the principals was encouraged to participate in this study. In addition, each principal wanted to share their opinions and comments in hopes that the information collected could make a change in the school district. Each principal accepted to participate in this study and was flexible with their schedule to meet with the researcher. It was also observed by the researcher, that Principal 1 was a little reluctant to elaborate on some of their comments. However, the researcher reminded Principal 1 that all responses are confidential. At this point, Principal 1 was more forthright with their responses.

Summary

The results of the data analysis were presented in this chapter. The purpose of this qualitative research study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. The research conducted and data collected for this study satisfied the purpose of the study and answered all of the research questions. This is a brief summary of the findings from Chapter 4. The purpose of this chapter was to present the findings from the data and to review and analyze the collected data in order to answer the four research questions that guided this study. A more descriptive analysis of the findings is presented in Chapter 5.

For research question 1, the data collected explained the different motivating factors of teachers. In addition, it displayed what motivates teachers to seek out PD opportunities. Three major themes emerged in the responses of participants to the focus group questions connected to RQ1: 1) teacher motivation, 2) principal motivation, and 3) self-motivation. Thirty-six participants provided data to show that their principal does not motivate 39% of the participants.

For the second research question, the data collected focused on how principals promote collaboration amongst teachers. This collaboration allows teachers to share information learned from PD. The participants described that collaboration is done in many different ways; PLC, casual conversation, email, and some participants shared that they do not share information with other teachers. In addition, the data collected showed that 53% of the participants felt their principal does not look to facilitate PD workshop at their schools.

The data collected for the third research question targeted teachers being proactive and learning new technology on their own to improve classroom instruction. The data showed the factors that teachers consider before deciding to use a new technology in the classroom. The data showed that 97% of the participants feel that follow-up PD training is crucial for teachers to implement new technology in the classroom.

The last research question explained the process of how teachers the requirements for PD. Examining the process and making suggestions on how to improve it could give teachers better quality PD workshops and more PD opportunities. The data showed that

67% of the participants attended PD workshops “only if told” to do so. Another 17% were not sure of what the requirements are.

As the conclusion of this study, in Chapter 5 the implications of the data and data analysis relative to each of the research questions are provided. The chapter begins with a restatement of the research questions guiding the study and the main issue of the research. There is a summary of findings and conclusions, organized by research question. Chapter 5 also contains a discussion of conceptual implications, practical implications and future implications, relating the information back to the Literature Review for this study. To conclude this study, recommendations are made for future research and practice in the areas of principal leadership, teacher motivation, and PD on new technologies, based on the findings of the study integrated with the literature reviewed.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

Chapter 5 focuses on the results, conclusions, and recommendations of the study. It addressed the problem, the purpose, and the research questions that guided the study, and then illustrates how the data answered each research question. It also further explains each theme that emerged in the data analysis phase, and connects all elements to the research, thereby establishing a foundation for this study.

This study was needed in order to develop an understanding on how a principal's leadership style influences and motivates teachers to seek new learning opportunities on integration of new technologies into classroom instruction. School leadership and a culture of trust were widely recognized as important in promoting in-school processes and conditions that support and increase student learning and achievement (Bryk et al., 2010; Louis et al., 2010; Robinson et al., 2009; Supovitz et al., 2009). Researchers have found successful technology integration did not occur without meaningful professional development (Buckenmeyer & Hixon, 2009).

The results of this study may contribute to an expansion of that understanding because it provided a picture of teacher perceptions and behaviors based on their interactions with their school principal in regards to motivation, improving classroom instruction, and new technology. The data provided in this research contributed to the body of knowledge on the topics of principal leadership, teacher motivation, and the PD opportunities made available to them by their principal. This contribution was made through research relating to the three areas of focus: 1) How teachers are motivated by their principal, 2) To explore how teachers share and use technology to improve

classroom instruction, and 3) Discover the PD opportunities on the use of new technology provided by the middle school principal. The data also indicates what areas need further concentration. In this chapter, conclusions, implications, and findings for the data in chapter 4, are discussed.

Summary of the Study

This study was needed in order to develop an understanding on how a principal's leadership style influences and motivates teachers to seek new learning opportunities on integration of new technologies into classroom instruction. School leadership and a culture of trust were widely recognized as important in promoting in-school processes and conditions that support and increase student learning and achievement (Bryk et al., 2010; Louis et al., 2010; Robinson et al., 2009; Supovitz et al., 2009). Researchers have found successful technology integration did not occur without meaningful professional development (Buckenmeyer & Hixon, 2009). The study incorporated a problem statement, a purpose statement, and four research questions. There are three sources of data collection.

It was not known how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate technology into classroom instruction. Aelterman (2009) noted that principal leadership contributed to a positive school culture that encouraged student achievement. However, the general problem of professional development still existed: How does the leadership style of the principal motivate teachers to engage in professional development how to integrate technologies into their classroom instruction? This study was needed to develop an understanding on how a principal's leadership style influences and motivates teachers to

seek new learning opportunities on integration of new technologies into classroom instruction.

The purpose of this qualitative case study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Looking at the leadership style of the principals, and the opportunities provided for technology utilization to their teachers, assisted and furthered the understanding of the skills needed to build and maintain a learning environment that promoted student achievement. The principal is the key to move teachers to a higher performance level. With the use of technology in the classroom, evaluating teaching practices is an attempt to achieve a high quality teaching to improve student learning (Datnow et al., 2013).

This qualitative case study focused on four research questions. The formulation of the research questions was to support and better clarify the connection between principal leadership style, and how principals influence their teachers to seek out professional development opportunities. There were four research questions:

(R1) What principal leadership factors influenced teachers to seek out professional development opportunities on the use of new technologies that facilitated learning in the classroom?

(R2) How did principal leadership promote collaboration among teachers resulting in a ”learning” culture to share professional development “best” practices on classroom uses of technology?

(R3) How did proactive teacher use of new technology influence the modification of teacher instructional approaches in the classroom?

(R4) How did principal leadership style determine the process to be followed to meet the professional development requirements on the use of technology in the classroom?

To answer these research questions, concurrent qualitative methods were applied to collect data to measure the effectiveness of the principal leadership. Three different forms of data were used. First, focus groups were conducted to explore the thoughts, ideas, and opinions of teachers about the leadership of the principal at their middle school. Additional data came from principal interviews to explore the thoughts, ideas, and opinions of the middle school principal on how they motivate their teachers. Lastly, data came from the researcher's field notes describing the setting of each focus group and principal interview. The findings were reported in Chapter 4, and are discussed in this chapter in depth, beginning with a summary of findings and conclusions based on the data collected. Theoretical, practical, and future implications were explored, to show what this study meant in the fields of principal leadership, professional development, and new technology in the classroom. Finally, recommendations for future practice with the outcomes of this research in mind, and recommendations for further research are discussed.

Summary of Findings and Conclusion

The phenomenon explored was how principal leadership motivated teachers to seek out PD opportunities on new technology. This study targeted three middle schools in urban Arizona. To address the research questions, data was collected that showed self-

reflection of motivation of both teachers and principals. Data were also collected that showed information about teacher collaboration, and PD workshops available to teachers from two groups of participants: 36 middle school teachers (12 from each of 3 school, and 3 principals (1 from each middle school).

The specific problem was a lack of understanding of how principal leadership influenced teacher motivation for professional development on new technology. The findings from this research revealed the importance of principal leadership, and provided an understanding of how principals were motivating their teachers to seek out PD opportunities on new technology. The following findings and conclusions were made and organized by research question.

Research Question 1. *What principal leadership factors influenced teachers to seek out professional development opportunities on the use of new technologies that facilitated learning in the classroom?* For the first research question, the data came from three sources; two groups of participants: 36 middle school teachers (12 from each of 3 school), 3 principals (1 from each middle school), and the field notes from the researcher. The focus group questions and principal interview questions were similar for both groups, but slightly changed to gain both perspectives. An important aspect of the data analysis for this study was a comparison of the results from both the teachers and principals to show two perspectives of each research question. The results from each focus group and interview questions are summarized. The summarization contains a narrative of the responses from the participating teachers and principals about motivation.

Focus groups. Each group of participants from the three middle schools shared candid information in answering the focus groups questions. For the purpose of this

dissertation, teacher motivation was defined as the teachers' attitude toward work (Lubin & Ge, 2012). In addition, motivation has to do with teachers' desire to participate in the pedagogical processes within the school environment and teachers' interest in student discipline and control particularly in the classroom (Cohen et al., 2011). Therefore, it could underlie their involvement or non-involvement in academic and non-academic activities, which operate in schools (Cohen et al., 2011).

Based on the data collected, it was determined that principals motivated 50% of the participants to seek out PD of new technology to improve classroom instruction. In addition, data indicated the principals did not motivate 39% of the participants, and 11% were self-motivated. Despite the general acceptance of professional development as essential to improvement in education, reviews of professional development research consistently point out the ineffectiveness of most programs (Cohen et al., 2011; Deal & Kennedy, 1982). A variety of factors contributes to this ineffectiveness. It has been suggested, that the majority of programs fail because they do not take into account two crucial factors: (1) what motivates teachers to engage in professional development, and (2) the process by which change in teachers typically occurs (Guskey, 1986). This is significant because the information could show that principals are not discovering what motivates teachers to engage in PD workshops to improve classroom instruction.

Additional data was collected to discover how teachers are motivated to improve classroom instruction. The findings indicate that half of the participants are motivated by their students to improve classroom instruction. The other half was self-motivated to improve classroom instruction. This advances Guskey’s model since it show specific factors that motivate teachers to improve classroom instruction via PD workshops on new

technology. In addition, when participants were asked about their personal motivation, half alluded to the fact that students presented the greatest motivation for them as teachers. Brophy (2008) mentioned that a teacher's motivation tends to positively reflect the overall motivation of the students. If students are motivated in the classroom, then the teacher tends to be more motivated.

The final piece of data collected focused on what teachers needed to feel comfortable implementing technology into their classrooms. The largest area of need mentioned by the participants was support. The results displayed in figure 11 in chapter 4 showed that 47% of the participants from MS1, 7% of the participants from MS2, and 25% of the participants from MS3 stated support as main need if they were to implement new technology in the classroom. The participants stated the new technology must be supported by their school/school district. In addition, participants shared they needed time to learn the new technology, it easiness to use and implement in the classroom, and it must be prove to improve student achievement. What attracts teachers to professional development, therefore, is their belief that it will expand their knowledge and skills, contribute to their growth, and enhance their effectiveness with students (Guskey, 1986). This could mean that teachers are willing to incorporate new technology in the classroom, but some conditions must exist. These conditions must be in place before teachers are willing to put in the time to learn a new technology to use in the classroom. The biggest obstacle for teachers is the overall time it would take to learn the new technology, so the participants want to know the infrastructure is in place to support the new technology.

This information also advances Guskey's model as it gives specific needs of teachers to change their classroom practices. Guskey (1986) explains, "We need to

explore specific teacher attitudes and beliefs most crucial to professional growth and development, and to find better ways of measuring these areas of focus. Studying these issues offer exciting possibilities." Guskey (1986) continues, "The findings are likely to have implications for professional development efforts at all levels of education." Guskey (1986) explained that careful attention to the order of change events described in this model is likely not only to facilitate change making, but also to contribute to the endurance of change. As a result, professional development programs will be far more effective and much more powerful. According to Guskey, the final step occurred after teaching practices changed and allowed teachers to see changes in student achievement. Student outcomes drove teacher beliefs when student achievement increased, teachers believed the success of the professional learning innovation was the cause of the increased and continued to integrate that learning in instructional practices (Guskey, 1986).

The data collected was not limited to only improving classroom instruction, but to seek out PD workshops to use technology in the classroom. It was also evident that teachers are willing to seek out PD workshops on new technology if certain conditions are met; support, infrastructure, time to learn the technology, and compensation. In addition, the PD workshops teachers are currently attending show that teachers are not evaluated on whether they learned the content.

Principal interviews. Each of the participating principals from the three middle schools shared candid information in answering the principal interview questions. The principal interview questions were designed to gain the opposing perspective to the focus group questions. In other words, the principal interview questions gave the principals the

opportunity to share their thoughts, ideas, and opinions on how they are trying to motivate their staff.

Based on the data collected, it was determined principals are conscious of how busy teachers are and thus tend to focus on informing the teachers that they are supported and valued at their school. This could mean that principals do not want to overload teachers with more responsibilities. Principal 1 stated, "I try to absorb the outside troubles so teachers do not have to worry about outside factors." Simply communicating with teachers about what they see during walkthroughs can help motivate teachers to improve. Principal 2 shared, "I can be a better principal knowing what the teachers are experiencing, and by letting teachers know that we are a team. I want teachers to feel supported." Knowing that classroom instruction needs to improve, principals consult with teachers to discover what they need to improve classroom instruction. This information helps principals plan PD workshops that meet the teachers' needs. A servant-leader is any leader who focuses on identifying and meeting the needs of others, rather than trying to acquire power, wealth, and fame for oneself (Li, 2013).

The principals shared that they always need to look for new ways to improve instruction in the classroom. This could show those principals are motivated because they know that the instructions level at their school needs to improve. Principal 3 explained that modeling, positive reinforcement, and focusing on student achievement has helped their middle school. The first step in kindling motivation is to establish a foundation of respectful verbal exchanges, shared understandings, positive routines, and proof of support between teacher and administration (Li, 2013). In addition, principals know that this is a time of high stakes accountability and need to work toward the best level in

classroom instruction possible. These findings advance Guskey's model by discovering how principals are looking to assist teachers in changing their classroom practices. Principal 1 expressed that technology has been the focus of the learning community and incorporating technology in the classroom will change the classroom practices of teachers. Principal 3 shared similar thoughts explaining that by incorporating technology and focusing on the common core curriculum has positive improvement in the classrooms at their middle school. Understanding this could give principals and teachers a better quality professional development workshop to attend.

Additional data was collected to discover how principals are motivated to facilitate a PD workshop on new technology for teachers to implement in the classroom and improve classroom instruction. All of the principals' responses indicated some level of reluctance in facilitating a workshop on new technology. They stated that they want to see the technology in action first and know that it will improve student achievement. Literature shows that, in order to improve teaching, especially as they explore the uses of emerging technologies, instructors must continually reflect on their teaching practices (Li, 2013). Looking at how the emergence of new technologies such as Webinars, Web Xs, and Smart Board technologies can improve the instruction level of teachers while at the same time increase student achievement. However, principals are reluctant to introduce this type of PD workshop since they do not want to waste the teachers' time in a PD workshop that does not improve student achievement and classroom instruction. Research showed that learners want more choices in how they learn and prove they are proficient in reading a book, writing a paper, or participating in a group project (Li, 2013). With today's technological tools, the possibilities for creative expression expand

and instructors need to be aware of, and reflect on, the potential use of these technologies (Li, 2013).

The teachers are crucial in this process. Teacher must recognize the learning needs of their student and adapt or develop a set of instructional strategies including technology to meet the needs of the students. In addition, ethnographic studies of teacher change show, for instance, that new ideas and principles about teaching are believed to be true by teachers `when they give rise to actions that work' (Johnson, Levine, & Smith, 2010). This study demonstrates that experienced teachers seldom become committed to a new instructional approach or innovation until they have seen it work in their classrooms with their students (Guskey, 1986).

The principal interviews provide an expansion to Guskey's model since it provides data that influence not only professional development, but also the ability to directly change or motivate the change in teacher practices in the classroom. Principal 2 felt by influencing the change in teacher's classroom practices will influence the change in student learning outcomes. In addition, principal 2 stated that if "I" as a principal can influence or motivate my teachers to improve their classroom instruction, then it would be assumed that student achievement would increase. Lecturing, questions, collaboration, discussions, and demonstration are different teaching practices in the classroom. Principal 1 explained that collaboration is a big way for teachers at their middle school to share information and improve classroom practices. Principal 1 also continued to add that in addition to principal motivation, teacher motivation is influential. However, the expansion of new instructional technologies is giving students a more in-depth understanding of the teacher's instruction (Johnson, Levine, & Smith, 2010). This is

significant because it not only aligns with the findings in Guskey's, but it provides additional influence that can modify or add to the existing model.

Research Question 2. How did principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices? For the second research question, the data came from three sources; two groups of participants: 36 middle school teachers (12 from each of 3 school), 3 principals (1 from each middle school), and the field notes from the researcher. The focus group questions and principal interview questions were similar for both groups, but slightly changed to gain both perspectives. The results from each focus group and interview questions are summarized. The summarization contains a narrative of the responses from the participating teachers and principals about collaboration. An important aspect of the data analysis for this study was a comparison of the results from both the teachers and principals to show two perspectives of each research question.

Focus groups. Each group of participants from the three middle schools shared candid information in answering the focus groups questions. For the purpose of this dissertation, Wong (2010) explained that collaboration occurs when teachers are provided with time for cross-fertilization of ideas and knowledge about their practices through interaction and active participation. In addition, collaboration is a crucial piece in the success of any school. Collaboration works best when employees can tap many information sources, that way, like-minded groups of people can gather online, exchange data, and disband upon completion of the work (Nash, 2011).

Based on the data collected, it was overwhelmingly determined that Professional Learning Communities (PLCs) were the primary way that teachers share information

with other teachers. This was demonstrated by Guskey's (1986) model of the process of teacher change began by engaging teachers in professional learning. Guskey (1986) continued expressing that the next step involved teachers modifying their teaching practices to reflect what they have learned from the professional development series. The study utilized the theoretical framework of a Professional Learning Community (PLC) to provide an environment of ongoing support and training in education technology integration (Ham, 2010). This finding is significant since it provided teachers a better understanding about self-reflecting on their own teaching practice and sharing information with other teachers to share instructional "best" practices (Ham, 2010). In addition, this finding was significant because it extends Guskey's model and provides an influence that effects changes in teachers' classroom practices. Principal 3 shared, "I try to empower each teacher to improve. I strongly believe collaboration amongst teachers is equally as motivation or influential on teachers as principal motivation." Principal 3 continued to say that collaboration has a big impact on classroom instruction and a motivator to change classroom practices.

Additional data was collected which indicated time plays an important role since a teacher's day was already busy and it was difficult to schedule a time to meet more frequently. This could mean that teachers do not have enough time during the day to meet and collaborate on information. The data also revealed that collaboration occurs during casual conversations. The data from MS1 and MS2 showed that 33% of the participants engage in casual conversation as part of their PLC. The data from MS3 showed 8% of the participants engage in casual conversations as part of their PLC. This could be from passing another teacher in the hallway, lunch, or during common prep periods. Literature

shows that teacher-to-teacher collaboration cannot occur unless time made during the day for them to meet (Nash, 2011). However, it is no secret teachers spend a great deal of time planning and creating lesson plans, organizing the classroom, preparing the necessary worksheets or copies, and setting up the classroom to create a positive learning environment.

Grounded in the assumption that teacher growth does not happen in isolation, current professional development seeks to create learning communities where participants engage in meaningful activities collaborating with peers to co-construct knowledge about teaching and learning (Shulman & Shulman, 2004). This also expands Guskey's model because it reveals a condition that directly effects change in teachers' classroom practices and changes in teachers' beliefs and attitudes. By eliminating as many conditions that do not allow teachers to collaborate will positively effect change in teachers' classroom practices, changes in students' learning outcomes, and changes in teachers' beliefs and attitudes. Principal 2 explained that PLCs are embedded into the regular school day to make it convenient for teachers to meet. Principal 2 also shared that if PLCs were not embedded, then teachers would have to work longer hours. "Teachers already work hard enough, so as their principal I must provide time during the school day," said principal 2. Professional development workshops need to create spaces for teachers to interact, teach to their content team, and educate each other (Nash, 2011).

The final piece of data collected from the teachers showed that principals are not facilitating PD workshops at their respective middle school. Principals are not looking for PD opportunities to improve classroom instruction. All three of the principals shared that they do not actively look for PD workshops for their teachers to attend. Principal 1 said,

"I do not want to put more on my teachers' plates. If a teacher comes to me asking about attend a PD workshop, then I will help them. But, I will not do it on my own." Principal 3 shared similar thoughts as Principal 1 stating, "I see if teacher could benefit from a PD workshop, then I seek workshop that would fit their need. I will not seek out a PD workshop until I know a teacher has the need." Principal 3 commented, "Before I seek out a PD workshop, I must know a teacher is interested." A variety of factors contribute to this ineffectiveness. It has been suggested, that the majority of programs fail because administration does not take into account two crucial factors: (1) what motivates teachers to engage in professional development, and (2) the process by which change in teachers typically occurs (Guskey, 1986). This finding supports Guskey's model and past literature, which reports that principals need to have more influence on PD workshops for the teachers at their schools. Literature shows that without principal leaderships, teachers allow will not successfully change classroom instruction (Taylor et al., 2009). In addition, Taylor et al. (2009) found that the school making the least progress had been characterized by a lack of commitment by administration to produce quality professional development programs. Moreover, the description of the school's faculty was lacking perseverance, and generally lacked the principal's support and teacher leadership to maintain momentum of the reform effort (Ham, 2010).

Principal interviews. Each of the participating principals from the three middle schools shared candid information in answering the principal interview questions, which were designed to gain the opposing perspective to the focus group questions. This would give the participating principals the opportunity to share how they are trying to schedule

collaboration time for their staff. In addition, by gaining the principals perspective on collaboration assisted on understanding their level of importance on collaboration.

Based on the data collected, principals reported they heavily rely on PLC time for teachers to share information with other teachers. In addition, principals are joining PLC groups to monitor and help assist with the information that is being shared. Principal 2 explained they attend as many PLC meeting as possible to help teachers stay focused during the meeting and make the time a quality meeting. Principal 3 shared they have three instructional coaches that make sure PLC meeting stay on task. "I do not have the time to attend every PLC," said Principal 3. By attending PLC meetings, principals have an idea of what teachers need to improve classroom instruction. Providing teachers more tools to use in the classroom and engage students in the learning process was crucial to the improvement of students (Fleck, 2009). The lack of practical training and relevancy in principal preparation programs has influenced principals' abilities to transform leadership theoretical knowledge into practice (Gordon & Patterson, 2006). This information is crucial to understand because by allowing teachers to meet and share "best" practices influences three components of Guskey's model (1986), change in teachers' classroom practices, changes in students' learning outcomes, and changes in teachers' beliefs and attitudes.

Additional data showed that principals mentioned time as an obstacle for principals to work around since there are only eight half/in service days scheduled for the school year. This could mean that principal are trying to get teachers together, but other events happen or come up that do not allow them to schedule or attend PLC meetings. Lubin & Ge (2012) shares that there is only so much time during a school day for

teachers to collaborate, that schedule PLC time is a difficult task for school administration. This information effects Guskey model negatively because it does not assist teachers in changing classroom practices and improve classroom instruction. Eliminating as many obstacles that negatively influence teachers' ability to change classroom practices will greatly impact the students' learning outcomes (Guskey, 1986).

The final piece of data collected revealed that principals are reluctant when it comes to incorporating technology in the classroom. The data showed that principals want to know how technology works, or if it is going to improve student achievement. Principals want technology that has been proven and works at engaging students in learning. In addition, principals want it to be easy to use, so teachers do not need much time to learn how to use it. Guskey (1986) explains that teachers became committed to the new practices only after they had actively engaged in using them in their classrooms. Again, this supports the idea that change in teachers' attitudes takes place primarily after some change in student learning has been evidenced (Guskey, 1986).

The significance of these findings shows the importance of PLC collaboration amongst teachers. In addition, it adds to Guskey's model because PLC collaboration influences three factors in the model, 1) changes in teachers' classroom practices, 2) changes in student learning outcomes, and 3) changes in teachers' beliefs and attitudes. Discovering this information advances the Guskey's model because, according to Guskey, (1986, 2002) when teachers engage in professional development, they confirm or challenge their beliefs. Guskey adds that staff development programs were a systematic attempt to bring about change – change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the learning outcomes of students

(Guskey, 1986). Collaboration works best when employees can tap many information sources, that way, like-minded groups of people can gather online, exchange data, and disband upon completion of the work (Nash, 2011). This will help principals plan better and properly schedule PLC meetings for teachers during the school year. In addition, it could help principals recognize the importance of scheduling common prep periods, allowing teachers to meet during the school day. Since time was stated a major issue, this will help eliminate the problem of not having enough time during the school day or school year. Answering the second research question advanced scientific knowledge by showing importance of getting teachers together to share PD best practices to improve classroom instruction.

Research Question 3. To what extent did proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom? For the third research question, the data came from three sources; two groups of participants: 36 middle school teachers (12 from each of 3 school), 3 principals (1 from each middle school), and the field notes from the researcher. The focus group questions and principal interview questions were similar for both groups, but slightly changed to gain both perspectives. The results from each focus group and interview questions are summarized. The summarization contains a narrative of the responses from the participating teachers and principals about proactive uses of technology that modify classroom instruction. An important aspect of the data analysis for this study was a comparison of the results from both the teachers and principals to show two perspectives of each research question.

Focus groups. Each group of participants from the three middle schools shared candid information in answering the focus groups questions. For the purpose of this dissertation, Li (2013) explained that in order to improve teaching, especially as they explore the uses of emerging technologies, instructors must continually reflect on their teaching practice. Learners need realistic, active, learner-centered strategies and experiences to stay engaged, be motivated, and succeed. Students need to find their own interests and see relevancy and application to their lives and needs (Prensky, 2005).

Based on the data collected, it was determined that two main ideas were revealed; 1) teachers want to be compensated for their time and effort put into learning, using, and presenting the PD workshop information, and 2) teacher need time to learn, understand, and use the technology from PD workshops before presenting to their fellow teachers. Lubin & Ge (2012) explains that middle school educators are among the most poorly paid professionals in the public sector. This could mean that teachers are willing to undertake the task of learning new technology and presenting the technology to teachers at their school. In addition, it could mean that teachers want to incorporate new technology in the classroom, but feel they should be compensated for their time. Guskey (1986) expressed that according to the model, significant change in teachers' attitudes and beliefs occurs primarily after they gain of monetary compensation for additional task performed. This directly advances Guskey's model because it influences one of the three major goals of programs in the model. Guskey (1986) confirms this by explaining that the three professional development programs based on the assumption that change in attitudes and beliefs comes first are typically designed to gain acceptance, commitment, and enthusiasm from teachers if compensation is included.

Additional data collected showed that teachers are unsure of how: 1) principals seek out PD workshops, 2) they follow up after a PD workshop is attend by a teacher, and 3) principals encourage teachers to train other teachers after they attend a PD workshop. Nearly 42% of the participating teachers stated they were either unsure of how their principal sought out PD workshops or were never asked to attend a PD workshop by their principal. A minority of the teachers also disclosed they were sent spam emails from their principal about workshops, but never asked to attend. This could mean that principals are not seeking out PD workshops for their teachers to attend. In addition, it could mean that principals are forwarding emails that are sent to them, instead of seeking out PD workshops. This is significant because how are principals motivating their teachers if they are not seeking out PD workshops on new technology to improve classroom instruction? Buckenmeyer & Hixon (2009) explained that if school administration does not make improving classroom instruction a high priority for their school, teaches are not motivated to improve instruction. Principal 2 shared that if they were not motivated to improve student achievement, the they could see how teacher are unmotivated. Principal 2 continued by stating that many experienced teachers get comfortable with their teaching methods and need to seek change. Principal 3 explained from their experience, not many teachers are self-motivated, so if "I" cannot find a way to motivate them, then the teacher will not seek to improve themselves. This finding is also significant because Guskey's (1986) model of change was predicated on the idea that change was primarily and experientially based learning process for teachers and supported by principals. Guskey (1986) continues with practices that are found to work - that is, those that teachers find useful in helping students attain desired learning outcomes - are retained and repeated.

Those that do not work or supported by administration yield no tangible evidence of success are generally abandoned (Guskey, 1986).

Principal interviews. Each of the participating principals from the three middle schools shared candid information in answering the principal interview questions. The principal interview questions were designed to gain the opposing perspective to the focus group questions. This would give the participating principals the opportunity to share how they are promoting teachers use of technology to their staff.

Based on the data collected, it was determined that principals are not seeking out PD workshops for teachers to attend and return to their middle school to train the teachers on the information learned in the PD workshop. In addition, all of the principals stated that they do not want to give more work for the teachers to do. The principals also expressed that they try to empower their teachers because they want them to be interdependent and help each other. Guskey (1986) adds to this thought by sharing that learning to be proficient at something new and finding meaning in a new way of doing things requires time, effort, and administrative support. Any change that holds great promise for increasing teachers' competence and enhancing student learning is likely to be supported by the administration of the school (Guskey, 1986). This was significant because this factor negatively influences Guskey's model for teacher to change their beliefs and attitudes, as well as, their classroom practices. Fadel & Trilling (2009) tells us that without principal initiated factors to improve classroom instruction with the use of new technology, then teacher will not be motivated to their instruction level with technology.

This was a significant finding because it showed the importance of principal motivating and seeking out PD workshops on new technology to improve classroom instruction. It was stated that teachers are not likely to be proactive when it comes to use of technology in the classroom. Interactive technology is having a significant impact on teaching (Jacobs, 2010). In addition, Guskey's model of teacher change is influenced by the support of the principal because it has an impact on changes in teachers' classroom practices, and changes in teachers' beliefs and attitudes. Since student outcomes drove teacher beliefs, when student achievement increased, teachers believed the success of the professional learning innovation was the cause of the increased and continued to integrate that learning in instructional practices (Guskey, 1986). Encouraging or recommending PD workshops to teachers helps increase student understanding and better retention of the content when supported by the school principal. Concomitantly, interactive technology is employed to improve students' basic academic skills such as recall of math facts, vocabulary concepts, and to enhance targeted twenty-first century skills including collaboration, creativity, communication, critical thinking, and problem solving (Fadel & Trilling, 2009).

Research Question 4. How did principal leadership style determine what the nature of the process to be followed to determine just how teacher requirements for professional development are met? For the last research question, the data came from three sources; two groups of participants: 36 middle school teachers (12 from each of 3 schools), 3 principals (1 from each middle school), and the field notes from the researcher. The focus group questions and principal interview questions were similar for both groups, but slightly changed to gain both perspectives. The results from each focus

group and interview questions are summarized. The summarization contains a narrative of the responses from the participating teachers and principals about proactive uses of technology that modify classroom instruction.

Focus groups. Each group of participants from the three middle schools shared candid information in answering the focus groups questions. For the purpose of this dissertation, Guskey (2005) points out that "powerful professional development helps educators recognize that defining learning goals and identifying specifically how those goals will be measured are not new ideas" but have always been important to teacher effectiveness. So what constitutes a quality professional development activity? The literature shows professional development to have a "substance…stimulates the mind, and leaves much to think about afterward" (Educational Leadership, 2002, p. 92), features expressed needs, makes the learning active, and involves collaboration with experienced teachers.

Based on the data collected, it was determined 58% of the participants responded with either there is no follow up or they are unsure how the principal follows up. This could have two meanings, 1) principals do not follow up or track what PD workshops teachers have attended, or 2) principals do follow up, but do not communicate or discuss the content of the PD workshop with teachers. This advances the scientific knowledge of Guskey's model because despite the general acceptance of professional development as essential to improvement in education. A variety of factors contributes to this ineffectiveness. Professional development activities frequently are designed to initiate change in teachers' attitudes, beliefs, and perceptions (Guskey, 1986).

Additional data collected showed that teachers are not provided the requirements for PD each year or they are unsure what the requirements are for their middle school. In addition, the participants stated that if the requirements were explained it would have happened at the beginning of school. However, no follow up from the principal was sent as a reminder. The participants also expressed that they only complete the PD requirements each year when the district office requires teachers to attend certain PD workshops. The research showed that the lack of practical training and relevancy in principal preparation programs has influenced principals' abilities to transform leadership theoretical knowledge into practice (Gordon & Patterson, 2006). This data has a large effect of Guskey's model because it show that school leadership may not influencing change in classroom practices, change in student learning outcome, and a change in teacher beliefs and attitude.

The last piece of data collected revealed that 42% of the participants would not make a recommendation to improve the process to meet PD requirements was extremely surprising. After disclosing their disappointment about PD workshops in previous questions, it was surprising that teachers would not make recommendations to improve the process. This could mean that teachers do not care about the PD workshops they attend because the PD workshop was not relevant, informative, or useful. Thus, they had no recommendations to make the process better. The gap expected to be filled by this study was the effect principals have on motivating teachers to seek out professional development opportunities on new technology. With a growing interest for technology in the schools, the interest extended to the purpose of technology education integration. Research indicated that although technology has been at the disposal of teachers, they are

not using it to its full potential (Gorder, 2009). As mentioned above, this data supports Guskey's model because it show that school leadership is not influencing change in classroom practices, change in student learning outcome, and a change in teacher beliefs and attitude.

Principal interviews. Each of the participating principals from the three middle schools shared candid information in answering the principal interview questions. The principal interview questions were designed to gain the opposing perspective to the focus group questions. This would give the participating principals the opportunity to share how their staff meets the PD requirements at their school.

Based on the data collected, it was determined that none of the three participating principals follow up with teachers to verify they have met the PD requirements. In addition, the three principals stated that it is the teachers' professional responsible for meeting the PD requirements. Literature shows that the lack of practical training and relevancy in principal preparation programs has influenced principals' abilities to transform leadership theoretical knowledge into practice (Gordon & Patterson, 2006). Fleck (2009) explains that if principals are not monitoring, influencing, and explaining PD requirements to their teachers, then how will principals influence their teachers. This finding supports Guskey's model because principals are not influencing change. Ham (2010) explained professional development opportunities and requirements were the direct responsibility of the principal to provide up-to-date workshops teaching new technologies to specific content area teachers. This could mean that principals do not care about the PD workshops teachers attend. In addition, if principals do not display that PD

workshops are important, then teachers will not take PD workshops seriously. This would also support Guskey's model.

Additional data collected showed that principals do what they are told from the district office pertaining to PD workshops. This could mean that principals do not have the ability to lead their school and improve classroom instruction or implement new technology due to restraints from the district office. In addition, there was evidence that the district office does not allow principals to improve on the learning environment at their school. Principal 2 comments that PD workshop begin with the district office. In addition, principal 2 shared that PD workshops are initiated by the district office. Principal 1 mentioned that the district office does not give middle school principals the ability to select personalized PD workshops to match their schools specific needs. This advances the scientific knowledge of Guskey's model because this issue offers some exciting possibilities to improve classroom instruction if principals were responsible for their schools PD workshops. Guskey (1986) states, "We need better, more efficient methods of providing teachers with PD opportunities at the local level." Guskey (1986) continued, "We need to explore the specific teacher attitudes and beliefs most crucial to professional growth and development, and to find better ways to meet their individual needs."

Implications

The implications of this study support principals are the instructional leaders of their schools. There was a lack of generalizability of these findings due to the small sample size and not being able to have all middle schools in one school district in urban Arizona. With that in mind, this research met its primary concern and provided evidence

to show that principals are perceived as being responsible for improving classroom instruction by motivating their teachers. In addition, they should provide quality PD workshops for teachers to improve classroom instruction. The findings of this study were significant because it provided qualitative evidence that principals need to have more ability to select the PD workshops available for the teachers at their middle school. In addition, Principals also need to make time for teachers to meet during the school day providing more opportunities for teacher to collaborate. This will aid in the continuous effort of hiring highly qualified principals who are perceived by both themselves and teachers as being responsible for improving classroom instruction by motivating teachers.

Theoretical implications. This research was grounded in Guskey's (1986, 2002) model of Professional Development and Teacher Change. Guskey's model of teacher change describes four stages: 1) professional development, 2) change in teachers' classroom practices, 3) changes in student learning outcomes, and 4) changes in teachers' belief and attitudes. While most professional development designs aim to establish teacher buy-in from the start, Guskey (1986, 2002) explained that teachers' beliefs only change when they see the professional development program is effective. Guskey's (1986) model of the process of teacher change begins by engaging teachers in professional learning. The next step involves teachers modifying their teaching practices to reflect what they have learned from the professional development series. The final step occurs after teaching practices change and allow teachers to see changes in student achievement. Student outcomes drive teacher beliefs when student achievement increases, teachers believe the success of the professional learning innovation was the cause of the increase and continue to integrate that learning in instructional practices

(Guskey, 1986). The overall conceptual model for this study is based on, and was intended to demonstrate, Guskey's theory in three middle schools in one school district in urban Arizona. To expand on Guskey's model, the areas of teacher motivation, principal leadership style, and technology have been included in this study to further clarify.

After evaluating the attribution of Guskey's theory this study, it was concluded that this was an adequate choice. The data analysis clearly supports this theory. Many of the participants attributed their success as teachers to the overall performance of the principals at their middle schools. To further test this idea, the real impact of the middle school principal, additional studies that could influence teacher motivation on a long-term, longitudinal study may be indicated. While there was evidence supporting the conceptual foundation of this study, it is important to consider the item that may have skewed the results. For research question 1, an unexpected theme emerged. This unexpected theme was self-motivation. The original idea of principal motivating teacher was explained, but self-motivation also had to be explained. This area could use further exploration.

Practical implications. The most evident practical implication for this study was from the qualitative support of focus groups and principal interviews. Overall, the data revealed that there is a need for better quality PD workshops, and an increase in teacher motivation from their principals. This supported the conceptual foundation established in the Literature Review.

Based on the overall conclusions drawn from this study, it could be deduced that principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom

instruction. The positive conclusions drawn indicated that the PD workshops on new technology would be beneficial, for both the teacher and the student. The data suggested that motivation of teachers to seek out and share the content of PD workshops with other teachers increased if the teachers knew the new technology was supported by the school district's infrastructure and proven to improve student achievement.

Future implications. The results of this study supported the value that principals need to improve their level of motivation they provide to their teachers. In addition, principals need to have more involvement in what PD workshops are provided to their individual middle schools. This is crucial since the principals know what area of improvement their school needs. Guskey (2005) points out that "powerful professional development helps educators recognize that defining learning goals and identifying specifically how those goals will be measured are not new ideas" but have always been important to teacher effectiveness.

So, what constitutes a quality professional development activity? The research showed that principals have an influence on professional development, "substance...stimulates the mind of teachers, and leaves much to think about afterward" (Educational Leadership, 2002, p. 92), features expressed needs, makes the learning active, and involves collaboration with experienced teachers (Merriam, 2009). Focusing on these needs allows for an increased level of classroom instruction. In addition, this study was localized to a specific geographical location in Arizona. The limitation may display the results to be specific to that area, and they may not be generalized. In this case, future studies could compare different middle schools, different grade levels, and rural school districts to see if the different locations are impacted differently. This study

showed the value of principals' leadership, and how they motivate and influence their teachers to seek out PD workshops on new technology. This adds to the educational experience for the students. In addition, it creates a positive learning environment at their middle schools.

Recommendations

According to Merriam (2009), the unique strength of a case study was its propensity to set up and promote additional research. There are many recommendations that could be made, but they are not limited to the list below in the future research section. In addition, research that is more extensive is necessary to determine whether the findings from this study are or can be generalized to other schools throughout Arizona and the United States. The recommendations are listed below.

Recommendations for future research. Because of this qualitative study, there are four recommendations. The first recommendation is for this study to be conducted in different middle schools in different geographical locations to see if the results would be different. This study was limited to one school district in urban Arizona. Conducting this study in a different urban area in Arizona may produce different or similar results. In addition, conducting this study in a different geographical location could produce different results. For example, conducting this study in a rural area or in a different state may show similar or different results.

The second recommendation comes from the theme self-motivation. The original idea of principals motivating their teachers was studied, but the theme of self-motivation emerged, which was not the focus of this study. Self-motivation differs in every individual, but to what extent was unclear. This area could use more exploration to

discover motivational factors are there that inspire or self-motivate teachers. One question that could be asked, are teachers self-motivated by recognition or monetary compensation? This could assist in further understand factors that self-motivate teachers.

The third recommendation comes from the analysis of various school districts discovering the quality level of PD workshops they provided to their teacher. All three principals stated they do not have input as to what PD workshops are provided to their teachers. A study on this impact could further explain the importance of the school principal and improving the level of classroom instruction. In addition, it may also explain why or why not teachers do or do not seek out PD workshops.

The fourth recommendation is that as further research is done, perhaps using a quantitative method to look for relationship between principals, teacher motivation, and professional development. Some characteristics that were not examined in this study were: gender, age, education level, and the subject taught. It was determined that these characteristics did not have a bearing on the outcome of the study. Therefore, they were not included in the study. However, this is can be an opportunity for future study.

Recommendations for practice. The importance of this study was to explain how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. New technologies were available to teachers. However, how were principals motivating and providing PD workshop opportunities to the classroom teachers? Giving teachers more tools to use in the classroom and engage students in the learning process was crucial to the improvement of students. The first recommendation, based on the data reviewed and the research

conducted is clear. To meet the needs of students today, principals must have full control or at least a voice of the PD opportunities available to their teachers. The lack of practical training and relevancy in principal preparation programs has influenced principals' abilities to transform leadership theoretical knowledge into practice (Gordon & Patterson, 2006). Many of the current leadership preparation programs focused on the top-bottom direction of the interaction between principals and teachers (Fleck, 2009). This will allow each middle school to focus on the needs of the specific school. In addition, the school district must provide better quality PD workshops for principals to select.

The second recommendation, based on the data from the schools that participated in the study, is to ensure that teachers are collaborating with the other teachers in their content and grade level PLC teams. Teachers need to communicate with other teachers to share classroom "best" practices and continue to develop their teaching skills. Each teacher must work to improve their craft and make it the best learning environment for students. Collaboration works best when employees can tap many information sources, that way, like-minded groups of people can gather online, exchange data, and disband upon completion of the work (Nash, 2011).

This study is significantly valuable to educational leadership because the research supported and explained how principal leadership influenced teachers to seek out and participate in professional development opportunities on how to integrate new technology into classroom instruction in three middle schools in an urban school district in Arizona. Meaningful professional development for instructional technology requires a commitment by program leaders to dedicate the resources required to deliver instruction and assistance to teachers in the context that the technology will be used (Harris, 2010;

Keengwe & Onchwri, 2009). Professional development designers should also be mindful of creating opportunities for teachers to collaborate and scaffold their new skills slowly, ultimately encouraging teachers to have mastery experiences with technology integration (Alexander & Henderson-Rosser, 2010). This research will help establish "best" practices and support the value effective classroom instruction. Principals will benefit from this evidence to support the importance of their role as instructional leader of their school. Motivating teachers and providing quality PD workshops that match the needs of each middle school will truly increase the level of classroom instruction. Administrators and teachers alike might be provided with viable research to support a more focused approach to professional development (Ogunduyile, 2013). This increased understanding and support led to the increased use of technology in classrooms. Maintaining the same skills in a changed industry may leave a district stagnant. Change was always going to occur, but how to deal with change was up to strong leadership with solid skills.

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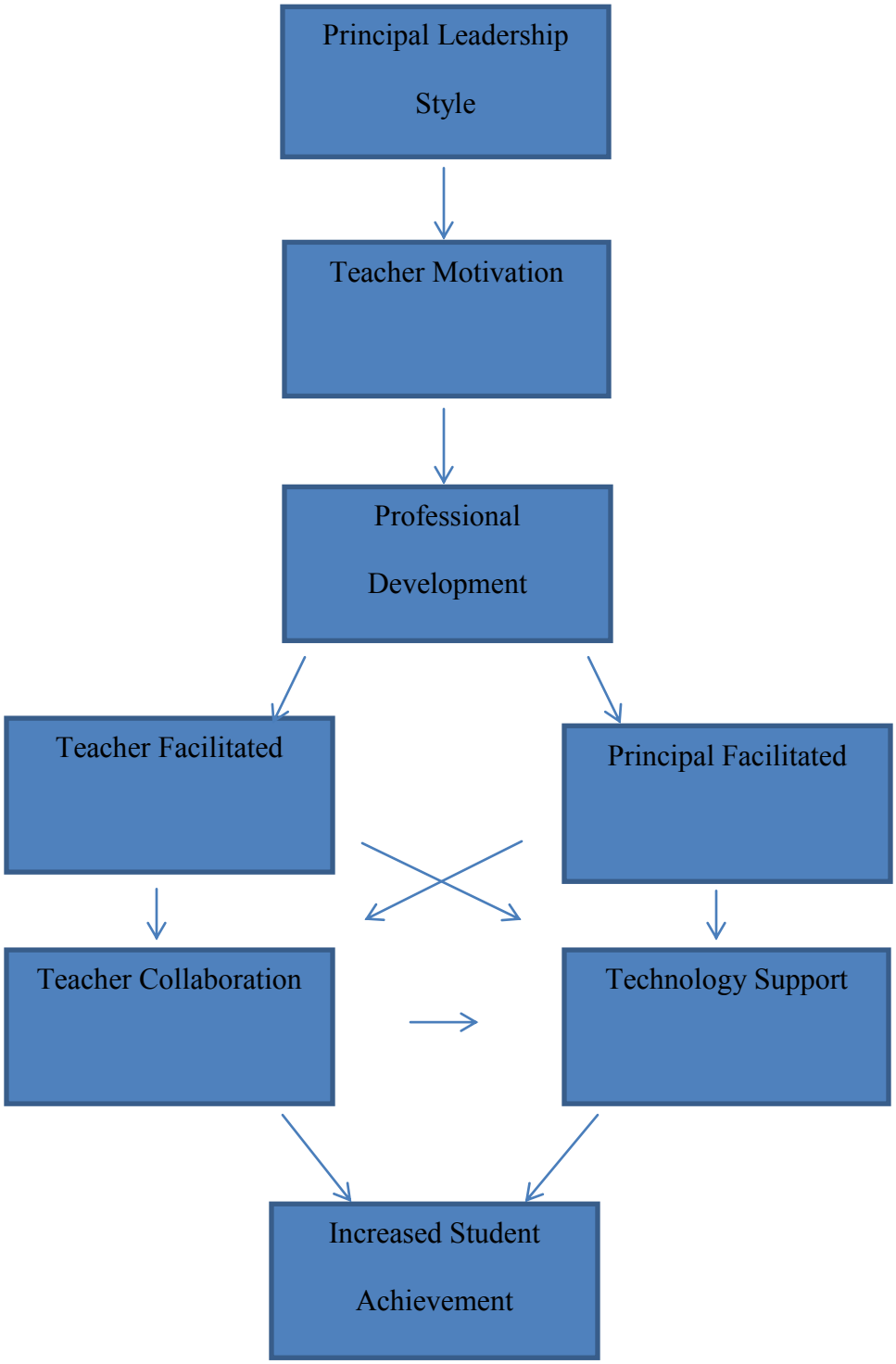
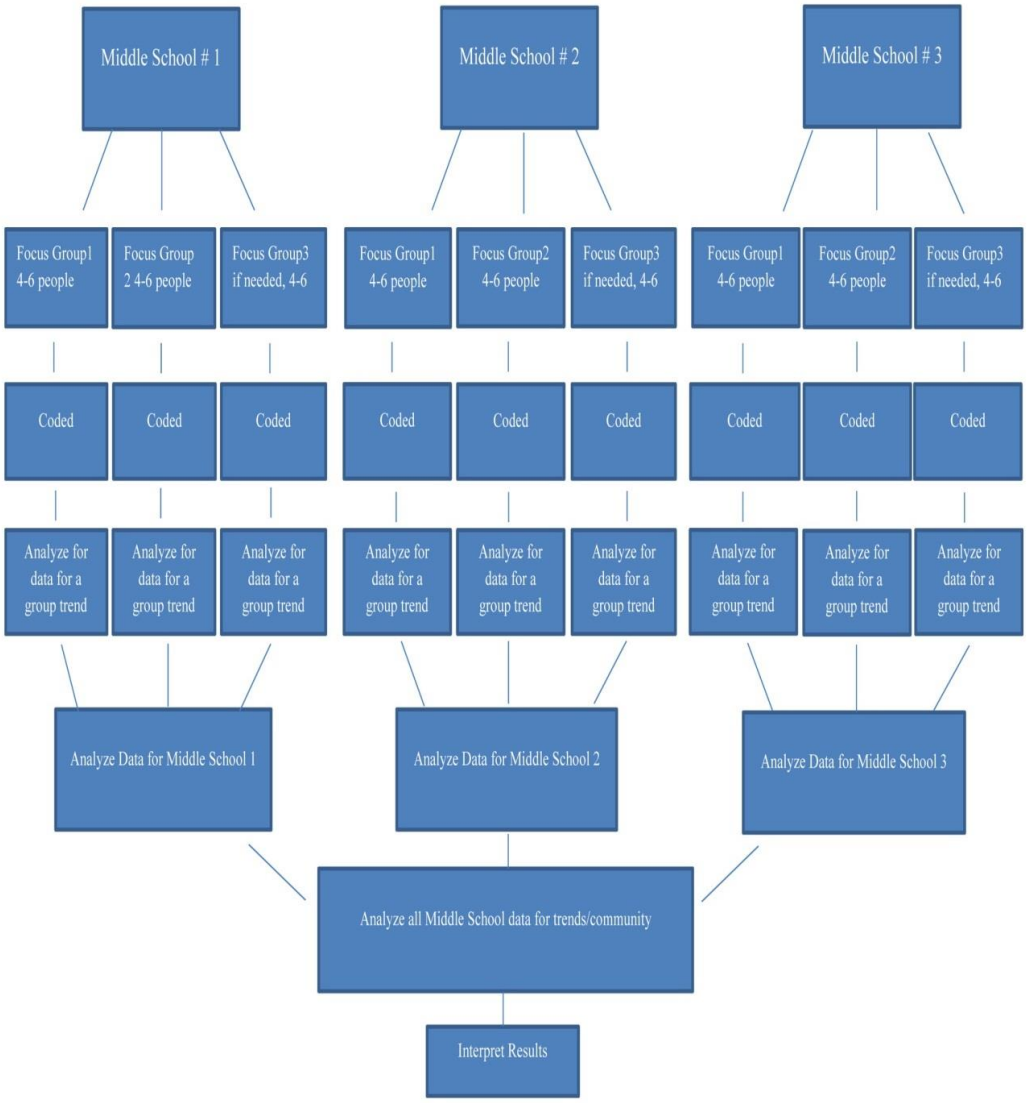
Appendix A

Literature Map



Appendix B

Data Collection/Analysis Procedures



Appendix C

Informed Consent Form

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
Fax: 602- 639-7820

INFORMED CONSENT FORM (SOCIAL BEHAVIORAL) MINIMAL RISK SAMPLE

CONSENT FORM
TITLE OF RESEARCH STUDY
How Principal Leadership Style Affects Teacher Motivation to Seek Out Professional Development Opportunities on New Technology

INTRODUCTION

This study adds to existing knowledge of professional development as a form of continuing education for teacher gaining additional lesson skills, resulting in a higher level of learning in the classroom. In order to discover the connection between professional development and technology, this study will examine how principal leadership motivates teachers to seek out professional development opportunities about new classroom technologies. In addition, this study focuses on three middle schools in urban Arizona. These middle schools are from the same school district, but different geographical locations.

RESEARCH

As a researcher working on the above research study at Grand Canyon University, Timothy Scott Paul has invited your participation in a research study.

STUDY PURPOSE

The purpose of this qualitative case study is to examine and attempt to clarify the connection between principal leadership styles, as perceived by teachers and the professional development opportunities on new technology provided to them. Looking at the leadership style of the principals, and the opportunities they provide for professional development to their teachers, assists and furthers the understanding of the skills needed to build and maintain a learning environment that promotes student achievement. The principal is the key to move teachers to a higher performance level, with the use of technology in the classroom, to evaluate their teaching practices in an attempt to achieve a high quality teaching to improve student learning.

DESCRIPTION OF RESEARCH STUDY

If you decide to participate, then your participation for each focus group will take approximately 60 to 90 minutes in duration and held on the [redacted] Middle School campus.

[redacted]

There are no known risks from taking part in this study, but in any research, there is some possibility that you may be subject to risks that has not been identified at this time.

BENEFITS

This study is also significant in which it might provide teachers a better understanding about self-reflecting on their own teaching practice, which was consistent with their pedagogical beliefs, and an understanding that technology cannot stand-alone. Administrators and teachers alike might be provided with viable research to support a more focused approach to professional development (Karl, 2011). This increased understanding and support could lead to the increased use of technology in classrooms. Ultimately, school districts are responsible for the principals they hire for their schools (Broad, 2006). The information provided in this study may lead to a more scrupulous hiring process for school districts. Maintaining the same skills in a change industry will leave a district stagnant. Change is always going to occur, but how to deal with change is up to strong leadership with solid skills.

NEW INFORMATION

If the researchers find new information during the study that would reasonably change your decision about participating, then the researcher will provide this information to you.

CONFIDENTIALITY

All information obtained in this study is strictly confidential. The results of this research study may be used in reports, presentations, and publications, but the researchers will not identify you. In order to maintain confidentiality of your records, Timothy Scott Paul will create codes for each focus group. Each focus group will be delegated its own code, FG1, which describes the first Focus Group. The numbers will organize the responses given by the participants in their given focus group. Each participant will receive a number, participant 1, participant 2, etc. Each middle school in which the focus groups will occur will have a number, middle school 1, middle school 2, etc. This will assist the researcher and organize the participant's statements from each focus group and their middle school. In addition, the collected for this study will be audio recorded and will remain in a secure place only accessible by the researcher. After the researcher's dissertation has been approved, one year from that date ALL audio recordings will be destroyed.

WITHDRAWL PRIVILEGE

Participation in this study is voluntary. It is ok for you to say no. Even if you say yes now, you are free to say no later, and withdraw from the study at any time.

COSTS AND PAYMENTS

There is no payment for your participation in the study.

VOLUNTARY CONSENT

Any questions you have concerning the research study or your participation in this study, before or after your consent, will be answered by Timothy Scott Paul at 623-308-1539.

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 Institutional Review Board, through the College of Doctoral Studies at (602) 639-7804.

This form explains the nature, demands, benefits and any risk of the project. By signing this form, you agree knowingly to assume any risks involved. Remember, your participation is voluntary. You may choose not to participate or to withdraw your consent and discontinue participation at any time without penalty or loss of benefit. In signing this consent form, you are not waiving any legal claims, rights, or remedies. A copy of this consent form will be given (offered) to you.

Your signature below indicates that you consent to participate in the above study.

_____ _____ _____

Participant's Signature Printed Name Date

INVESTIGATOR'S STATEMENT

"I certify that I have explained to the above individual the nature and purpose, the potential benefits and possible risks associated with participation in this research study, have answered any questions that have been raised, and have witnessed the above signature. These elements of Informed Consent conform to the Assurance given by Grand Canyon University to the Office for Human Research Protections to protect the rights of human subjects. I have provided (offered) the subject/participant a copy of this signed consent document."

Signature of Investigator_____ Date_____

Appendix D

Confidentiality Statement

Grand Canyon University
College of Doctoral Studies
3300 W. Camelback Road
Phoenix, AZ 85017
Phone: 602-639-7804
Fax: 602- 639-7820

"A Study to Explore How Principal Leadership Style Affects On Teacher Motivation for Professional Development: Meeting New Technology Demands To Ensure Student Achievement"

As a researcher working on the above research study at Grand Canyon University, I understand that I must maintain the confidentiality of all information concerning research participants. This information includes, but is not limited to, all identifying information and research data of participants and all information accruing from any direct or indirect contact I may have with said participants. In order to maintain confidentiality, I hereby agree to refrain from discussing or disclosing any information regarding research participants, including information described without identifying information, to any individual who is not part of the above research study or in need of the information for the expressed purposes on the research program.

_____ _____

Signature of Researcher Printed Name Date

_____ _____

Signature of Witness Printed Name Date

Appendix E

Guideline Protocol for Principal Interviews

The guideline protocol was established to create equality between each of the three principal interviews. These guidelines helped the study have the similar goals and outcomes before, during, and after each interview. Before any of the interviews began, each principal was screen to meet the minimum requirements to participate in the study. Below were the guidelines that were followed before, during, and after the interviews were conducted:

1) Before the interviews begun, each principal was given a Consent Form (Appendix C) to sign allowing their thoughts, opinions, and ideas to be used in the study.
2) Before the interviews begun, each principal was given a Confidentiality Statement (Appendix D) to sign stating their name will not be disclosed in the study.
3) Each principal was asked before audiotaping to answer each question as best to their knowledge, keeping their responses to a maximum of two minutes in length.
4) The audiotape was turned on and each principal was asked 29 questions (Appendix J).
5) Clarification questions were asked, if needed, to make sure the principal answered the interview question.
6) After the principal interview questions were asked, the audiotape was turned off.
7) The principal was thanked for their time and appreciated for their contribution to the study.
8) The day after each interview, the principal was sent a copy of the signed Consent Form (Appendix C), and the Confidentiality Statement (Appendix D) for their records.

Appendix F

Guideline Protocol for Focus Groups

The guideline protocol was established to create equality between each of the nine focus groups. Three focus groups were conducted at the three middle schools participating in this study. These guidelines helped the study have the similar goals and outcomes before, during, and after each focus group. Before any of the focus groups began, each participant was screen to meet the minimum requirements to participate in the study. Below were the guidelines that were followed before, during, and after the focus groups were conducted:

1) Before the focus group begun, each participant was given a Consent Form (Appendix C) to sign, allowing his or her thoughts, opinions, and ideas to be used in the study.
2) Before the focus group begun, each participant was given a Confidentiality Statement (Appendix D) to sign stating his or her name will not be disclosed in the study.
3) Each participant was asked before audiotaping to answer each question as best to their knowledge, keeping their responses to a maximum of two minutes in length. This allowed other participants to share his or her thoughts.
4) The audiotape was turned on and each focus group was asked 33 questions (Appendix I).
5) Clarification questions were asked, if needed, to make sure the participants answered the focus group question.
6) After the focus group questions were asked, the audiotape was turned off.

7) The participants were thanked for their time and appreciated for their contribution to the study.
8) The day after each focus group, the participants were sent a copy of their signed Consent Form (Appendix C), and their Confidentiality Statement (Appendix D) for their records.

Appendix G

Codebook for Principal Interviews

Code Name:	**Code Definition:**	**Number of Occurrences of Code:**	**Direct quotes that illustrate the Code (Principal Interviews)**	**How many principals said the Code:**
Teacher Motivation	What motivates your teachers?	P1 – 28 times P2 – 37 times P3 – 24 times	P1 – "My job is to motivate my teachers" P2 – "Motivating teachers is the key to improving classroom instruction." P3 – "Motivating teachers is twofold, my responsibility and their responsibility.	There were three principals interviewed.
Criteria to Accept	Mentioned at least 15 times by each principal.			
Criteria to Reject	Mentioned less than 15 times by each principal.			
Collect data – hard sources	Data was collected from three principal interviews			
Code Name:	Code Definition:	Number of Occurrences of Code:	Direct quotes that illustrate the Code (Principal Interviews)	How many principals said the Code:
Professional Development (PD) - Collaboration	How do teachers share PD information with other teachers?	P1 – 17 times P2 – 21 times P3 – 25 times	P1 – "I always try to allow teachers to collaborate about PD workshops." P2 – "It is hard to schedule PD collaboration time, but it is incorporated in the schedule." P3 – "PD collaboration is an opportune time to share best practices."	There were three principals interviewed.
Criteria to Accept	Mentioned at least 15 times by each principal.			
Criteria to Reject	Mentioned less than 15 times by each principal.			
Collect data – hard source	Data was collected from three principal interviews.			

Code Name:	Code Definition:	Number of Occurrences of Code:	Direct quotes that illustrate the Code (Principal Interviews)	How many principals said the Code:
Technology	The use of technology in the classroom.	P1 – 48 times P2 – 33 times P3 – 36 times	P1 – "Technology is great, but only of the technology improves student achievement." P2 – "Technology is not the answer. Technology that engages in high level understanding is the answer." P3 – "Technology must be proven to work before I present it to my teachers."	There were three principals interviewed.
Criteria to Accept	Mentioned at least 25 times by each principal.			
Criteria to Reject	Mentioned less than 25 times by each principal.			
Collect data – hard source	Data was collected from three principal interviews.			
Principal Leadership follow-up to PD	How does the principal follow-up to verify that teachers are attending PD.	P1 – 19 times P2 – 30 times P3 – 29 times	P1 – "It is hard to follow-up since teachers are spread throughout the district." P2 – "I follow-up as best I can, and discuss with teachers what they have learned." P3 – "I follow-up, but it the teacher's professional responsibility."	There were three principals interviewed.
Criteria to Accept	Mentioned at least 15 times by each principal			
Criteria to Reject	Mentioned less than 15 times by each principal			
Collect data – hard source	Data was collected from three Principal interviews.			

Appendix H

Codebook for Focus Groups

Code Name:	Code Definition:	Number of Occurrences of Code:	Direct quotes that illustrate the Code (Focus Groups)	How many focus groups said the Code:
Teacher Motivation	What motivates you as a teachers?	FG1 – 48 times FG2 – 38 times FG3 – 50 times FG4 – 43 times FG5 – 50 times FG6 – 47 times FG7 – 35 times FG8 – 56 times FG9 – 45 times FG10 – 40 times FG11 – 42 times FG12 – 46 times	FG1, P2 – "I am motivated by the success of my students" FG2, P10 – "I am motivated by improving my classroom instruction." FG3, P5 – "My motivation comes from students' achievement.	There were 12 Focus Groups.
Criteria to Accept	Mentioned at least 35 times by each focus group.			
Criteria to Reject	Mentioned less than 35 times by each focus group.			
Collect data – hard sources	Data was collected from 12 focus groups.			
Professional Development (PD) - Collaboration	How do teachers share PD information with other teachers?	FG1 – 35 times FG2 – 56 times FG3 – 40 times FG4 – 45 times FG5 – 38 times FG6 – 50 times FG7 – 46 times FG8 – 35 times FG9 – 46 times FG10 – 41 times FG11 – 53 times FG12 – 36 times	FG4, P6 – "I always try to collaborate about PD, but it is difficult." FG5, P11 – "It is hard to meet and collaborate with fellow teachers during the school day." FG6, P2 – "Sharing PD is not utilized at our school enough."	There were 12 Focus Groups.
Criteria to Accept	Mentioned at least 30 times by each focus group.			
Criteria to Reject	Mentioned less than 30 times by each focus group.			
Collect data – hard source	Data was collected from 12 focus groups.			

Code Name:	Code Definition:	Number of Occurrences of Code:	Direct quotes that illustrate the Code (Focus Groups)	How many focus groups said the Code:
Technology	The use of technology in the classroom.	FG1 – 39 times FG2 – 41 times FG3 – 46 times FG4 – 35 times FG5 – 41 times FG6 – 49 times FG7 – 53 times FG8 – 53 times FG9 – 44 times FG10 – 40 times FG11 – 37 times FG12 – 36 times	FG7, P9 – "New Technology is great, but I have no time to learn how to use it. FG8, P4 – "New Technology is not the answer to improve student achievement." FG9, P12 – "The technology must be proven to work before I try to learn how to use it."	There were 12 focus groups.
Criteria to Accept	Mentioned at least 35 times by each focus group.			
Criteria to Reject	Mentioned less than 35 times by each focus group.			
Collect data – hard source	Data was collected from 12 focus groups.			
Principal Leadership follow-up to PD	How does the principal follow-up to verify that teachers are attending PD.	FG1 – 37 times FG2 – 32 times FG3 – 42 times FG4 – 50 times FG5 – 39 times FG6 – 38 times FG7 – 47 times FG8 – 45 times FG9 – 33 times FG10 – 40 times FG11 – 43 times FG12 – 33 times	FG10, P9 – "I am unsure how the principal follows up." FG11, P7 – "I do not think my principal knows what the workshops are about to follow up." FG12, P1 – "I see no follow up from my principal."	There were 12 focus groups.
Criteria to Accept	Mentioned at least 30 times by each focus group			
Criteria to Reject	Mentioned less than 30 times by each focus group			
Collect data – hard source	Data was collected from 12focus groups.			

Appendix I

Focus Group Interview Questions

Research Questions (RQ)	Corresponding Interview Questions (IQ)
RQ 1 - What principal leadership factors motivate teachers to seek out professional development opportunities on the use of new technologies that facilitate learning in the classroom?	IQ4 – How does your principal motivate you to improve your classroom instruction? IQ7 – How do you motivate yourself to improve your classroom instruction? IQ9 – What would motivate you to seek out professional development opportunities on new technology in the classroom? IQ13 – What would motivate you to use new technology in the classroom to ensure student achievement? IQ3 – How does your principal motivate you to seek out professional development opportunities on new technologies in the classroom?
RQ 2 - How does principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices?	IQ6 – After attending a professional development workshop, how do you share the information with your fellow teachers? IQ8 – How do you collaborate with teachers to share classroom uses of technology to improve instruct and student achievement? IQ12 – What uses of technologies have you incorporated or use in your classroom that you learned from collaborating with teachers? IQ16 – How does your principal encourage teacher collaboration to share professional development "best" practices, thus benefiting other teachers? IQ20 – What professional development opportunities has your principal facilitated to improve instruct and student achievement?
RQ 3 - To what extent does proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom?	IQ5 – What factors would encourage or motivate you to facilitate a professional development workshop on new technologies for other teachers to attend? IQ15 – How does your principal seek out or identify professional development workshops on new technologies and recommend them for you to attend?

Research Questions (RQ)	Corresponding Interview Questions (IQ)
RQ3 continued	IQ19 – What technologies do you currently use in your classroom? IQ22 – How are you using new technologies in the classroom to ensure student achievement? IQ26 – How does your principal follow-up after a professional development workshop to know if the workshop content is being used in the classroom? IQ30 – Does your principal identify various workshops for teachers to attend and bring the concepts and ideas back to teach the other teachers at your school about those ideas and concepts? If so, how has that worked at your school?
RQ 4 - How does principal leadership style determine what the nature of the process is that will be followed to determine just how teacher requirements for professional development are fully met?	IQ11 – How does your principal follow–up with teachers at your school to verify professional development requirements are met? IQ17 – What steps do you take to meet the professional development requirements at your school? IQ25 – How does your principal explain the process or requirement for professional development each year? IQ27 – What is the process for meeting the professional development requirements at your school? IQ31 – What changes would you recommend to make the process flow more efficiently than the current process to meet the requirements of professional development?

Appendix J

Principal Interview Questions

Research Questions (RQ)	Corresponding Interview Questions (IQ)
RQ 1 - What principal leadership style factors motivate teachers to seek out professional development opportunities on the use of new technologies that facilitate learning in the classroom?	IQ4 – How do you as a principal motivate your teachers? IQ10 – How do you motivate yourself to improve the level of classroom instruction at your school? IQ16 – What motivates your teachers? IQ21 – What would motivate you to facilitate a professional development workshop on new technologies to use in the classroom to ensure student achievement? IQ26 – How do you as a principal motivate teacher's classroom instruction to facilitate student improvement?
RQ 2 - How does principal leadership promote collaboration among teachers resulting in a "learning" culture to share professional development "best" practices?	IQ5 – After teachers attend a professional development workshop, how do you as a principal allow teachers to share the information with their fellow teachers? IQ12 – How do you as a principal allow teachers to collaborate with other teachers to share classroom uses of technology to improve instruct and student achievement? IQ18 – What uses of technologies have you incorporated at your school for teachers to use in their classroom to improve student achievement? How have you allowed teachers to collaborate to improve the use of this technology? IQ23 – How do you as a principal encourage teacher collaboration to share professional development "best" practices, thus benefiting other teachers?
RQ 3 - To what extent does proactive teacher use of new technology result in these teachers modifying their instructional approaches in the classroom?	IQ7 – How do you as a principal seek out or identify professional development workshops on new technologies for your teachers to attend and train other teachers? IQ11 – What factors would encourage or motivate you to empower your teachers to facilitate a professional development workshop on new technologies for other teachers to attend? IQ17 – How do you as a principal follow-up with teachers after they attend a professional development workshop to know if the workshop content is being used in the classroom?

Research Questions (RQ)	Corresponding Interview Questions (IQ)
RQ 4 - How does principal leadership style determine what the nature of the process is that will be followed to determine just how teacher requirements for professional development are fully met?	IQ24 – How would you as a principal encourage teachers to be proactive and seek out professional development workshops to improve student achievement at your school? IQ6 – How do you as a principal follow–up with teachers at your school to verify professional development requirements are met? IQ14 – What steps do you take to meet the professional development requirements at your school? IQ20 – How do you as a principal explain the process or requirement for professional development each year? IQ25 – What process have you as a principal implemented for meeting the professional development requirements at your school? IQ28 – What changes would you recommend to make the process flow more efficiently than the current process to meet the requirements of professional development?

Appendix K

IRB Approval Letter

GRAND CANYON UNIVERSITY™

3300 West Camelback Road, Phoenix Arizona 85017 602.639.7500 Toll Free 800.800.9776 www.gcu.edu

DATE:	October 3, 2013
TO:	Timothy Paul, MBA
FROM:	Grand Canyon University Institutional Review Board
STUDY TITLE:	[452717-1] How Principal Leadership Style Affects Teacher Motivation to seek out Professional Development Opportunities on New Technology
IRB REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	
REVIEW CATEGORY:	Exemption category # *[7.6 and 7.7]*

Thank you for your submission of New Project materials for this research study. Grand Canyon University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office.

If you have any questions, please contact Stephanie Henkel at 602-639-8010 or stephanie.henkel@gcu.edu. Please include your study title and reference number in all correspondence with this office.

cc:

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