E-Mentoring for New Principals:
A Case Study of a Mentoring Program

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Dedication

I dedicate this work to all those that think it cannot happen. It can. Gather your community of supporters and take the first step. After that, you only need to take one step at a time. This work is also dedicated to all new principals and their many mentors. You deserve both recognition and support for taking on the most important job there will ever be – educating our children. Lastly, I dedicate this work the many mentors who have taken me under their wing. I am filled with gratitude.

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Abstract of Dissertation

E-Mentoring for New Principals:
A Case Study of a Mentoring Program

This descriptive case study includes both new principals and their mentor principals engaged in e-mentoring activities. This study examines the components of a school district's mentoring program in order to make sense of e-mentoring technology. The literature review highlights mentoring practices in education, and also draws upon e-mentoring research in the fields of business and healthcare. This is an innovative study because the use of e-mentoring technology for principal support and development is unexplored. Senge's (1990) learning organization serves as a theoretical foundation, focusing this study by recognizing that the success of a principal is tied to the success of the principal's school. The development of a case study protocol ensured thorough analysis of the five sources of data collected: 1) documentation; 2) archival records; 3) interviews; 4) direct observations; and 5) physical artifacts (Yin, 1994; 2009). Findings included eight elements that impact e-mentoring: 1) background knowledge and experience of the participants; 2) technology experience of the participants; 3) job-related duties and responsibilities of the participants; 4) goals and aims of the e-mentoring program; 5) content of the e-mentoring conversations; 6) technology training provided to participants; 7) synchronous or asynchronous nature of the technology involved; and 8) support for multiple mentors and mentees.

Table of Contents

List of Figures

List of Tables

Chapter I: Introduction

Mentoring, as a way to gain knowledge about one's chosen profession, has been a common practice in many different vocations. In Greek mythology, Odysseus asked his best friend Mentor to watch over his son, Telemachus, while he fought in the Trojan War. Telemachus' eventual success in saving his homeland became proof of the value of Mentor and mentoring. Mentoring is defined as the pairing of a more experienced person with a less experienced person, with the agreed-upon goal of having the latter grow and develop specific abilities to reach long-term objectives (Wallace Foundation, 2007).

Mentoring programs in organizations increased during the 1980's to provide employees with psychosocial or career-advancement support (Kram, 1985). In recent times, more and more organizations use technology to support their mentoring programs. This practice evolved into what is termed e-mentoring. E-mentoring is defined by Single and Muller (1999) as:

> a naturally occurring relationship or a paired relationship within a program that is established between a more senior individual (mentor) and a lesser skilled or experienced individual (protégé), primarily using electronic communications, and is intended to develop and grow the skills, knowledge, confidence, and cultural understanding of the lesser skilled individual to help him or her succeed. (p. 236)

Mentoring programs as a support for new principals are increasing. The Wallace Foundation reported that, since 2000, 22 states have adopted mentoring requirements for new principals. Prior to 2000, Kentucky and West Virginia were the only states to require all new principals to undergo mentoring (Wallace Foundation, 2007). Currently, 26 states have enacted mentoring policies for school leaders (Education Commission of the States, 2011).

1

The rise in number of principal mentoring programs can be attributed to the increased complexity of the principalship and the lack of qualified candidates (Wallace Foundation, 2007). The role of principal changed sharply with the introduction of the 2001 No Child Left Behind (NCLB) law. Prior to NCLB, *A Nation At Risk* (U.S. Department of Education, 1983) increased public scrutiny of schools and principals (Abernathy, 2007; Duke, Grogan, Tucker & Heinecke, 2003). In this era of accountability, the support and guidance offered to new principals is of paramount importance. Abernathy (2007) claimed there could be as many as 37 ways for a school to fail to make Adequate Yearly Progress. NCLB created standards for student achievement, and when these standards are not met, schools can suffer harsh consequences (Abernathy, 2007). In a national study of 860 students enrolled in administrative preparation programs, Bass (2007) reported that stress is the primary factor discouraging potential candidates from entering school administration. The second and third factors are the increase in time commitment and the pressures of standardized testing. Hewitt, Denny, and Pijanowski (2011) found that qualified teacher leaders are not going into administration because of "time, accountability, and the stressful demands of the job" (p. 20). Clearly, the skills required to lead within this educational landscape are different from those required prior to *A Nation At Risk.*

Along with the increased complexity of the principalship, a lack of qualified candidates is cited as the reason more principal mentoring programs are being developed (Wallace Foundation, 2007). A lack of qualified principals willing to lead America's schools is a growing concern. The National Association of Secondary School Principals (NASSP) estimates that, within the next decade, 40% of current principals will retire. Although teachers and administrators are completing principal certification programs,

they are not applying for principalships. Teachers are not interested in becoming principals because of the job-related stress, inadequate pay, and lack of professional development offered to principals (NASSP, 2003). The National Center for Education Statistics reported in 2007--2008 that 36 percent% of public school secondary principals had three or fewer years experience as principals (Condition of Education, 2010). Administration preparation program developers are hoping to entice candidates into their leadership programs by offering mentoring components (Wallace Foundation, 2007).

Despite documented evidence of increased mentoring programs for new principals, generalizations about mentoring are difficult to make because of the wide variety of structures and components in different mentoring programs. Documenting effectiveness or best practices for mentoring becomes difficult in the face of so many different programs and structures.

The rapid development and evolution of communication technologies has increased e-mentoring research within business and healthcare sectors. With a variety of mentoring components used to varying degrees, more research on the best synthesis of components is required. If mentoring is going to be a widely used support for new principals and viewed as the panacea for supporting leadership in the era of accountability, then an investigation into the effectiveness of e-mentoring for the principal and the principal's school is warranted.

Background of Prior Research

A variety of different mentoring program designs are being used, typically costing states one million dollars per year (Wallace Foundation, 2007). In addition to state-designed programs, university and college administration preparation programs use

mentoring as a method of leadership development (Browne-Ferrigno & Muth, 2006). Nonprofit foundations, state administrator associations, and districts are also sponsoring principal development programs that use mentoring (NASSP, 2003). Collaborative models run through a partnership of agencies also exist (Villani, 2006).

Mentoring programs have different models, different components, and different aims. Some programs are designed to help new principals through their first year, and others are designed to grow a life-long partnership between the mentor and mentee. Components vary from program to program as well. Mentor training may be embedded in an ongoing fashion in one program, and may exist as an initial orientation in another program. Mentoring may involve one-on-one training, or may involve group training between a mentor principal and several different mentees. There is a limited body of research on formalized mentoring programs for new principals and all of these research studies use face-to-face mentoring (Alsbury & Hackmann, 2006; Browne-Ferrigno & Maynard, 2005; Daresh, 2007; Hansford & Ehrich, 2006; Lim, 2004).

The development of new communication technology has aided the growth of virtual organizations (Kasper-Fuehrer & Ashkanasy, 2003), adding to the variability of mentoring structures. The communication technology used in e-mentoring environments includes e-mail, the Internet, telephone, fax, discussion conferencing, and video conferencing. E-mentoring is used commonly in new principal mentoring programs in England, New Zealand, and Australia (Martin & Robertson, 2003). In the United States, e-mentoring technologies are used often by participants in new principal mentoring programs, but are not a required structure of the mentoring program. In the United States, structured e-mentoring exists more frequently within health and business sectors, as well

as in mentoring programs established for students and teachers (Bierema & Merriam, 2002; Perren, 2003).

Topics researched in studies of mentoring programs that employ e-mentoring technologies include the technology comfort level of participants, access to technology, the importance of a technical support system, and synchronous versus asynchronous communication (Bierema & Merriam, 2002; Lenear, 2007; O'Neill, Weiler, & Sha, 2005; Perren, 2003; Rickard, 2004; Rickard & Rickard, 2009). Little research has been conducted on how different e-mentoring technologies can best support mentoring programs. For these reasons, generalizations about mentoring programs are difficult to make.

Benefits of Face-to-Face Mentoring for Mentors and Mentees

Consistent within research on face-to-face mentoring programs is that mentoring does benefit both mentors and mentees. Researchers have documented that face-to-face mentoring increases socialization experiences (Alsbury & Hackmann, 2006; Browne-Ferrigno & Maynard, 2005; Browne-Ferrigno & Muth, 2006; Crow, 2007; Kamler, 2006). Browne-Ferrigno and Muth (2004) define principal role socialization as:

> an intricate process of learning and reflection that requires working closely with leadership mentors in authentic field-based experiences, developing confidence through engaging in leadership activities and administrative tasks, and assuming a new professional self-concept grounded in confidence about leading schools. (p. 471)

Browne-Ferrigno and Muth (2006) investigated components in mentoring programs that support role socialization. Alsbury and Hackmann (2006) conducted a mixed-method study of the Iowa Administrator Mentoring and Induction (IAMI) program and concluded that the development of a mentee/mentor relationship should focus on role socialization

and role clarification. Mentee participants did not view the mentoring program as a venue for skill development or enhancement, but as support for their transition to a new professional role. When faced with a variety of supports, new English head teachers valued their assigned mentor because of the increased socialization the mentor relationship provided (Crow, 2007). Browne-Ferrigno and Maynard's (2005) exploratory case study of the Principals Excellence Program in Pike County, Kentucky described the mentoring program as a forum for participants to learn tools and techniques that will quicken their socialization into the new role of principal. Kamler (2006) investigated mentoring outcomes for the Aspiring Superintendents' Study Group, established in 2001 in Nassau County, and role socialization was an important theme. These studies demonstrate that socialization is a benefit reported frequently by participants engaged in face-to-face mentoring programs.

Hansford and Ehrich (2006) presented a structured review of the literature on formalized mentoring programs for principals. Forty empirical studies, conducted between 1987 and 2004, explored the outcomes of mentoring for principal mentees and principal mentors. Positive mentee outcomes included 18 studies that reported support/empathy/counseling, 12 studies that reported sharing ideas and problem solving, and 10 studies that reported professional development as positive outcomes. Overall, nineteen specific positive outcomes were identified. Positive outcomes for principals participating as mentors included increased collegiality and networking, professional development, and the opportunity to reflect.

Other benefits of face-to-face mentoring documented by both qualitative and quantitative studies include mentoring as a support to institutional growth (Thorndyke,

Gusic & Milner, 2008; Stead, 2005). Thorndyke, Gusic, and Milner (2008) reported that a formalized mentoring program for new staff contributed to the mission of Penn University. Stead (2005) concluded that a formalized mentoring program within the United Kingdom National Health Service provided Directors of Finance with increased leadership skills. Although limited in number, these studies refer to the impact of mentoring within an organization. They are important to research on formalized mentoring programs for new principals because principals are often evaluated on the success of the schools they lead (Glidden, 1999).

Limitations of Face-to-Face Mentoring for Mentors, Mentees, and Program Designers

The challenges of face-to-face mentoring have also been documented thoroughly in mentoring research. The challenges fall among three broad categories of time, training, and matching. There is debate among researchers on the optimal length of time a mentorship should last (Daresh, 2007; Kram, 1985; Salmon, 2004; Thorndyke et al., 2008; Villani, 2006) Most formalized mentoring programs for new principals last one year, the length of the novice principal's first year in the role (Villani, 2006). However, researchers such as Daresh (2007) contend that the mentorship should last three or four years. Creating time for mentoring relationships and activities is another challenge of face-to-face mentoring programs. New principals can be overwhelmed by the demands of their new role and may find it difficult to make time to meet with mentors, especially when large distances between mentors and mentees exist, as in more rural areas (Alsbury & Hackmann, 2006; Ehrich, Hansford, & Tennent; 2004; Hansford & Ehrich, 2006).

Some studies reported challenges such as the mentor did not possess the skills necessary to mentor (Alsbury & Hackmann, 2006; Crow, 2007; Daresh, 2007; Hansford & Ehrich, 2006; Stead, 2005). These studies illuminate the need for training of both mentors and mentees in formalized mentoring programs because the presence of training often correlates with increased satisfaction of program participants.

Another limitation within face-to-face mentoring programs is how mentees and mentors are matched. Ensher and Murphy (1997), Hale (2000), and Hansford and Ehrich (2006) and are a few of the researchers who investigated different methods of matching mentees and mentors. There is conflicting data on what makes a good pair. Some research revealed that having a mentor with similar personality traits was beneficial and some researchers reported that different personality and gender match worked better (Hansford & Ehrich, 2006; Noe, 1988; Oglensky, 2008; Ragins & Cotton, 1991). Hale (2000) determined that most mentor matches are made based on interest inventories and suggested that similarities between mentors and mentees supported the development of rapport, while differences facilitated learning. A limitation to this body of research is that most of it utilized self-reported data in which participants offered their perception or opinion of their mentee and mentor. However, it is valuable research to include in a thorough review of mentoring research because it is a prominent issue for program developers and administrators to consider.

Another problem with a lack of empirical data in mentoring research is that the manner in which a component works in a particular program is unique to just that program. Different mentoring programs with different components produce different results. For example, the mentoring model described by Alsbury and Hackmann (2006) is

very different from the mentoring model described by Browne-Ferrigno and Maynard (2005). Both research studies report high satisfaction with mentor/mentee match.

Overall, face-to-face mentoring research lacks rigor due to the methodologies employed. Most data is self-reported data by program participants. Studies lack enough data for triangulation (Alsbury & Hackmann, 2006; Hansford & Ehrich, 2006). Most studies center on participant satisfaction of the formal mentoring program (Alsbury & Hackmann, 2006; Browne-Ferrigno & Muth, 2004; Crow, 2007; Daresh, 2007; Kamler, 2006; Ladyshewsky, 2007). Likert scales are often used in surveys to assess participant satisfaction with the mentoring program.

The Advent of E-Mentoring

Prior to 1985, e-mail and Internet use was available mainly to researchers and universities. With the public launch of America Online in 1985 and Netscape in 1994, technology quickly changed how America and the world conducted business. Several e-mentoring programs sprouted. The first e-mentoring program, The Electronic Emissary Project, founded in 1993, matched students with science-related projects with scientists (Harris, Rotenberg, & O'Bryan, 1997). The Electronic Emissary Project marked the advent of large-scale e-mentoring programs built on research from face-to-face mentoring. However, no exact blue print was available. The founders operated on the assumption that the Internet could be used to "facilitate social equity and educational attainment" (Single & Single, 2005b, p. 8). Other major e-mentoring programs included The Telementoring Young Women in Engineering and Computing Project, funded by a grant from the National Science Foundation in 1994 (Bennett, Tsikalas, Hupert, Meade, & Honey, 1998), the International Telementoring Program (Neils, 1997), and MentorNet

(Stromei, 2001). These programs all sought to connect students to professionals and relied on technology because face-to-face meetings were not feasible. Program developers realized that sustaining meaningful relationships between mentees and mentors required programmatic support structures similar to those in face-to-face mentoring programs, such as training, as well as the technological support. Researchers thus began to investigate the similarities and differences among different types of structured e-mentoring programs. From this body of research certain benefits and challenges of e-mentoring programs have been documented (Single & Single, 2005b, p. 10).

Benefits of E-Mentoring for Mentors and Mentees

One of the first benefits documented for mentors and mentees engaged in a formal e-mentoring program is the ease and convenience associated with scheduling time for mentoring activities to take place (Goldman, 1997). Meeting online or engaging in asynchronous communication does not require travel time lamented typically by those in face-to-face mentoring programs. Several studies reported that technology increased participant satisfaction with the mentoring experience (Bierema & Merriam, 2002; Colky & Young, 2006; Goldman, 1997; Shrestha, May, Edirisingha, Burke, & Linsey, 2009; Single, Muller, Cunningham, Single, & Carlsen, 2005). Research on e-mentoring revealed mentors and mentees appreciate the quick exchange of information and support that can be achieved through an e-mail exchange versus a face-to-face meeting that involves travel. The asynchronous quality of some e-mentoring technology, such as e-mail, allows for mentors and mentees with different schedules to connect. This body of research demonstrates that e-mentoring can be useful when mentors with the skills to

help a mentee are in short supply and are not in close proximity to the mentee. E-mentoring is a way for those living in isolated areas to benefit from mentoring. E-mentoring transcends geographic boundaries (Headlam-Wells, 2004; Kasprinsin, Single, Single, Ferrier, & Muller 2008; Kasprinsin, Single, Single, & Muller, 2003; Single & Single, 2005a).

Similar to research on face-to-face mentoring programs, research on e-mentoring programs revealed that training for both mentees and mentors increased participant satisfaction. Mentees and mentors appear to benefit from training on the mentoring process as well as in the technological skills required to be an effective e-mentor or mentee (Headlam-Wells, Gosland & Craig, 2005; Kasprinsin et al., 2003, 2008). Within e-mentoring programs, training often took the shape of electronic tutorials, which are easy to maintain and access.

Kasprinsin et al. (2003) found that engaging in a required training tutorial will increase the number of students who stay involved with their e-mentors in a formalized e-mentoring program. The researchers concluded that a training component of a formal e-mentoring program may facilitate the early development of an e-mentoring relationship and therefore support a greater frequency of contact between mentor and mentee. Kasprinsin et al. (2003) deemed training that identifies the potential benefits and outcomes of participation in the program as a crucial element of required training. The training modules used in this study were interactive online case studies designed for the education level of mentors (p. 71). The researchers recognized that the cost, complexity, and purpose of training were areas in need of further research. While Kasprinsin et al. (2003) investigated the use of training for mentors, Kasprinsin et al. (2008) used the same

11

data set to investigate the use of training for mentees. Again, the data supported the hypothesis that overall involvement would increase for the mentors matched with mentees who engaged in the required training tutorial. The researchers also found that the trained mentees reported greater satisfaction with the e-mentoring relationship than the untrained mentees. The researchers recommended that mentoring for mentees be mandatory, but voluntary for mentors.

Another benefit for participants enrolled in an e-mentoring program was that matching between mentees and mentors did not suffer some of the biases based on stereotypes that traditional mentoring studies have documented (Hamilton & Scandura, 2002; Sproull & Kiesler, 1986). de Janasz, Ensher, and Heun (2008) documented that when mentors and mentees are not able to see each other physically, perceived similarity rather than actually demographic similarity, was a higher indicator for a successful relationship. Although methods for matching mentors and mentees vary among studies, all studies cited the importance of the match to both the mentor and mentee. Participants across the studies reported that when they felt a mismatch with their partner, they were less likely to engage in mentoring activities.

Another benefit to e-mentoring is the egalitarian quality of the exchange of information that technology allows. E-mentoring is also lauded for the increased access to mentoring relationships that can occur with increased availability of telecommunication technology (O'Neill, Wagner, & Gomez, 1996). For example, since the advent of e-mentoring, more women and minorities are accessing mentoring relationships. Some e-mentoring programs are designed specifically for women to access information and support in fields dominated traditionally by men (Kasprinsin et al.,

12

2003). Logging in or signing up for mentoring support online can be easier than applying to a mentoring program within one's chosen profession. Increased networking opportunities are described in the research by Whiting and de Janasz (2004).

Some researchers documented e-mentoring as a panacea to problems existing within face-to-face mentoring programs. In e-mentoring programs that do not utilize face-to-face meetings, "cultural baggage and stereotypes that accompany race, gender and social class become invisible in the virtual forum" (Bierema & Merriam, 2002, p. 13). Technology facilitates learning that can cross social, economic, cultural, organizational, and physical boundaries (Bennett et al., 1998; Harasim, Starr, Teles, & Turoff, 1998; Headlam-Wells, 2004; Megginson, 2000; Palloff & Pratt, 1999; Ravert & Layte, 1997).

Challenges of E-Mentoring for Mentors and Mentees

Bierema and Merriam (2002) and Shrestha et al. (2009) reported that adequate computer literacy skills can be a challenge for participants engaged in e-mentoring programs. Maintaining online engagement is another challenge (Lenear, 2007). Lenear's (2007) mixed-method study investigated synchronous versus asynchronous e-mentoring environments and determined different models of mentoring result in different levels of participant engagement. Participant commitment to the e-mentoring relationship can be challenging. Participants can end, just as easily as strike up, a relationship (Colky & Young, 2006). Other challenges include the development of virtual intimacy. The extent to which mentors and mentees can build significant trust solely online is a topic of research. Many studies contended that the frequency of contact between mentor and mentee is positively correlated with increased participant satisfaction in the mentoring

relationship (de Janasz et al., 2008; Kasprinsin et al., 2003, 2008; Rickard & Rickard, 2009).

Rickard and Rickard's (2009) qualitative study investigated the characteristics of effective and ineffective e-mentoring partnerships in a small business e-mentoring program. Their findings indicate that ineffective mentoring partnerships resulted from irregular contact schedules and limited partner contact. Disadvantages included the suitability of e-mail for the issues raised and the lack of cues associated with face-to-face communication.

Challenges of E-Mentoring for Program Designers and Administrators

Often challenges reported in face-to-face mentoring programs were echoed in e-mentoring programs. The challenge of providing adequate training for participants is documented in e-mentoring research (Kasprinsin et al., 2003, 2008; Shrestha et al., 2009). Kasprinsin et al. (2003) investigated how interactive training modules affected the involvement, satisfaction, and value mentees attributed to an e-mentoring program. Shrestha et al. (2009) also recognized that mentor and mentee training in computer literacy is crucial to the development of a successful mentoring relationship. Asgari and O'Neill (2005) investigated how mentee expectations of the e-mentoring program are transformed by the actual experience. Arguing that upfront training for mentees is the most widely documented recommendation for program developers and administrators, but that the content of the training is unclear, Asgari and O'Neill attempted to fill a gap in literature. Through an in-depth quantitative study, the researchers found that mentees' needs change throughout the course of the mentorship.

Identifying goals and designing structures of e-mentoring programs are documented by Freedman (1992) as two challenges for e-mentoring program developers and administrators. Many e-mentoring programs utilize e-mail as the main communication mode for participants. Rickard and Rickard's (2009) qualitative study exposed the need for support structures by program developers and administrators in order to facilitate satisfactory e-mentoring relationships. Lenear's (2007) seminal study investigated differences between structures in the ABC mentoring program for girls between the ages of 10 and 14. A static-group comparison design was used to compare a mentoring environment that allowed for synchronous communication and one that used asynchronous communication. Lenear's findings reveal that synchronous communication created stronger feelings of closeness between participants (p. 6). This study also supported other research that frequency of interaction is important and should be considered by program developers and administrators when setting communication parameters for participants (de Janasz et al., 2008; Kasprinsin et al., 2003, 2008; Rickard & Rickard, 2009).

Two challenges for program developers and administrators are overhead costs and finding personnel qualified to maintain technology infrastructure, especially for smaller e-mentoring programs (Headlam-Wells et al., 2005; O'Neill et al., 2005). Still, a case study of an e-mentoring program determined that technology was not the main factor in supporting learning, whereas supporting a quality mentoring relationship was crucial (Headlam-Wells et al., 2005).

A challenge well documented in e-mentoring research is that of making virtual matches (de Janasz et al., 2008; Headlam-Wells et al., 2005; Kasprinsin et al., 2003,

15

2008; O'Neill et al., 2005; Perren, 2003; Rickard & Rickard, 2009). Similar to face-to-face mentoring research, e-mentoring research provided no conclusive evidence of best practices for making matches, but the importance of a quality match was cited consistently by participants as contributing to their satisfaction with the mentoring experience. No studies investigated what makes a quality match.

A comprehensive review of e-mentoring research disclosed the above issues as challenges for program developers and administrators when designing and facilitating e-mentoring programs. Some of the challenges are similar to those exposed in face-to-face mentoring and some are different, posing the question, is one form of mentoring better than another?

Purpose and Research Questions

Many districts, states, universities and colleges, and professional organizations have recognized the need to support new principals and have introduced mentoring as a component of their leadership development strategies. These organizations have also recognized that simply matching principals together and calling one a mentor does not produce a supportive relationship or increased capabilities for the novice mentee (Daresh, 1995). Studies of formal mentoring programs that incorporate data on e-mentoring technologies report only the effectiveness of the overall mentoring experience and do not evaluate the effectiveness of the e-mentoring technologies (Bierema & Merriam, 2002; Kasprinsin et al., 2003, 2008; Lenear, 2007; O'Neill et al., 2005; Perren, 2003; Rickard, 2004; Rickard & Rickard, 2009; Single & Single, 2005a). The present study will look at whether e-mentoring technologies are a viable component for formal mentoring programs of new principals.

Creating time for mentor and mentee principals to develop relationships is a multi-faceted issue for mentoring programs to address. Effective mentor/mentee matching and mentor/mentee training are complex components that program developers must consider. The rapid development and evolution of communication technologies has increased e-mentoring research within business and health sectors (O'Neill et al., 2005; Perren, 2003). The application of e-mentoring research to formal new principal mentoring programs will help inform program development. A study of e-mentoring in a new principal mentoring program is both a timely and relevant topic of research.

This study examines a formal mentoring program for new principals that utilizes an e-mentoring component. This study was guided by the following research questions:

1. How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?

2. Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?

3. What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program developers and administrators?

4. What do mentors and mentees suggest should be done to enhance the effectiveness of e-mentoring technologies?

Statement of Potential Significance

Attracting and retaining qualified principals continues to be a concern to educational policymakers. In a survey of 197 school districts in Arkansas, Carnine, Denny, Hewitt, and Pijanowski (2008) found a reduced number of qualified principal applicants over the past ten years. Other states report a similar shortage of qualified

principal candidates (Davis, Darling-Hammond, LaPointe, & Meyerson, 2005). Shortages

of qualified principals to lead today's school, as well as high turnover in the principal

position are reasons an increasing number of states and districts are using mentoring to

support new principals (Villani, 2006). The power of mentoring is uncontested within the

literature, but understanding what components and conditions best prepare new principals

to lead a school successfully is still unknown. Mentoring is common within the context of

leadership development, and research on the effectiveness of mentoring is important to

educational policymakers and leadership program developers. In 2007, The Wallace

Foundation report "Getting Principal Mentoring Right: Lessons from the Field" directed

attention to the need for quality mentoring research:

> Much of the existing information gathered by states and districts has tended to be
>
> subjective and anecdotal, aimed primarily at gauging satisfaction levels of
>
> mentors and mentees and whether or not they felt particular development goals
>
> were met. (p. 5)

One answer to this call for more scholarly mentoring research is an examination of a

relatively new vein of mentoring research, e-mentoring.

Advances in technology make e-mentoring a more viable form of mentoring for

more and more organizations (Mueller, 2004). E-mentoring technology is readily

available to companies and organizations wanting to initiate the practice. One such

company advertises "robust e-mentoring technology that scales as your mentoring

program grows to handle both small and extra large enterprise programs" (Mentor Scout,

n.d.). These pre-packaged e-mentoring "kits" are increasing e-mentoring usage among

businesses and non-profit organizations. As the use of e-mentoring for leadership or staff

development increases, so does the scholarly literature on various aspects of e-mentoring, such as training mentors and making successful online matches. E-mentoring practices support leadership development when certain components are included in the formal mentoring program (Bierema & Merriam, 2002; Colky & Young, 2006; Goldman, 1997; Shrestha et al., 2009; Single et al., 2005). Consequently, understanding the conditions within an e-mentoring program that support or detract from leadership development is useful to educational leadership program developers.

This study investigated a formal mentor program for new principals that incorporates e-mentoring technology as a component to a comprehensive leadership program. The program under study is one of only a few new principal mentoring programs that utilize e-mentoring technology. This study provided insight into the experiences of new and experienced principals engaged in e-mentoring activities. Findings from this study can help guide the development of formal mentor programs for new principals. Data from this study will allow mentoring program developers to revise current practices.

Although countries such as New Zealand have utilized e-mentoring technologies to support new principals (Martin & Robertson, 2003), United States principal mentoring programs underutilize e-mentoring technology. This study will add to the body of research on formal mentoring programs by contributing data on a synthesis of program components and the ability of the mentoring program to produce a principal who will impact his or her school positively.

E-mentoring research outside the field of education explores the benefits and challenges e-mentoring technology presents to participants (Bierema & Merriam, 2002;

19

Colky & Young, 2006; Goldman, 1997; Shrestha et al., 2009; Single et al., 2005). In addition to uncovering benefits and challenges of e-mentoring for new principals, this study uses learning organization theory as a lens by which to focus data collection and analysis. Senge's (1990) learning organization theory espouses that specific skills are disciplines that individuals and groups should develop in order to create organizations that grow and thrive. Senge's concept of learning organization is one in which people are continually learning how to learn together (Senge, 2006, p. 3). By linking leadership skills to organizational success, Senge provided a blueprint for creating organizations that can survive complexity. This perspective is unique because it sheds light on what is lacking from most principal mentoring research: a connection between the mentoring and the organization in which the principal resides. A study that does more than seek to understand participant satisfaction will fill a noted gap within scholarly mentoring research. Indeed, the author of The Wallace Foundation's 2007 report on principal mentoring lamented that most mentoring research "doesn't specifically address whether mentoring is promoting the retention of promising new leaders or the specific behaviors that signal a willingness and ability to lead instructional improvement" (p. 5). The use of Senge's learning organization theory as the foundation guiding this research focuses this study on leadership behaviors.

The policy implications of this research are many. First, research has indicated that a growing number of state policies require new principals to be mentored (Wallace Foundation, 2007). Mentoring policies vary by district and state (Education Commission of the States, 2011). Findings from this study can inform state and district policymakers about the viability of e-mentoring as a program component. Issues of enhancing e-

mentoring conversation, matching mentors and mentees, and technology training,

explored in this case study, provide valuable data that policymakers can use to shape

future mentoring programs.

Second, this research will inform policies regarding principal retention. Many

states and districts are concerned with attracting and retaining qualified principals, and

mentoring has emerged as a strategy to help alleviate the problem (Wallace Foundation,

2007; Villani, 2006). In "Strong Leaders, Strong Achievement: Model Policy for

Producing the Leaders to Drive Student Success," Christie, Thompson, and Whitely

(2009) recommend that policies should be enacted so that mentoring for new principals

occurs on the job. Where veteran principals are not readily available to mentor new

principals, e-mentoring could provide valuable solutions as well as valuable data to

policymakers concerned with principal retention in rural areas.

Last, an in-depth case study of e-mentoring within a principal mentoring program

is beneficial to the future of new principals. The knowledge gained from this study can

shape how future principals engage in mentoring activities. Specifically, this study can

help inform program developers and administrators in the school district using the

mentoring program under study. Considering this is the first year Skype will be

incorporated into the program, findings from this study will be important when

evaluating and planning program revisions.

Theoretical Foundation and Conceptual Framework

Yin (2009) emphasized the importance of theory development prior to collecting

data in case study research (p. 35). He contends that the theory is particularly important

in the design phase of case study research because it influences the type of data collected.

Senge's (1990) learning organization theory is the theoretical foundation for this descriptive case study. In *The Fifth Discipline: The Art and Practice of the Learning Organization,* Senge expounds upon his belief that individual development in the areas of reflection and engagement help create leaders open to learning. He presents research and personal stories of leaders in a variety of successful organizations who have used creative thinking and innovation to survive while other, similar organizations did not. It is through personal mastery, mental models, building a shared vision, team learning, and systems thinking that Senge believed people could be the agents to construct the organization in which they operate. Senge's theory was presented in reaction to the traditional understanding of an organization that functioned with top down management. In effect, Senge was giving a human element to the organization by calling it the *learning* organization. His theory highlighted a more humanistic view of what happens in an organization. Since the release of *The Fifth Discipline,* Senge has collaborated on several other books, such as *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization* (Senge, Kleiner, Roberts, Ross & Smith, 1994) and *Schools That Learn* (Senge et al., 2000). He also co-founded the Society for Organizational Learning, a non-profit organization dedicated to the research, implementation, and practices of learning organizations (Society for Organizational Learning, http://www.solonline.org). His theory has gained international attention and in 2006 he released the second edition of *The Fifth Discipline* in which he wrote, "the organizations that will truly excel in the future will be the organizations that discover how to tap people's commitment and capacity to learn at all levels in an organization" (p. 4). The role of the individual is a crucial variable in determining the functionality of the organization.

Grounding the present study in Senge's learning organization theory is appropriate because previous research studies have demonstrated that mentoring supports the development of learning organizations (Buck, 2004; Dymock, 1999; Groves, 2007; Mohn & Machell, 2005). Dymock's (1999) study investigates the usefulness of a mentoring program in supporting a learning organization. Groves (2007) uses the tenets of a learning organization to investigate best leadership development practices for organizations preparing for smooth successions in leadership. Mentoring is deemed a best practice in this study. Buck (2004) also argues that mentoring is one way to support learning organizations. Mohn and Machell (2005) suggest that new principals often spend more time on school management than instructional leadership or improving student learning and suggest that mentoring is one way to improve the capacity of school leaders.

These three research studies use Senge's theory as a lens by which to investigate leadership activities or structures within an organization. The common belief among the researchers is that developing a learning organization results in an organization ready to take on the challenges of the 21st century. The mentoring programs within the studies included face-to-face mentoring. The intention of the present study is to investigate e-mentoring through the lens of learning organization theory.

The selection of learning organization theory as a theoretical foundation is a reaction to a major critique of mentoring research. Inside the limited body of research investigating mentoring practices within a formalized new principal program, researchers often centered on the relationship between the mentee and mentor. Typically, researchers documented the success of the mentoring relationship through determining the satisfaction level of the mentee. Within the existing research there was little consideration

of the outcome of the mentor program on the host organization. When studies did refer to the benefits of mentoring on the host organization (Kamler, 2006; Stead, 2005; Thorndyke et al., 2008) or the detriments (Stead, 2005), little empirical data was collected and the effect was not the focus of the study. With the exception of Kamler (2006), these studies were conducted outside of education.

More research on the effect of mentoring programs on the host organization is necessary, especially within mentoring programs for new principals. Because of the unique role of principals, it is this author's view that mentoring should do more than support a new principal emotionally. New principal mentoring programs are charged with developing and supporting leaders ready to head schools in a very turbulent time, where effective leadership is central to educational reform (Leech & Fulton, 2008). Quality mentoring should support principals' abilities to lead a school. By grounding this study in organizational learning theory, I plan to highlight the connection of mentoring to the overall development of the school, and thus avoid the critique of previous mentoring research.

With this aim, it is Senge's five tenets that become the conceptual framework for this study. They are the blueprints for an investigation of e-mentoring in a new principal mentoring program. What follows is a description of each tenet and its relation to published e-mentoring research.

Senge (1990) defined *personal mastery* as "the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively" (p. 7). One's vision is a picture of a desired future. In order to obtain that future, one must confront reality objectively. By confronting reality, one is

able to name obstacles that can free an individual from the hold of the unknown (Senge, 1990, p. 160). Thus, concentration on personal mastery opens doors for creative problem-solving. Hamilton and Scandura (2002) summarized information on early e-mentoring groups that first formed on the Internet, saying that they were formed to create a psychological and emotional support to a mentee, and that electronic communication "enables more honest feedback than face-to-face communication" (p. 392). Hamilton and Scandura are referencing e-mail communication and not Skype, where the mentee and mentor are able to see one another. The present study will examine what the data reveal about the extent of personal mastery development available in an e-mentoring program that uses Skype.

According to Senge (1990) *mental models* are the assumptions we carry with us that limit our learning. Mental models are built on the work of Argyris and Schon (1978), who developed a theory on the reasoning that underlies our actions. Argyris and Schon investigated inquiry and reflection and used action science to demonstrate to managers how they become trapped by their mental models and the power of letting go of entrenched ways of thinking. The media, with one headline after another, paints the picture that American education is failing our students. Putting principals in schools to do what has been done in the past is not acceptable. Advances in technology have opened doors for a greater variety in mentors. Mentors are no longer limited to individuals within the local organization but can be located worldwide, thus widening access to diverse thinking (Bierema & Merriam, 2002; Hamilton & Scandura, 2000; Ragins & Cotton, 1999; Rickard & Rickard, 2009).

Senge (1990) described a *shared vision* within an organization as "a force in people's hearts, a force of impressive power" (p. 206). He justified why a shared vision matters with documented stories of businesses that succeeded in turbulent times because of their shared vision. The discipline of individuals to develop their personal visions is significant because, without that discipline, individuals are simply complying with the organization's vision and not committing (p. 211). Using the analogy of a hologram, Senge described how each person's slightly different personal vision contributes to a clear picture of the overall vision of the organization. Expounding on the idea of a committed member versus a compliant member, Senge built the case that creative power is released through committed members. Principals are key players in developing the culture and climate of schools (Wallace Foundation, 2007). Thus, a mentoring program that fosters shared-vision building strategies will contribute to the principal's ability to create a learning organization. Some research supports mentoring as a way to build a shared vision because it is a model of professional development that relies on senior members of an organization charged with developing new members of an organization (Thorndyke et al., 2008; Stead, 2005). When e-mentors and mentees are paired within the same organization, the shared vision discipline can be addressed.

Team learning includes the discipline of "aligning and developing the capacity of a team to create the results its members truly desire" (Senge, 2006, p. 219). Drawing on the work of quantum theorist Bohm (1965), Senge contrasted the term *discussion* with *dialogue* to distinguish the power that reframing how people interact greatly influences the development of a learning organization. Senge emphasized dialogue as the premiere mode of communication, but described discussion as an important element as well. The

power is rooted in the team's ability to move effectively between both dialogue and discussion. According to Senge, the purpose of dialogue is to move beyond any one individual's understanding, whereas in discussion, there is transfer of knowledge back and forth over a known topic. In discussion we analyze and dissect, or pull apart information in order "to win," whereas in dialogue we work toward a new reality, gaining insight that could not be achieved individually (p. 224). Team learning also demands that individuals see each other as colleagues. Senge warned that seeing each other as colleagues is "critical to establish a positive tone and offset the vulnerability that dialogue brings" (p. 228). Mentoring research has long addressed the trust and comfort level that must exist between mentee and mentor in order for an effective mentoring relationship to develop. Previous e-mentoring research has provided mixed conclusions on the ability to create a supportive environment. For example, students engaged in an undergraduate e-mentoring program reported mixed reviews on communication via Blackboard e-mails and chat rooms (Shrestha et al., 2009). Looking at the extent to which elements of team learning exists in an e-mentoring program that utilizes Skype will provide a new perspective within e-mentoring research.

Finally**,** *systems thinking* is the most important discipline, according to Senge, because it is a discipline for "seeing wholes" (Senge, 2006, p. 68). Senge argued the need for systems thinking is greater now, more than ever, because our society is fraught with complexity. The ability of leaders to demonstrate the other four learning disciplines rests in their ability to see the interconnectedness and interrelationships surrounding themselves and their work. For Senge, systems thinking is the shift of mind that allows members of an organization to integrate the four tenets described previously. Senge

argued that systems thinking ultimately "simplifies life by helping us to see the deeper

patterns lying behind the events and the details" (p. 73).

What follows is a table depicting the leadership capabilities described in each of

Senge's tenets (Senge 2006; Senge et al., 2000) matched with the supportive e-mentoring

research.

Table 1: Senge's Tenets Matched with Supportive E-Mentoring Research

Senge's Tenets	E-Mentoring Research
Personal Mastery • Continually clarify and deepen personal vision • See current reality • Make choices to help you achieve your vision • Challenging the status quo is the norm	Hamilton and Scandura (2002) • E-mentoring provided an emotional and psychological support to mentees • More honest feedback was given due to the electronic medium used to communicate Rickard and Rickard (2009) • E-mentoring supported goal development
Mental Models • Bring assumptions and attitudes to the surface so people can explore and talk about their differences and misunderstandings with minimal defensiveness	Colkey and Young (2006) • Virtual mentoring provides access to diverse mentors, leaders become more culturally savvy Single and Muller (2001) • Absence of social cues with the use of e-mentoring technology alleviated impediments to communication between higher and lower status individuals Rickard and Rickard (2009) • E-mentoring supported diversity of support and advice sought or provided by mentee
Shared Vision • Foster commitment to common purpose	Martin and Robertson (2007) • E-mentoring used to help new principals engage all members of the school community in further learning about their school improvement process
Team Learning • Engage people through dialogue and discussion	Headlam-Wells, Gosland, Craig (2005) • E-mentoring is empowering for mentees and mentors

• Dialogue- form of conversation where people are invited to participate, encouraged to surface and display assumptions, and invite others to see new dimensions in what you are thinking • Discussion- different views are presented and defended	Kasprinsin, Single, Single, and Muller (2003); Kasprinsin, Single, Single, Ferrier, and Muller (2008) • Mentor and mentee training produces positive mentoring outcomes Windschitl and Lesehm-Ackerman (1997) • E-mentoring supported a greater cohesiveness within a learning group
Systems Thinking • See interrelationships rather then things • Look for patterns of change • Use feedback concept to see structures underlying actions	Rickard and Rickard (2009) • E-mentoring supported "seeing alternatives, providing insight, clarifying solutions to problems, and a way of developing new skills and knowledge, and an enhanced mindset" (p. 762)

Overall, Senge's learning organization theory is relevant to a case study on e-mentoring for new principals because e-mentoring provides a unique forum for conversation. Whether mentoring communication occurs through Skype or e-mail, current studies have yet to determine whether e-mentoring technologies can provide a supportive platform for a true dialogue powerful enough to influence the work of the mentee in his or her school. Senge believed such leaders could be developed. Senge wrote, "mastering any of the disciplines requires effort on both the levels of understanding the principles *and* following the practices" (p. 374). All data in the present study were analyzed through the lens of Senge's five tenets.

Summary of Methodology

According to Creswell (2005):

Qualitative research is best suited for research problems for which you do not know the variables and need to explore. The literature might yield little information about the phenomenon of study and you need to learn more from participants through exploration. (p. 45)

Considering little to no research exists on e-mentoring in a new principal mentoring program, a qualitative approach was best suited for this study. According to Creswell (2005, 2007) qualitative research allows for the exploration of a topic. The intent of this study was to explore and expose what happens when mentees, mentors, and program developers and administrators use e-mentoring technologies in a new principal mentoring program.

The case study is used as a research method because the new principal mentoring presents a bounded system. This descriptive case study aimed to give voice to mentees, mentors, and program developers. According to Yin (2009), case study research allows the researcher to retain the "holistic and meaningful characteristics of real-life events" in a setting that is not controlled by the researcher (p. 4). Yin (1994, 2009) described six sources of evidence used in a case study: documentation, archival records, interviews, direct observations, participant observation, and physical artifacts. All, with the exception of participant observation, were utilized in this descriptive case study.

The study site was in a small urban school district using a new principal mentoring program. The program matches new principals (mentees) with experienced principals (mentors) for one year. Mentees and mentors engage in formal mentoring activities from August through July and are then encouraged to continue informal mentoring. Three pairs of mentees and mentors were interviewed at the middle and end of their engagement in the new principal mentoring program. Observations were made of both the mentees and mentors engaged in e-mentoring activities. Interviews were also conducted with program developers and administrators.

A case study protocol (Yin, 1994, 2009) was developed, as was an interview protocol for all interviews. Interviews were recorded with a digital recording device. A case study database was created so that electronically archived data may be retrieved and reviewed easily. A codebook was also maintained to track of data analysis accurately.

Data analysis began with transcriptions of interviews. The method of "memoing" after each observation visit was employed (Straus, 1987). Data collection from all five sources of evidence was broken into "units of analysis" and served as a basis for defining categories (Yin, 2009). The categories were previewed in order to distinguish themes, which were used to conduct pattern matching (Yin, 2009). Open and axial coding furthered data analysis (Creswell, 2007). The cyclical process of analysis continued until full description and understanding of the e-mentoring phenomenon within the context of the new principal mentoring program was understood.

Delimitations

1. This study investigated only one principal mentoring program for new principals. The program has unique features and therefore findings may not apply to programs whose features vary from the ones described in this study.

2. The three pairs of mentees and mentors interviewed and observed in this study were the only participants in the 2011--2012 Mentoring Program.

Limitations

1. E-mentoring technologies are relatively new, and participants have no background or theories with which to relate their experiences.

2. This study relied on the voice of the principals engaged in the e-mentoring activities and their willingness to share honest answers in interviews.

31

3. Site selection presented an informal mentoring program where e-mentoring technologies were piloted in the 2011--2012 year. The informal nature of the program was revealed throughout the course of the study.

Definition of Key Terms

The following definitions are used in this study:

Formal mentor program: A program that establishes, recognizes, and manages mentoring relationships (Cao, Walz, & Gardner, 1992)

Mentor: An experienced, productive individual who relates to a less-experienced individual, who facilitates his or her personal development for the benefit of the individual as well as the organization (Kram, 1985).

Mentee: A person with less skills and experience

E-mentoring: A naturally occurring relationship or a paired relationship within a program that is established between a more senior individual (mentor) and a lesser skilled or experienced individual (mentee), primarily using electronic communications, and is intended to develop and grow the skills, knowledge, confidence, and cultural understanding of the lesser skilled individual to help him or her succeed. (Single & Muller, 1999, p. 236)

E-mentoring technology: Any form of computer-mediated technology used to support mentoring activities

In closing, e-mentoring is a relatively new area of study within mentoring research. The fast-paced evolution of technology makes this an exciting field of study. Using computer-mediated communication to support mentoring presents new challenges to researchers and practitioners trying to determine mentoring best practices. A thorough

case study documenting the introduction of e-mentoring technology to a traditional new

principal mentoring program is the first step toward determining the viability of e-

mentoring as a powerful leadership development tool. This research is the first of its kind

and will hopefully inspire other researchers to continue the quest to fully understand e-

mentoring.

Chapter II: Review of the Literature

This literature search encompassed sources from 1990 to 2012 in which

mentoring was identified as a key term. It also included literature on the changing role of

the school principal, the principal shortage, and approaches to principal development,

which will be discussed below. The terms *principal*, *professional development*, *e-*

mentoring, *telementoring*, *virtual mentoring,* and *leadership* were added to the term

"mentoring" using the Boolean "and" command. The literature search included the

Education Research Information Clearinghouse (ERIC) database, dissertations and theses

online, reference lists from articles, World Wide Web Internet searches, and books. All

journal articles were peer-reviewed. Studies of mentoring can be described as evaluative

research on specific mentoring programs, research on the outcomes of mentoring

relationships, and research on the effectiveness of mentoring program components.

The Changing Role of the Principal

In 2000, the Educational Research Service (ERS) concluded that good principals

are the keystone of good schools. The ERS reviewed research and found specific

elements that contributed to promoting higher levels of student learning, one being a

"building-wide, unified effort that depended on the exercise of leadership-most often

identified in the research as the building principal" (p. 5).

Sergiovanni (2001) contended that the principalship is becoming more complex

with new duties being added continually to the responsibilities of the principal (p. 17).

The role of the principal has evolved from one that focuses on school management to one

that emphasizes leadership skills (Copland, 2000; DiPaola & Tschannen-Moran, 2003).

The expanding role of the principal has been linked to the standards and accountability

movement in education (Duke et al., 2003). Government mandates, such as those set forth by No Child Left Behind (NCLB), hold principals accountable for student preparation and teacher qualification. States mandate curriculum standards, school accreditation standards, and testing standards. Professional educational organizations, including the Council of Chief State School Officers (2008), publish standards such as the Interstate School Leaders Licensure Consortium (ISLLC). Districts also mandate policies and procedures that principals are expected to know and follow. The pressures of these sometimes conflicting agencies have added to the complexity of the principalship that was once viewed as a management position (Engelking, 2008; Fenwick, 2000). Hess and Kelly (2006) outlined seven dimensions of effective school leadership: managing educational results/achievement; personnel; technology; external relationships; norms and values; classroom instruction; and school culture. As the role and expectations of the principal has expanded, preparing qualified educators to take on this role has become more challenging.

The Principal Shortage

Many studies report a shortage of principals across the nation. However, a more detailed look at some studies reveals that more people are becoming certified to become principals, but are not willing to take on the responsibilities of the job (Bass, 2007). In 1997, the ERS asked superintendents about principal hiring practices in their districts. Half of the surveyed districts reported there was a shortage in qualified candidates. The shortage occurred at all levels and in rural (52%), suburban (45%), and urban (47%) schools (ERS, p. 23).

Approaches to Principal Development

Principals themselves feel underequipped for the duty (Farkas, Johnson, & Duffett, 2003). When asked how much graduate studies helped prepare them for the job, 52% of practicing principals stated that colleagues were more helpful than graduate studies, 44% stated that on-the-job experience was more helpful than graduate studies, and only 4% indicated that graduate school prepared them for their jobs. In addition, two thirds (67%) of the 925 principals polled described leadership programs in graduate schools of education as being out of touch with what principals need to know (Farkas et al., 2003). Principal training is necessary and should not end with an individual's initial appointment to school leadership or with the completion of a probationary period (Quinn, 2003). The changing role of the principalship requires principals to maintain a lifelong learning posture.

School districts have created programs to encourage principal certification, sometimes called "grown your own" programs (Browne-Ferrigno & Muth, 2004; Ehrich et al., 2004, Jackson & Kelly, 2002). Many collaborative partnerships between universities and districts also have been created in order to support professional development of principals (Goldring & Sims, 2005; Grogan, 2004; Grogan & Andrews, 2002). In 2004, the U.S. Department of Education released a study of six "grow your own" programs that had developed in response to an awareness of the looming principal shortage. Kentucky's Principals Excellence Program, the Boston Principal Fellowship Program, New Jersey's Expedited Certification for Educational Leadership program (NJEXCEL), Chicago's Leadership and Urban Network for Chicago (LAUNCH), Cleveland's First Ring Leadership Academy, and New Leaders for New Schools represented the diverse public school systems that created unique pathways to principal

certification. The six districts in the report developed their own pathways to school leadership in response to the frustration of attracting and keeping well-prepared principals. The commonalities highlighted among the distinct programs were a clear vision and aim of program outcomes, rigorous recruiting and selection process, meaningful course and field work, and processes for building and sustaining the program over time. All six programs included a mentoring component within their highly structured principal preparation program (U.S. Department of Education, 2004).

Despite a plethora of program structures, research conducted by Hess and Kelly (2005) sharply critiques what aspiring principals are learning in their preparation programs. The researchers examined course units and required reading in 210 syllabi collected from 31 principal preparation programs throughout the country. The researchers concluded "principal preparation programs that pay little attention to data, productivity, accountability, or working with parents leave their graduates unprepared for new responsibilities" (p. 38). Recognizing the need to develop successful principals, The Wallace Foundation commissioned *The School Leadership Study, Developing Successful Principals*. Conducted by the Stanford Educational Leadership Institute in conjunction with The Finance Project, the research sought to answer many questions, including "What are the features of effective pre-service and in-service leadership development programs?" (Davis et al., 2005). The researchers state:

> Evidence indicates that effective programs are research-based, have curricular coherence, provide experience in authentic contexts, use cohort groupings and mentors, and are structured to enable collaborative activity between the program and area schools. (p. 7)

Anecdotal information suggests that many principal preparation programs contain some of these elements, but there are no empirical data indicating the extent to which existing

programs cover all elements (p. 10). The authors of the study support mentoring as an important element for principal development, suggesting mentors should "guide the learner in his or her search for strategies to resolve dilemmas, to boost self-confidence, and to construct a broad repertoire of leadership skills" (p. 10). One way to address the leadership crisis is to investigate research on programs built around the mentoring concept and identify current practices.

Duncan and Stock (2010) explored the needs of principals in relation to mentoring in the state of Wyoming. This study sheds light on want principals feel they need in order to be successful. In Wyoming, there are several rural areas with high turnover in administration. The researchers sent a survey to all principals in the state (274 total, return rate of 68.3%). The researchers categorized the years of service into four groups: 0-3 years, beginning principals; 4-7 years, intermediate principals; 9-15 years, experienced principals; and 16 or more years, very experienced principals. The researchers reported that respondents averaged 6.28 years in their current position. The respondents were asked to rate, on a Likert scale (1= not important and 5= very important), the importance of mentoring and coaching in organizational and professional socialization. The survey also asked details about the type of mentoring and coaching available. The findings revealed that 96.8% of respondents agreed mentoring is important for beginning principals. Seventy-nine percent of experienced and very experienced principals agreed mentoring is also important for experienced principals. Interestingly, this study highlights the discrepancy between what principals feel they need and the reality of support available, because only 6% reported having formal mentors. The researchers defined formal mentoring programs as programs "structured by the school

district in which formal mentors and mentoring/coaching activities were assigned" and informal mentoring as "support networks that principals created for themselves" (p. 302). The study also revealed that of the few districts with formal mentoring programs, none had a process to evaluate the success of the mentoring programs.

Duncan and Stock (2010) also analyzed respondents' ratings (on a Likert scale) of how helpful a mentor or coach would be in various categories related to professional and organizational socialization. The results revealed that, in all categories, principals marked above 3 on the 5-point scale except for diversity issues. The researchers hypothesized that diversity was rated low because there is not much diversity within Wyoming school leadership. Beginning principals rated the importance of support more highly in all categories. The top five areas new principals rated the highest for mentorship and coaching were: data-driven decisions; difficult faculty; difficult parents; legal issues; and budget and finance. Principals at all levels of experience included working with difficult faculty members and data-driven decision-making. Both intermediate principals and very experienced principals also included instructional leadership and difficult parents. Experienced principals included instructional leadership and creating collegial environments in their top four categories. The study is important because it establishes that, at all levels of experience, Wyoming principals feel that having a mentor or coach would be helpful.

A criticism of the Duncan and Stock (2010) study is that most of the principals did not have a formal mentor, and therefore did not have negative mentoring experiences. This may, or may not have, impacted their responses. Also, of the 6% who were provided formal mentors, all rated the mentoring program high (4.16) on the 5-point Likert scale.

When formal mentoring was not provided, 29% of the principals reported seeking out informal mentoring within their districts. The informal mentoring relationships were valued for the trust the respondents perceived within the relationship. This study highlights the professional development needs of rural principals and sheds light on the value principals put on mentoring.

Formalized Mentoring Programs for New Principals

The body of research on mentoring as a form of development for new principals, revealed a variety of program structures and components making generalizations about program best practices and program effectiveness difficult. Hansford and Ehrich's (2006) seminal work presented a structured review of the literature on formalized mentoring programs for principals. Forty empirical studies that explored the outcomes of mentoring for principal mentees and principal mentors were identified. The review, comprised of studies from 1987 to 2004, contained 25 qualitative, four quantitative, and 11 mixed-method approaches to investigating the outcomes of mentoring. Hansford and Ehrich summarized the findings of the 40 studies by charting positive or beneficial outcomes and negative or problematic outcomes for both mentees and mentors.

Thirty-one studies reported positive or beneficial outcomes for mentees. Eighteen studies cited *support/empathy/counseling*, 12 studies cited *sharing ideas and problem solving*, and 10 studies cited *professional development* as positive mentee outcomes. Nineteen specific positive outcomes were reported. Among them were *the opportunity to reflect*, *the opportunity to network*, and *feedback and positive reinforcement*, to name a few. Positive outcomes for mentors were reported in 16 studies. Eleven studies cited *collegiality and networking*, nine cited *professional development*, and seven cited *the*

opportunity to reflect as positive outcomes for mentors. Ten specific positive outcomes were reported. In addition to the three mentioned previously, they included *personal satisfaction and reward*, *interpersonal skill development*, *improved role satisfaction*, *better understanding of trust and mutual support*, *provides a sense of purpose*, *exposed to new ideas*, and *opportunity to give back to the profession*.

Negative or problematic outcomes for mentees and mentors were examined in the studies reviewed by Hansford and Ehrich (2006). Eleven studies reported negative or problematic outcomes for mentees. Eight studies cited *concern with expertise/personality mismatch* and *lack of mentor time* as negative outcomes. Other negative outcomes reported were *work demands conflict with those of mentor*, *mentor not trained/skilled appropriately*, *mentor critical/out of touch*, *lack of opportunity to express own ideas*, *difficulties arising from cross-gender mentoring*, *mentors should be selected more carefully*, *lack of social contact with mentor*, and *mentor inhibited ideas of reform*.

Negative outcomes for mentors were reported in 19 studies. These specific outcomes included *lack of time to perform role*, *mismatch arising from personality/educational interests*, *nature of communication skills, especially listening, required, extra burden and responsibility, initial establishment of productive communication, role not explained carefully enough, frustration with attitude of mentee, meeting demands of authorities, lack of proximity to mentee, balancing support role with evaluation,* and *inadequate training*.

Hansford and Ehrich (2006) agreed with Southworth (1995) that data gathering in mentoring research is conducted through some form of self report. Sixteen of the 40 studies in Hansford and Ehrich's review used surveys. Southworth (1995) maintained

"we have a strong rationale for mentoring and a supporting rhetoric from participants but no other evaluatory data to triangulate these two strongly positive positions" (p. 47 in Hansford and Ehrich, 2006).

A criticism of Hansford and Ehrich's (2006) work is that the positive and negative outcomes can be interpreted differently. *Lack of time to perform role* was a reported negative outcome for mentors but it is unclear if this was a choice forced by other duties or a function of the design of the mentor program. Although the list of positive outcomes might seem like useful components to include in a mentoring program, the context of the outcomes was not described. The parameters of the mentoring programs from which the outcomes were derived also were not described.

Hansford and Ehrich (2006) concluded, "based on our examination of 40 studies relating to the mentoring of school principals, it would seem that many of the negative and problematic outcomes could be minimized if greater attention were paid to the overall planning of proposed programs" (p. 46). Since the work of Hansford and Ehrich (2006), there have been a limited number of published research studies on new principal mentoring programs. The mentoring issues raised by Hansford and Ehrich have been examined in the work of Alsbury and Hackmann (2006), Brown-Ferrigno and Maynard (2005), Daresh (2007), and Lim (2004).

Alsbury and Hackmann (2006) conducted a mixed-method study to establish baseline data for the Iowa Administrator Mentoring and Induction (IAMI) program. The purpose of this study was to offer suggestions for change. The researchers collected quantitative and qualitative data. Data were collected during the 2002-2003 and 2003-2004 pilot years. A formative assessment, in the form of a survey, was given at the end of

each pilot year to all participants in the IAMI program. The survey included open-ended questions and asked participants to use a four-point Likert rating for each of the program's components. A rating of 4 indicated "highly beneficial" and a 1 indicated "not beneficial." This measure was used to assess the perceptions of mentors and mentees on component effectiveness. The sample included 62 participants the first year and 111 the second. Return rates were 69% and 80%, respectively. The data were disaggregated between elementary and secondary, principal and superintendent, mentors and mentees, male and female, and central office directors versus building administrators. A narrative summary was provided for the findings on each of the survey questions, which included pertinent responses to open-ended questions. Respondents ranked all components similarly between the 2002--2003 and 2003--2004years.

For the 2003--2004 year, respondents rated mentor-mentee contact at 3.67, mentor training at 3.24, and statewide training at 3.24. Respondents indicated these components were "highly beneficial." Respondents rated the reflection log at 2.87, the audio journal at 2.82, and the professional growth plan at 2.63. The open-ended responses revealed respondents had concerns about the lack of time for mentors and mentees to meet. Time was a recurrent theme throughout responses, with respondents expressing a desire for more face-to-face meeting time. Mentees reported a desire for mentors to increase the structure of meetings and to initiate meeting times. All respondents felt strongly that mentors and mentees should come from either the same school district or districts in close geographic proximity. Mentors and mentees rated components similarly, except mentors rated mentor-mentee contact higher (3.79) than did mentees (3.53).

Alsbury and Hackmann (2006) provided specific program feedback to IAMI program developers. The study is limited in that it provided participants perceptions of the effectiveness of program components, and there was no triangulated data on the effectiveness of each component. This study is useful to mentoring research because themes important to program development are generated. These themes include how time for meetings is managed, how training of both mentors and mentees is managed, and how to develop a supportive mentor--mentee relationship. Alsbury and Hackmann concluded that the relationship should emphasize role socialization into the profession and role clarification. This study also demonstrated that participants did not view the IAMI program as a venue for skill enhancement or for specific advice on how to address difficult issues.

This study provided specific areas of improvement for the IAMI program, and also contributed to the greater body of mentoring research because the results indicated a supportive mentor--mentee relationship is the most important component. Investigating and developing this supportive mentor--mentee relationship has been a focus of mentoring research outside the world of education in both face-to-face mentoring programs and e-mentoring programs (Hale, 2000; Headlam-Wells et al., 2005; Stead, 2005).

Daresh's (2007) sample consisted of 20 experienced current and recently retired mentor principals in two large urban school districts. Retired principals had retired within the last three years. These principals were selected deliberately by their districts to be mentors because of their positive reputations and records of accomplishment as strong instructional leaders. Mentors were interviewed twice during the year of the study. The

interviews were conducted in a one-on-one format with the researcher. Daresh also

queried small focus groups to gain further information from participants. The two main

questions for the interviewees were:

(1) In what ways are you able to focus your mentoring activity on the

development of instructional leadership skills by your mentees?

(2) How did your school districts support you in preparing you to serve as

mentors who were expected to assist new principals in becoming effective instructional

leaders? (Daresh, 2007, p. 23)

Daresh used Huberman's (1989) work on the professional life cycle of teachers as a

framework for how principals move through stages in their career.

Mentors reported that mentees wanted to spend their mentoring time to learn more

about practical and technical job aspects and not instructional learning. By March 1st,

mentees could be described as either risk takers (leaders) or risk avoiders (managers).

Both groups discussed test scores and the importance of achievement. The leaders'

discussions centered on proactively developing new instructional practices, staffing

arrangements, and inservice activities. The managers' discussions covered how to explain

data results to community members and district administrators. The mentors raised issues

over the lack of concern for instructional leadership in the principals and suggested the

district do a better job in selecting new principals as a solution. Daresh (2007) reported

that these findings indicated a need for better preparation of mentors, and suggested

professional development on the sensitivity and developmental needs of the mentee as a

learner and on the instructional leadership process. Daresh also suggested that mentors be

taught career stage or professional development stage theory.

This study lacked a detailed description of the sample and methodology used. No empirical evidence was used in the findings section of the study. Daresh (2007) reported that the group of principals was "almost equally divided" into leaders and managers, but reported no statistics (p. 23). The terms leader and manager are highly interpretive. Another weakness was the researcher frequently referred to his previous work to support his statements and did not include the work of other researchers.

The type of information sought in Daresh's (2007) study is not unique from other studies on district mentoring programs. The study demonstrated a need for mentor training. Daresh (2007) was not evaluating the program specifically, but rather investigating how the mentoring experience changed the practice of the mentees. The study's significance is that it focuses on new principal mentoring and attempts to draw correlations between the mentoring activities and their effect on mentees actions. Few studies have investigated this correlation.

Lim's (2004) study investigated a university-sponsored principal mentoring program. Like Daresh (2007), Lim's work fills a gap in mentoring research because it explores how the learning gained from the mentor experience developed into a principal practice.

Lim's (2004) exploratory study took place in Singapore with a sample culled from principals attending the Diploma in Educational Administration program at the National Institute of Education of the Nanyang Technological University. This program has a full-time, full-year principal preparation program for selected assistant principals. Each participant in the program was paired with a mentor principal. The Ministry of Education granted the researcher permission to contact a maximum of 70% (48 principals) of the

population of 68 secondary school principals who were former participants in the mentoring program. A random sample of 70% of the available population was invited to participate in the study. Forty-one of the 48 principals (85%) agreed to participate.

The method consisted of a administering a questionnaire and then conducting a face-to-face interview. The findings showed that nine participants indicated they learned the practice of trusting through mentoring. Eleven principals indicated that they learned informal monitoring. The principals learned of walkabouts and conversations with staff as informal ways to monitor the school. One key finding was that, when asked about school management, more principals indicated the practice of monitoring than trusting. Lim attributed this to the idea that principals in Singapore are given the responsibility of running of the school and schools are ranked annually with the principal being accountable. Another contributing factor is that the Ministry of Education chooses the mentor principals, principals who thrive in the accountability-driven culture, and whose practices are passed down to their mentees.

This study contributed to mentoring research by delving into two learned practices, trust and monitoring. Most mentoring research focuses on what was learned or discussed in the mentoring relationship, but Lim looked at the actual consequent practice of learning in the workplace. A weakness is that no description of how the questionnaire was created or of the structure of the interviews was provided. Data analysis description was also missing. Lim recognized that this article described part of a bigger study, which was carried out to explore the practice of how school management is learned as perceived by secondary school principals who have the opportunity to learn through mentoring.

Another weakness of the study is that principals were self-reporting their learning and practices.

Browne-Ferrigno and Maynard (2005) investigated the Principals Excellence Program (PEP), a partnership program between Pike County School District and the University of Kentucky. Current and aspiring school administrators are admitted to the program. The PEP program provides year-long intensive professional development that includes, "a coordinated mix of group and individual learning activities, professional reading and reflection, clinical practice and disciplined inquiry supported by mentor principals-for educational practitioners holding administrator certification" (p. 7). The program was designed to develop instructional leaders able to increase student learning in rural areas. Browne-Ferrigno and Maynard (2005) detailed the program components and used surveys, reflections, small-group interviews, and observation to capture the perceptions of cohort members at various times throughout the program.

The mentoring that took place in the PEP program involved the requirement to conduct action research in a mentoring principal's school. Cohort members worked with mentoring principals to identify student-learning concerns and design strategies to address the real-life problems of practice. This program component was designed specifically to "stimulate theory-to practice linkage and development of inquiry skills, for only for cohort members but also mentor principals" (p. 11).

Browne-Ferrigno and Maynard (2005) presented favorable comments by both mentor principals and cohort members. For example, one program participant commented, "Nothing can replace the face-to-face, on-the-spot practicum…The practicum encourages the mentor principal to reflect on the learning climate, culture and

48

instructional practices of the school" (p. 12). A mentor principal commented, "Being involved through field-based experiences with mentoring principals provided the participants with opportunities to problem solve and apply critical thinking skills to actual situations that would impact students' achievement the most" (p. 13). Working with a mentor on real-life issues produced a win-win situation for the participant, mentor, and school. Program designers purposefully designed the mentoring aspect in this way because of the documented power of action research and they wanted the participants to gain experience in real schools. Many of the participant comments reflected the value of learning about the culture and climate of their host school, "Even though all schools have many similarities, rural eastern Kentucky schools retain a unique culture. PEP allows future leaders to experience the pulse of the [host] school by what they see and hear" (p. 12).

A criticism of this study is that it focused on the perceptions of program participants. The researchers concluded that the program had grown since its inception in 2003. Upon completion of the study, 18 of 25 schools in Pike County and five of the nine schools in Johnson County employed PEP members. However, despite favorable comments by both districts' administrators, touting "the greater confidence, competence, and comfort of [cohort members] in their roles as instructional leaders," the researchers concluded that it is too early to make direct correlations between the PEP program and student achievement (p. 16). There is no data available for triangulation. The missing link between mentoring and student achievement is an important correlation for future studies to consider.

Alsbury and Hackmann (2006), Browne-Ferrigno and Maynard (2005), Daresh (2007), and Lim (2004) are four empirical studies that contributed to a mentoring knowledge base specific to new principal mentoring programs. This limited empirical research, despite the fact that the studies relied on self-reported data and participant perceptions, provides insight into how mentoring activities are being realized for new principals. The findings have limited applicability because each formal mentoring program operates differently. However, common themes, such as the need for mentee--mentor training, the importance of mentee--mentor matching, and the importance of cultivating the mentoring relationship can be traced throughout the studies.

Benefits of Face-to-Face Mentoring for Mentors and Mentees

This review includes studies on formalized mentoring programs beyond those designed for new principals. By looking at the benefits of face-to-face mentoring programs, one can gain a deeper understanding of the role of mentoring in leadership development. These studies demonstrate the impact mentoring can have on mentors, mentees, and sometimes institutions. One of the most common benefits reported for face-to-face mentoring is the role socialization mentoring provides for mentees.

Kamler (2006) investigated mentoring outcomes for the Aspiring Superintendents' Study Group established in 2001 in Nassau County, New York to provide inspiration, support, and interest in the superintendency. The study provided a detailed, rich description of the program. Such descriptions are often lacking in mentoring research, making generalizations about findings difficult. Kamler's qualitative study used surveys, observations, and interviews to obtain data. The researcher was the coordinator of the program so the bias must be considered.

All 56 superintendents of Nassau County were invited to participate and asked to invite administrators who they believed demonstrated the potential to become superintendents. The group was targeted to meet three or four times a year. Data was collected from 11 meetings that took place between May 2002 and March 2005. Meetings were four hours, 4 pm to 8 pm, and broken into three segments. The first hour was devoted to networking, the second two hours were devoted to a whole-group presentation, followed by breakout sessions where small groups of five to seven aspirants and superintendents discussed topics, and the last hour was devoted to a buffet dinner. Registration for each session was limited to 60, and approximately 10 superintendents and 25 aspirants attended most sessions. A core of six superintendents and 15 aspirants attended all 11 sessions.

Kamler (2006) analyzed and coded data to "understand the needs of the group; design meaningful experiences; determine the strengths of the program, as well as the targeted areas for improvement; and gauge the effects of the program on career advancement" (p. 307). Although this study is not typical in that it did not address a focused research question and could be considered action research as defined by Creswell (2009), Kamler provided data that supported themes of role socialization and role identity.

Aspirants cited understanding the superintendent's role, attainment of knowledge and skills, networking and fellowship, reflection, support and encouragement, and career advancement as benefits of participation. Superintendents cited intellectualization, collegiality, and legacy as benefits of participation. Intellectualization was described as

51

the exchange of ideas and engagement in meaningful discussion. Legacy was described as the sense of responsibility the superintendents felt to serve as a mentor (p. 310).

Kamler provided an in-depth description into a mentoring program that included unique components: it was voluntary and, although mentoring activities took place, a formal one-on-one mentoring structure was not employed. The Aspiring Superintendents' Study Group created a space for participants to create their own connections, which Kamler termed "alternative mentoring" (p. 301). Kamler indicated that the group was built on "the principles of collaboration, bias-free outreach and communities of learning" (p. 302) and that this is the only research study that described the theoretical underpinning of program design. Citing Lick (1999), Mullen (2005), and Teitel (2005), Kamler espoused that this alternative mentoring emphasizes group interactions and often fosters relationships and promotes professional development (p. 301). This study provides a meticulous description of a mentoring program that both mentor and mentees reported as beneficial to their career and psychosocial development.

The Headteachers' Leadership and Management Programme, (HEADLAMP), established by the national Teacher Training Agency in England, utilizes mentoring for new principals. An English head teacher is equivalent to an American principal. Crow (2007) investigated socialization experiences of new head teachers and found Local Education Authority (LEA)-assigned mentors to be an important resource for socialization, as were former principals.

Crow's (2007) longitudinal, multi-case study aimed to: 1.) identify the content and methods used in the professional and organizational socialization experiences of new English head teachers and 2.) examine how head teachers perceive the affect of these

socialization processes on their roles as head teachers. The sample for this study included four head teachers who began their second year in the fall of 2001 in primary schools in the same LEA in England.

Three on-site interviews were conducted during the second year of head teacher experience. Another interview was conducted the following year. Observations of each head teacher's interactions in staff meetings and in various conversations were conducted. Document analysis included newsletters and public relations materials, as well as materials distributed during meetings and annual reports. Field notes were recorded and interviews transcribed. The transcripts were analyzed for themes regarding different socialization experiences. Themes and data were used to create portraits of each head teacher and then themes were identified across head teachers.

Crow's findings centered on the socialization experiences of the head teachers. This study is included in this literature review because the LEA program provided a mentor for new head teachers and the head teachers reported their mentor was a valuable source for socialization. This study is also included because of the methodologies employed. Observations of head teachers are important to document changed practices. No other mentoring research used observations.

The findings indicate that all four head teachers described their first year as traumatic. The head teachers described their first year in words that suggest that they were not prepared for what they encountered. Crow described the head teachers as "socializing personnel to new values and approaches while simultaneously being socialized to the value of headship- both professionally and organizationally" (p. 56). A major content area identified by all four head teachers involved self-learning. This

included learning how to survive the crises they encountered, how to pace themselves to respond to the enormity of the job, and how to gain self-confidence.

Socialization methods and sources included professional, organizational, and personal mechanisms. Two head teachers spoke positively of the National Professional Qualification for Headship program. Two teachers, who did not complete the program, said it would have added too much pressure. All four head teachers used HEADLAMP as a professional socialization mechanism and used the LEA for learning. Organizational socialization methods and sources included an LEA advisor that all four head teachers valued. The LEA also provided a mentor who was more available and useful to the four head teachers. Crow's findings aligned with Hansford and Ehrich's (2006) findings that a specific benefit of a formal mentoring program is supportive induction processes to the new leadership role.

A primary element of the organizational context that influenced how the head teachers learned their new roles was the previous head teacher. This created problems in socialization because leadership styles differed. Although socialization methods varied among the four head teachers, an important learning requirement became who to trust with what type of problem and for what kind of information.

This study is useful to research on mentoring because it demonstrates that groups and individuals contributed more cognitively to the growth of the head teacher than any other type of socialization method or source. The findings of this study support the work of Browne-Ferrigno and Maynard (2005): mentors are critical to leadership development. Crow recognized the small sample as a limitation to the study and also acknowledged that all head teachers were from primary schools and regarded their LEA as very supportive

in their socialization. A major weakness of this study is that a description of the mentor's interaction with the head teacher was not provided.

When considering the benefits of mentoring, it is important to consider benefits not only for mentors and mentees, but also for the institution in which the mentoring program exists. Two studies that mention the benefit of institutional growth specifically are Thorndyke et al. (2008) evaluative research and Stead's (2005) case study. The issues raised in these studies, such as the need for mentor training and the importance of developing a supportive mentor--mentee relationship, are echoed in mentoring research in fields outside of education (Hale, 2000). Research on face-to-face mentoring from other fields provides important knowledge that can be applied to future research on mentoring for new principals.

Thorndyke et al. (2008) found that mentoring research in the medical field focused on the satisfaction of participants and not on tangible outcomes. In response, Thorndyke et al. (2008) offered a different mentoring paradigm, where the objective of the mentoring relationship is for a senior faculty member to provide expert guidance to junior faculty on an individual project relevant to her/his professional responsibilities. The mentoring program was part of the Penn State College of Medicine Junior Faculty Development Program. The mentoring program was paralleled by a year-long curriculum in career development, research, clinical practice, and education.

Mentor selection was handled by the mentee, together with a leadership team who helped finalize the selection. The researchers explained that mentees "determine aspects of their projects for which they need guidance and identify senior faculty who have corresponding skills/expertise" (p. 158). Mentees were encouraged to seek mentors

outside their program of study. Employing self selection methods created a harmonious experience for mentors and mentees.

The duration of the program was nine months. Mentors worked voluntarily with their mentee to guide and assist the mentee on his or her project. Mentors were recognized at the graduation ceremony by induction in to the Mentoring Academy of the College of Medicine.

Thorndyke et al. (2008) used the evaluation framework of Kirkpatrick and Kirkpatrick (2005) and adapted by Moore (2003) to evaluate the program. Junior faculty self-assessed their professional development at the middle and end of the program via questionnaire. Thorndyke et al. (2008) also intended to track career paths of the junior faculty and status of the mentoring relationship with surveys distributed at regular intervals up to five years after completion of the program. This is the only research reviewed that performed a longitudinal study of a mentoring relationship. Preliminarily data, data collected within the first four years included data from 97 graduates, and 68 faculty mentors.

Important findings included that 88.7% indicated *agree or strongly agree* when asked, "I was comfortable with the choice of mentor" (p. 160). Longitudinal data indicated a continued appreciation of the benefit of the mentoring program and, 18 months after program completion, 41.7% of first year participants still met with their mentor.

The projects of the junior faculty included development of new courses or curricula or grant proposals. More than 90% of the mentees believed that their project would have an impact on their career. Thorndyke et al. (2008) found that the functional

mentoring model met the needs of the junior and senior faculty, and also met the needs of the institution. The mentoring program encouraged recruitment of new faculty. Projects completed by the mentees benefitted the university because the projects included curriculum development and grant proposals. Mentees became better grant writers or increased their laboratory administration skills. Thorndyke et al. (2008) concluded that the mentoring program contributed to the "vitality" of the institution (p. 163) because the mentoring program supported the institution's mission and goals.

Stead's (2005) comprehensive case study investigated a leadership mentoring program designed for Directors of Finance (DoF's) in the UK National Health Service. Stead outlined the changing role of DoF's to one with a greater leadership component and the need for alternative forms of professional development and support to enhance the typical financial and technical expertise of DoF's.

Stead (2005) outlined the details of the mentor program, which included the development of a mentoring scheme and of a program for mentors and mentees to support the scheme. The individual mentoring relationship was suggested to last a minimum of six and a maximum of 12 months. The program was owned, run, and managed by the Healthcare Financial Management Association, with the National Health Service University providing support the first year. The development program for mentors and mentees included mentoring, workshops, and Action Centered Learning (ACL). The ACL sessions were built on Revans' (1983) Action Learning principles, which utilized an understanding of peer questions and how to handle mentoring issues.

Stead's (2005) case study sought to provide lessons to inform program development and to provide insight into mentoring senior leaders. Although missing a

57

detailed description of data collection methods is a critique of this study, the researcher Stead provided a detailed description of the mentoring program and the involvement of participants and administrators. Stead broadly categorized outcomes of the design, content, and process of the program. The findings identified eight tensions connected to mentoring senior leaders. Tensions included level of issues, exposure and vulnerability, reliance, and control. Tensions connected to the nature of the relationship included emotional intensity, power and influence, trust, and commitment.

Stead (2005) concluded that the development of the mentoring program impacted the organization because of the financial and resource commitment that was required to run such a program. The mentoring program supported the National Health Service, because the Directors of Finance learned skills indicated as necessary by the National Health Service. This study shows that, with careful planning, mentoring programs can aid both the development of leaders and also institutions. .

Grove (2007) interviewed 30 chief executive officers and human resource executives. When asked, "What are the primary leadership development and succession planning practices in your organization?" (p. 242), the managers reported that their organizations instituted formal mentoring programs. The participants also reported that exposing potential leaders to a mentoring network, rather than to one specific mentor, was a widely endorsed practice. Grove reported unclear sampling practices, stating only that the participants were selected because of their "outstanding commitment to executive development and demonstrated effectiveness in executive succession decision" (p. 241), thus findings can be interpreted only with moderate confidence.

Clearly, how and why face-to-face mentoring is structured in formal mentoring programs varies; however, the benefits are considerable. Face-to-face formal mentoring programs are utilized in a variety of industries to promote leadership development and institutional growth.

Limitations of Face-to-Face Mentoring Programs

Developing a mentor--mentee relationship requires time. Most formal mentoring programs for new principals pair mentors and mentees for one year (Villani, 2006). The duration of most programs aligns with the novice principals' first year, but other researchers maintain that it takes longer to build quality relationships that can benefit both the mentee and mentor (Kram, 1985; Salmon, 2004). Daresh (2004) warned that administrators' time constraints can have negative effects on mentor programs. Daresh's (2007) findings indicated that a mentorship would be better defined as an induction process lasting two or three years instead of the typical one-year process. There is no data supporting an optimal formal mentoring program length. Often, pairs that have exited a program will continue informal mentoring, but few studies track these relationships (Thorndyke et al., 2008).

Another critical issue is finding time in the work day for mentoring to take place. Balancing the requirements of the participant's job with finding time to meet is a concern of participants in formal programs (Alsbury & Hackmann, 2006; Ehrich et al., 2004; Hansford & Ehrich, 2006).

Mentee--mentor training is another strand of mentoring research. Literature reveals that inadequate mentor training affected the quality and productiveness of mentoring relationships (Alsbury & Hackmann, 2006; Crow, 2007; Daresh, 2007;

Hansford & Ehrich, 2006; Stead, 2005). Specific to new principal mentoring programs, Daresh (2007) found that principals selected as mentors were given training in the duties of being a mentor and how to work effectively with a mentee in a one-on-one situation; however, more training in "career stage or professional development stage theory" was warranted (p. 25). Daresh concluded that mentors need to be willing to guide new principals and not rely on giving immediate answers. Alsbury and Hackmann's (2006) findings revealed high satisfaction with mentor training among elementary and secondary principals, but superintendents suggested providing the training during the summer months.

The extent to which agendas should control the mentoring relationship was a critical factor of mentor--mentee training components (Stead 2005). This concept was echoed by Daresh (2007) when interviewing mentor principals. The principals expressed frustration with the desire of mentee principals to want to focus on managerial items and not instructional leadership. Stead (2005) concluded there was a need for a structure to be in place to guide the mentoring activities.

Although no studies evaluated the effectiveness of training empirically, within each of the studies reviewed thus far, participants or researchers raised concern over the need for mentee or mentor training.

The match between the mentor and mentee is critical to the success of the mentoring relationship, and the program. As discussed earlier, Hansford and Ehrich's (2006) review of formal mentoring programs for new principals highlighted problems that exist within mentee and mentor matching. Negative outcomes were reported for both mentors and mentees. Hale (2000) presented theoretical models for matching mentors and

mentees based on research from 47 semi-structured interviews and 29 questionnaires in two different mentoring programs. Hale's findings revealed that it is important to understand the fundamental values of both parties. Large differences in personal values can lead to ineffective relationships. Similarities in interests, discipline, function, and profession of both parties can lead to effective relationships. In addition, similarities in social style can help build a quicker rapport between mentor and mentee. Hale also reported that understanding learning styles and making matches based on learning style rather than profile is crucial. Hale's work revealed that mentees, not mentors, are likely to have preferences regarding the gender of their mentee.

Although Hale (2000) contributed key findings to literature on matching within formal mentoring programs, his findings come from research on two businesses (Scottish Hydro Electric Company and Skipton Building Society), and thus, are limited. Studies do not come to universal agreement on what makes the best mentoring match. Hale suggested giving consideration to the goals of the mentoring program when matches are made. Because research on mentoring matches is inconsistent, it is more important to look at how the mentoring affects the host organization rather than debate criteria that should or should not go into matching. What makes for a good a good mentee--mentor match has long been debated by mentoring researchers. Different researchers and scholars propose different methods and criteria for matching, including consideration of mentor/mentee age, race, perceived similarity between mentor and mentee, and skill level. For example, Ensher and Murphy (1997) reported summer interns and their volunteer mentors were sorted into 26 same-race and 50 different-race pairings. Satisfaction and contact with mentors were higher when mentees perceived themselves to

be similar to their mentors. Mentees of the same race as mentors reported more career support. There is no consistency on how pairings should be made, but the challenge of matching mentees and mentors is a common topic in face-to-face mentoring research.

Overall, mentoring research that raised questions and concerns related to issues of time, mentee--mentor training, or mentee--mentor matching lacked rigor because most data were self-reported by program participants. Although the studies raised concerns about these components, most studies focused on capturing participant satisfaction of the formal mentoring program. Likert scales were often used to capture these data. Most studies contained single-point data and did not triangulate data. When empirical data supporting a particular program component were reported, a full description of how that component worked within the overall program was missing. No two mentoring programs covered in this literature review thus far are alike. Although common obstacles and themes are noted, making generalizations about specific components of mentoring programs remains difficult.

Benefits of E-Mentoring for Mentors and Mentees

Bierema and Merriam (2002) discussed how the information age has changed the dynamics of mentoring and proposed that e-mentoring "holds promise for redefining mentoring relationships and changing the conditions under which mentoring is sought and offered" (p. 211). Recognizing that there has long been disagreement on the purpose and function of face-to-face mentoring, Bierema and Merriam defined e-mentoring as "a computer mediated, mutually beneficial relationship between a mentor and protégé which provides learning, advising, encouraging, promoting, and modeling that is often boundaryless, egalitarian, and qualitatively different than traditional face-to-face

mentoring" (p. 214). In their exploration of how e-mentoring is used, Bierema and Merriam reviewed K--12 programs, teacher support and development programs, university-sponsored programs, corporate-sponsored programs, and programs for girls and women. Citing Goldman (1997), Bierema and Merriam discussed how e-mentoring is different from face-to-face mentoring. E-mentoring is not necessarily based on a "wise elder" dispensing advice to a mentee; instead, it is a mutually beneficial relationship that can be adapted to a variety of settings (p. 219). Bierema and Merriam maintained that, in the virtual environment, information is exchanged between a mentor and mentee, but there can be a lack of support and counseling. The mentor shares information in order to help the mentee and both assume that it is beneficial to participate in the relationship.

Bierema and Merriam (2002) concluded that e-mentoring possibilities are as limitless as the Internet. Indeed, how and where mentors and mentees connect using computer technology varies greatly. In order to best understand how e-mentoring technology can aid principal development, it is important to review studies that explore the benefits of e-mentoring. An important benefit documented by researchers is the ease and convenience e-mentoring provides. Scheduling time to meet without the added strain of travel is mentioned frequently in the literature (Bierema & Merriam, 2002; Colky & Young, 2006; Goldman, 1997; Single et al., 2005).

Single et al. (2005) addressed the concept of time in their evaluation of MentorNet, the E-mentoring Network for Diversity in Engineering and Science, which addresses the underrepresentation of women in science, technology, engineer, and mathematics. The program pairs undergraduate and graduate students with professionals and supports them through e-mentoring relationships. Many research studies have been

conducted on MentorNet because it is one of the first wide-scale e-mentoring programs (Single & Single, 2005a). The results of three years of end-of-year program evaluations revealed that participants were extremely happy with their one-on-one e-mentoring experience and more than 90% would recommend MentorNet to a friend.

The one-on-one e-mentoring component of MentorNet is described by Single et al. (2005) as a year-long e-mentoring engagement between a student and a professional where communication is mediated through e-mail. MentorNet provides voluntary e-training to both mentors and mentees via web-based case studies. In addition, mentees and mentors receive "coaching" e-mails designed to offer topics of discussion to facilitate the mentoring process and relationship (p. 298).

Data analysis of the end-of-year surveys completed by participants in 2000--2001 matched 2,000 students with 1,913 professionals (some professionals mentored two students). The response rate for participants was 52% for mentees and 60% for e-mentors. The survey was designed to obtain the participants' assessments of their satisfaction and value associated with their e-mentoring experience as well as their time commitment. Most questions used a 5-point Likert scale. To assess the time commitment, participants were asked to report the number of minutes "spent writing and reading MentorNet e-mail in a typical week" and to report the number of e-mails sent and received per month (p. 301). Both mentees and e-mentors exchanged approximately four e-mails per month; two e-mails were sent and two received each month. Participants reported spending just under 20 minutes writing and reading MentorNet e-mail in a typical week. On average, mentees spent 18.8 minutes and e-mentors spent 17.5 minutes per typical week writing and reading e-mail. Due to the asynchronous nature of e-mail,

participants were able to engage in the e-mentoring relationship at their convenience. Mentees valued their participation in MentorNet because it helped increase their self-confidence in academic work and their interest in pursuing careers in science, technology, engineering, or mathematics.

The e-mentoring technologies utilized in MentorNet, including the e-mail format for communication, Web-cased training, electronic newsletters, and electronic discussion groups, increased the participants' overall satisfaction with the e-mentoring program. The researchers concluded that the time investment that these technologies allowed, "was modest, convenient, and yet effective in terms of influencing female STEM students' knowledge and confidence about what their future careers may hold" (p. 306).

As one of the most widely studied formal e-mentoring programs, MentorNet provides information useful to designers of new principal mentoring programs. Many studies have investigated the use of technology for community building (Single & Muller, 2001), interactive online training for mentors and mentees (Kasprinsin et al., 2003), and Web-delivered coaching curricula (Single, Muller, & Carlsen, 2000). Each of these studies referenced the ease and convenience e-mentoring provided for participants in a structured e-mentoring program.

Shrestha et al. (2009) investigated the benefits of e-mentoring for mentors and found that flexibility in mentoring hours emerged as a positive factor. These mentors participated in E-Success, a structured mentoring program at a United Kingdom university designed to support first-year undergraduate students. E-Success utilized Blackboard as the e-mentoring technology platform and combined e-mentoring with face-to-face mentoring activities. Second- and third-year undergraduates acted as a guide "for

the first-year student (mentee) providing support in relation to both academic and life skills, and referring the mentee to other support services when appropriate" (p. 117). This program allowed mentors and mentees to determine their own blend of e-mentoring and face-to-face mentoring activities. Program administrators provided Blackboard group areas for mentors and mentees to exchange information, as well as a "common room." Mentors were given access to "mentor's café" designed for mentors to support one another as well as gain support from program leaders and the research team (p. 118). Mentors were also given the option to use Blackboard's discussion boards, e-mail, and synchronous chat functions. The face-to-face mentoring support included access to The Academic Skills Center, the faculty language laboratories, and a mentoring/seminar room. With all these supports available, Shrestha et al. found that e-mail was the only e-mentoring technology used by participants.

Data collection included one-on-one semi-structured interviews with mentors and focus group discussions, as well as informal meeting with mentors and staff throughout the two years of study (July 2002 through June 2004). The interviews and group discussions were recorded, transcribed, and analyzed using the qualitative software Nvivo. Glaser and Strauss' (1967) grounded theory approach was used to develop themes from the data.

Mentors gained organization and communication skills, increased opportunities for socializing and networking, experience with reflecting on one's own performance, and personal satisfaction. Mentors reported that the flexibility e-mentoring provided was a major draw to joining the program. One participant commented, "I never found fitting it [e-mentoring] around my studies a problem- you always have a moment. The real

problem came when I tried to get everyone to meet up" (p. 121). Shrestha et al. (2009) also documented that the electronic medium allowed the mentors to contact students without stigmatizing them, to reach out to more students, and to better manage the expectations of mentees.

Although the study by Shrestha et al. (2009) is limited by the nature of the self-reported data, the findings are useful to program developers interested in combining e-mentoring and face-to-face mentoring. The researchers concluded by recognizing and raising questions about the importance of training mentors to be better equipped to facilitate e-mentoring relationships.

The concept of providing training for mentors is further explored in the work of Kasprinsin et al. (2003, 2008). Both studies report on MentorNet, and feature data important to e-mentoring training.

Kasprinsin et al. (2003) examined the interactive, web-based case studies used as training modules to investigate their impact on involvement, satisfaction, and value. The researchers designed a control group experiment and conducted comparative analyses to test three hypothesis:

1. Engaging in a required training tutorial will increase the number of students who stay involved with their e-mentors in a formalized e-mentoring program (Involvement).

2. Engaging in a required training tutorial will increase the overall satisfaction of students who participate in a formalized e-mentoring program (Satisfaction).

3.   Engaging in a required training tutorial will increase the perceived value

of participation for the students who stay involved with their e-mentors

(Value). (p. 71)

Four-hundred students were accepted into the MentorNet program during the

2001--2002 school year. Half were assigned randomly to the experimental group, where

tutorial completion was required, and the other half to the control group, where tutorial

completion was voluntary. Data were collected through a web-based questionnaire

distributed at the end of the academic year. Two questions addressed involvement, five

addressed satisfaction, and three addressed value. Except for the involvement questions,

the questions used a five-point Likert scale that ranged from 1= "Not at all" to 5= "Very"

(p. 73). The return rate of the questionnaire was 41.7% for the experimental group and

30% for the control group.

The researchers ran a correlation matrix and found that the dependent variables,

involvement, satisfaction, and value, were related significantly to one another. Two-tailed

t-tests were run to determine whether the experimental and control groups performed in a

significantly different way for each of the variables. The data supported hypothesis one.

The experimental group reported a significantly greater number of e-mails between

mentor and mentee. The data did not support hypothesis two. The students in both the

experimental and control groups reported high satisfaction with the e-mentoring program.

The data also did not support hypothesis three because both groups rated the value of

participation similarly. Kasprinsin et al. (2003) concluded that e-training supported the

early development of an e-mentoring relationship because those who completed training

exchanged more e-mails with their mentors.

In 2008, Kasprinsin et al. (2008) continued their inquiry with this data set. They investigated how mandating mentee training influences the experiences of the mentors. The study was driven by the problem that frequently mentors are busy professionals who volunteer their time, and that mandating mentee training, rather than mentor training, will maximize the time and experiences of mentors. With the purpose of determining the influence of mentee training on the mentors, the researchers looked at the mentor outcomes reported in the year-end survey.

Data analysis included testing the hypotheses against one-sided alternative hypotheses. T-tests were run to assess the rating for mentors of mentees who completed training. Findings indicated that mentors paired with trained mentees spent 14.41 minutes per week exchanging e-mail information, whereas the control group interacted only 11.45 minutes per week, supporting the hypothesis that overall involvement would increase for the mentors matched with trained mentees. The findings also indicated that mentors paired with trained mentees reported higher satisfaction with their e-mentoring experience and with their overall MentorNet experience. A p value greater than .05 was used to determine significance. Mentors who worked with the experimental group reported that they 'thought highly' of their mentees at a higher rating ($p = 5.85$) than the mentors matched with mentees in the control group ($p = 5.40$). Other questions identified as measures of perceived value, such as "In my role as an e-mentor, I… serve as a sounding board, am reminded of myself as a student, identify with my protégé, and try to serve as a role model," were not significant at the .05 level (p. 169), even though mentors in the experimental group had higher ratings than those in the control group.

The studies by Kasprinsin et al. (2003, 2008) on the MentorNet data are significant to e-mentoring research because they use quantitative data. Their results indicate that training is an important part of an e-mentoring program and has positive benefits for both mentees and mentors. The researchers conclude that, for organizations where mentors are voluntary, the ideal model would include mandated training for mentees and voluntary training for mentors.

Research conducted by Headlam-Wells et al. (2005) on an e-mentoring program designed to support business women found training to be crucial to program success. The program developers provided comprehensive training for mentees and mentors to address technology skills and the ability to communicate online. Initial training included information on the philosophy of the project and guidance on how to mentor. Participants were also guided through simulations of the web interface used in the program. Evaluations revealed that 88% of the participants felt the training prepared them "completely" or "quite well" for the mentoring experience (p. 454).

Of the research that indicated training was an important element to e-mentoring success, online delivery of such training is a benefit over face-to-face training due to cost (Kasprinsin et al., 2003; 2008). Interestingly, Kasprinsin et al. (2008) did not find significant a difference between these groups on the ratings of their match; however, the methods used to match mentors and mentees in e-mentoring programs is an area of mentoring research where differences exist between face-to-face mentoring programs and e-mentoring programs. As discussed earlier, Hansford and Ehrich (2006) and Hale (2000) showed that an effective mentor--mentee match is a critical factor in developing meaningful mentoring experiences. What makes a "good" match is inconclusive.

De Janasz et al. (2008) investigated matching criteria in an e-mentoring program for business students. They found that e-mentoring programs have an advantage over face-to-face mentoring programs with regard to matching because relationships developed online are typically devoid of visual cues. Thus, relationships developed online do not suffer biases based on stereotypes (Hamilton & Scandura, 2003; Sproull & Kiesler; 1986). De Janasz et al. (2008) used this knowledgebase to formulate the following six hypothesis:

H1: Perceived similarity (i.e., attitudes and values) will be positively related to mentee's assessment of e-mentoring effectiveness.

H2: Perceived similarity will have a stronger relationship with mentee's assessment of e-mentoring effectiveness than will actual demographic similarity (race and gender).

H3: Mentees who interact more with their e-mentors will perceive their mentoring relationship as more effective and satisfying than those who interact less.

H4: Mentees with more effective e-mentoring relationships will report a greater increase in the size of their professional network than will mentees with less effective mentoring relationships.

H5: Mentees with more effective e-mentoring relationships will report a greater increase in job opportunities than will mentees with less effective e-mentoring relationships

H6: Mentees with more effective e-mentoring relationships will report a greater increase in their academic performances than will mentees with less effective e-mentoring relationships. (p. 397)

In this study, graduate and undergraduate business students from two mid-sized universities participated in a required online mentoring program attached to one of their

business courses. The students were offered course credit or extra credit to respond to an online survey based on their e-mentoring experience at the conclusion of the course. There was an 82.1% response rate when 183 out of 223 students responded to the survey. Regression analysis was used to test the hypotheses. E-mentoring was the dependent variable, using mentoring functions such as career, psychosocial, and role modeling as a measure of effectiveness as well as the mentees' assessment of their satisfaction with the mentoring relationship. A five-point Likert scale was used. The e-mentoring measures of increased network, job opportunities, and academic support were used a predictors of outcome variables. Two sets of variables were used as potential predictors of effective e-mentoring. Perceived similarity was measured using a method developed in 2002 and actual demographic similarity was assessed by creating two variables to compare gender and ethnicity of the mentee and mentor. The control variables were previous relationship with mentor, organizational level of mentor, and protégé employment status.

The data supported hypothesis one. Perceived similarity was positively related to all four e-mentoring variables. E-mentoring was considered effective relative to the degree of the mentoring support (career, psychological, and role modeling) and by the mentees' assessment of their satisfaction with the mentoring relationship. These findings support the idea that e-mentoring may be especially good for minority or women mentees because research has indicated that those in cross-gender or cross ethnic pairs in face-to-face programs encounter challenges due to biases and stereotypes (Ragins & Cotton, 1999). de Janasz et al. (2008) found that perceived similarity is a strong predictor of e-mentoring effectiveness while actual similarity is not. This implies that the nature of online mentoring, where one is denied observable differences, but has the opportunity to

build similarities around values, is a benefit of e-mentoring programs. It is important to note that of the sample in this study, one third of the mentor--mentee pairs were cross ethnic pairs and 42% were cross gender pairs (p. 409).

The results of de Janasz et al. (2008) support the work of Kasprinsin et al. (2008) and demonstrate that the more interaction mentees have with their mentors, the more psychosocial and career support they receive. The last three hypotheses of de Janasz et al. also received support. Career development and satisfaction with the mentor relationship were positively related to students' perception of an increase in their professional network, whereas psychosocial support and role modeling were not. Career development was positively related to increased job opportunities; but the other variables were not. With hypothesis six, the researchers expected the mentees to report enhanced academic performance. Role modeling and satisfaction with mentor relationship were significant predictors of improved academic performance, but career development and psychosocial support were not. In sum, this comprehensive quantitative study provided insight into some of the benefits of e-mentoring, and notably, it addressed how matching mentees and mentors in a virtual world can provide benefits different from face-to-face mentoring. The implication is that technology allows the mentoring relationships to develop based on values rather than by stereotypes or biases that can sometimes accompany face-to-face partnerships.

Many e-mentoring studies have investigated the egalitarian nature of e-mentoring technology. For example, O'Neill et al. (1996) discussed the flexibility of e-mentoring in providing more opportunities for interaction than face-to-face mentoring. Several e-mentoring programs have been established specifically to aid traditionally marginalized

groups in society. E-mentoring programs, such as MightyMedia, Co-Vis Telementoring, CONNECTIONS E-MENTOR Program, The Hewlett Packard E-mail Mentor Program, MentorNet, Systers, and Girl Geeks Mentor Match, target minorities, low income students, and young girls and women (Bierema & Merriam, 2002). With the low cost of e-mail, organizations are able to connect people from a wide geographic area. This allows mentoring programs within companies to include more people. Research studies have concluded that e-mentoring allows for mentoring relationships that cross social, economic, cultural, organizational, and physical boundaries (Bennett et al., 1998; Harasim et al., 1998; Headlam-Wells, 2004; Megginson, 2000; Palloff & Pratt, 1999; Ravert & Layte, 1997).

Challenges of E-Mentoring for Mentors and Mentees

The emergence of new technology and its applicability for e-mentoring programs does not mean e-mentoring should be seen as a panacea for all mentoring programs. Unique challenges exist for e-mentoring programs. Participants engaged in e-mentoring need computer literacy skills (Bierema & Merriam, 2002; Shrestha et al., 2009). In a study of a university program that combined face-to-face mentoring and e-mentoring, staff assumed that younger participants would be more comfortable communicating via technology, but the data did not support this assumption. Instead, the researchers found that a variety of participants lacked computer literacy skills and they concluded that the assumption that e-mentoring allows for greater accessibility is questionable (Shrestha et al., 2009). The researchers suggested that lack of computer literacy skills can be addressed by incorporating strategic training of the electronic media for participants. This option does not address other findings about the comfort level different participants

experienced when communicating via technology or face-to-face. The researchers noted that, "a mentor with good face-to-face skills may not be as effective when communicating electronically" just as "a mentor can feel self-conscious in face-to-face interaction yet may be highly skilled at establishing and maintaining relationships electronically, and communicating clearly in this medium" (Shrestha et al., 2009, p. 122).

Maintaining online engagement is another area of concern explored by e-mentoring researchers. As discussed earlier, frequency of contact between mentor and mentee is correlated positively with increased satisfaction (de Janasz et al. 2008; Kasprinsin et al., 2003, 2008; Rickard & Rickard, 2009). Maintaining a high level of engagement in a virtual environment is an area in need of study. As Colky and Young (2006) reported, cancelling an appointment in an online environment can be easier than doing so face-to-face. Shrestha et al. (2009) also reported that electronic communication can be "ambiguous" (p. 122). Participants in a university mentoring program that blended e-mentoring with face-to-face mentoring reported that the clarity of electronic communication depended on the skills of the e-mentor. Some participants felt the impersonality of electronic interaction was mended through face-to-face meetings. Thus, participant involvement varies depending on the communication mode of the e-mentoring program.

A variety of communication technology aspects can be combined to support mentoring and e-mentoring relationships. On-line services, such as Blackboard, allow synchronous communication when participants join a live chat, or asynchronous communications when participants post messages in threads or to a discussion board. Facebook offers similar possibilities (Muller, 2009).

Lenear's (2007) quantitative study used a static-group design and Mann-Whitney U-tests to compare protégé feelings of closeness, perceptions of interaction, structure, support, and satisfaction in synchronous and asynchronous mentoring environments. Mentors were seven adults trained by the ABC mentoring program and participants were 46 girls between the ages of 10 and 14 years old. Participants in the synchronous mentoring environment were able to post messages to WebBoardTM discussion as well as engage in real-time chat sessions via the WebBoardTM chat application. Participants in the asynchronous environment were able to communicate with their mentor by posting messages on separate password-protected WebBoardTM discussion boards. Mentoring groups met online for 30-45 minutes a week for a total of eight weeks.

Lenear used Moore's (1993) Theory of Transactional Distance as the theoretical framework for investigating feelings of closeness. Moore defined structure, the extent to which a program is responsive to the needs of individual learners, and dialogue, the communication between student and teacher, as key to creating minimum transactional distance. Transactional distance is the geographic distance of instructor and student in a distance education environment (Moore, 1993).

Lenear's findings revealed no significant differences between any of the constructs. This is consistent with Styles and Morrow (1992), who compared satisfied and dissatisfied mentor--protégé pairs and found no significant difference in the activities in which they were engaged.

Lenear characterized interactions between mentors and protégés as mentor--protégé interaction, protégé--protégé interaction, mentor-prompted interaction, and protégé-prompted interaction. Two models of mentoring activity emerged from the data.

The mentor initiation model (MIM) is characterized as a place where the mentor initiates the interaction and leads the discussion. This environment is dominated by mentor--protégé interactions and mentor-prompted interactions. The protégé collaboration model (PCM) is characterized by protégés assisting one another and taking on the role of the mentor when needed. In this model, there were more protégé--protégé interactions and protégé-prompted interactions.

Pearson product-moment correlation coefficients were computed to determine the interrelationships between interaction, structure, support, satisfaction, and closeness constructs in each e-mentoring environment and each e-mentoring interaction model. The closeness correlations were strong for the synchronous mentoring groups. There was no relationship between closeness and the other constructs in the asynchronous mentoring groups. The closeness correlations were moderately strong for the MIM groups but there was no relationship between closeness for the PCM groups. Lenear stated that this data suggests mentors in synchronous and MIM e-mentoring environments are perceived by their protégés as active, responsive, and involved, which results in positive perceptions of interaction, structure, and support, and increased levels of satisfaction and feelings of closeness.

This study is important to e-mentoring research because Lenear used Moore's (1993) conceptualization of transactional distance to explain that learner autonomy, a person's ability to set learning goals and strategies independent of instruction, becomes a function of closeness in a mediated environment. Lenear explained that the protégés in this study were Internet and technology competent. Their level of Internet autonomy "could have reduced their reliance on their mentors to post messages on the discussion

board and reduced any perceptions of transactional distance (closeness)" Lenear concluded that, where there is a high level of Internet savviness, whether there is a synchronous or asynchronous e-mentoring environment, feelings of closeness would not be effected. Recruiting or training participants with computer literacy skills is an important consideration for e-mentoring programs because it is closely tied to maintaining online engagement.

Rickard and Rickard (2009) investigated patterns in the characteristics of effective and ineffective e-mentoring partnerships using DeLone and McLean's (1992) model of Information Systems Success. The purpose of the study was to explore how effectively technology supports mentoring and how the benefits of e-mentoring are being realized. The researchers evaluated the effectiveness of a small business e-mentoring program in terms of the nature and quality of the mentoring partnership; the nature and quality of the e-mentoring program and structure and content; program use; user satisfaction and impact. The e-mentoring partnerships were assessed as either effective or ineffective partnerships through a quantitative survey not described in this study. Data were collected from 20 mentees and five mentors who participated in the e-mentoring program between 2001 and 2006. Rickard and Rickard conducted in-depth semi-structured interviews and analyzed e-mail messages between mentees and mentors. A survey questionnaire was also sent to participants. The sample included mostly professional engineers and scientists. DeLone and McLean (1992) model dimensions were used as a way to categorize data.

The findings support *the nature and quality of the relationship between mentor and mentee* was a critical dimension of the effectiveness of the partnership. Under this

dimension, the researchers looked for patterns in the quality of the mentee's relationship with mentor, the diversity of supports and advice, and use of the mentor as a sounding board. Data revealed that the effective partnerships involved the use of the mentor by the mentee as a sounding board. These mentees described their mentors as someone they could "bounce ideas off" or someone who could "lift their focus" or help them "to see things differently" (p. 751). Mentees in ineffective relationship described their mentors as "not listening" or "only interested in one-way information flow" (p. 751).

Diversity of support and advice sought or provided by the mentee was another area where specific patterns occurred between effective and ineffective relationships. Mentees in effective relationships described their mentors as someone who "should not be offering solutions, but should be helping the mentee to explore the options and see other solutions themselves" (p. 750). Another mentee described effective mentoring as when "the mentor is able to encourage the mentee to tackle other angles of problems and look at other options" (p. 750). Mentees in ineffective relationships described their mentor as someone who could help answer specific questions. Rickard and Rickard suggested that the lack of advice sought in wide-ranging areas could be either an antecedent to ineffectiveness or could be the outcome of an ineffective partnership.

Under the *nature of the quality of e-mentoring program structure and content* dimension, the researchers investigated patterns between effective and ineffective relationships in quality of matching, quality of program structure, including choice of instructional technology, and creation of individualized learning pathways. The data indicated that mentees involved in both effective and ineffective relationships found the structure useful in similar ways. Mentees commented that the structure was useful

79

because it helped manage expectations, maintained momentum, provoked discussion, and defined where to begin and end. This information is useful to program designers. Program facilitation messages made mentees feel that they were not completing the program as expected and carried a negative connotation.

Evidence from Rickard and Rickard supported the claim that mentoring relationships via e-mail benefitted from the use of structure or support similar to Ladyshewsky's (2007) finding in face-to-face mentoring. The program structure also contained elements of choice for participants to allow for the construction of individualized learning pathways. This was accomplished by allowing for the adaptation of content, goal-setting, and integration of the program with mentees' business activities.

Mentees in effective relationships reported that they were selective with the program structure. One mentee reported "the structure is excellent but like an ideal world it is hard to stick with it especially when there is so little time. But, we can pick from it, essential elements and use them as catalysts for improvement" (p. 755). Other comments from mentees of effective relationships echoed a partiality towards freedom of choice and careful selection of activities. The adaptability of the program format and how the pairs adapted the structures to fit their own needs was critical to mentees. Mentees in ineffective relationships reported that they, or their mentor, were not adaptable.

Goal-setting was also an area where specific patterns emerged. Mentees in effective relationships reported that they set goals and that the process of setting goals was important, even if they did not follow through or set good goals. This contrasted to the mentees of ineffective relationships, who overall did not set goals.

Integration was also an area where distinct patterns emerged between the two groups of mentees. Mentees in effective relationships reported integrating their mentor's suggestions into their day-to-day practices and asking for help on specific issues related to their work. Mentees in ineffective relationships did not integrate learning gained from mentoring into their daily practices.

The dimension of *use* was explored through patterns that emerged in the areas of nature, quality, and frequency of interaction and influence of e-mail delivery. Mentees in effective relationships reported that regular contact with their mentor was important. Many also qualified their statements by noting that quality, not just frequent contact, is crucial. Mentees in ineffective relationships reported irregular contact schedules and limited contact with their mentors.

Mentees in both effective and ineffective relationships reported similar advantages and disadvantages to the e-mail format, suggesting that e-mail format can impact effective relationships negatively. Convenience and flexibility of e-mail communication were reported frequently as advantages of the e-mail format by both effective and ineffective groups. The format allowed participants to reflect, review, and consider responses. The writing process allowed the writer to clarify issues. Disadvantages included the suitability of e-mail for the issues raised and the lack of cues associated with face-to-face communication.

Although the findings of Rickard and Rickard (2009) supported e-mail as a useful component in a mentoring program, the study did not describe effectively the business mentoring model from which the data were collected. The researchers acknowledged that their findings allow for initial inferences to be drawn about determinants of effective

structured e-mentoring, but cautioned that "direct causality cannot be drawn" (p. 766).
Although the conclusions may not be strong, this study provided useful dimensions of e-mentoring to consider.

Challenges of E-Mentoring for Program Designers

The challenges discussed in e-mentoring research presented thus far relate mainly to program participants. However, research has illustrated specific challenges for e-mentoring developers and administrators. As is true for face-to-face mentoring, mentor--mentee training is important to e-mentoring success (Kasprinsin et al., 2003, 2008). Both Kasprinsin et al. (2003) and Kasprinsin et al. (2008) support training as an important element of a formalized e-mentoring program. However, how the training is constructed and conducted is an issue left to program developers and administrators. Program developers and administrators of e-mentoring programs for new principals are wise to learn from these two studies because most principal programs combine face-to-face mentoring with e-mentoring, such as MentorNet, the program under study by Kasprinsin et al. (2003, 2008). Asgari and O'Neill's (2005) findings suggested that mentee expectations of the e-mentoring experience can be informed by up-front training. They concluded that helping the mentees understand the benefits of the mentoring experience increases the number of mentees describing the mentorship as successful. This study contributed important findings because managing mentee expectations of a mentoring program becomes the work of mentor program developers and administrators.

Shrestha et al. (2009) raised several important points relating to training mentors and mentees. In a university based e-mentoring program, mentors had different reactions to the electronic mode of communication depending on their technology skill level.

Whereas some mentors were comfortable using e-mail and Blackboard for mentoring

activities, others were not. Some mentors reported being uncomfortable with the

electronic mode of communication even though they possessed high technology skills.

These findings raised the question for program developers and administrators: What

skills make for a good e-mentor? Findings indicated that mentors need to possess the

skills required to make a good face-to-face mentor and good written communication

skills, as well, as a comfort level with electronic communication. Shrestha et al.

concluded that a mentor training program designed to increase these skills should be part

of an e-mentoring program (p. 123).

Another important element for developers and administrators is identifying the

goals and designing the structure of the e-mentoring program (Boice, 1990, 1993;

Freedman, 1992). Choosing the right modes of electronic communication becomes

important work for program developers and administrators. Research conducted by

Rickard and Rickard (2009) indicates that, when e-mentoring takes places via e-mail,

participants benefit from support developed and maintained through the program

structure or by program developers and administrators (p. 757).

Although most research advocated for careful consideration of the program goals

when choosing an electronic medium, only one, the work of Lenear (2007), investigated

differences among technology. Lenear used "social presence" as a way to describe the

sense of community created in an e-mentoring relationship. Social presence is defined as

"the degree to which a person is perceived as 'real' or 'salient' in the mediated

communication" (Gunawardena & Zittle, 1997, in Lenear, 2007, p. 2.). Lenear wrote,

"social presence conjures up the idea of a psychological, emotional, and interpersonal

connectedness within the environment…and should allow participants to be so immersed in the environment that the presence of the medium is not present" (p. 2).

Lenear (2007) cited the work of Lombard and Ditton (1997) who described feelings of closeness by saying real-time communication allowed by technology creates a "we are together" atmosphere (p. 6). This research is important because it supports other research that maintains that frequency of interaction between mentor and mentee is important to participant satisfaction (de Janasz et al., 2008; Kasprisin et al., 2003, 2008; Rickard & Rickard, 2009).

Maintaining technology infrastructure is an important challenge faced by program developers and administrators (Headlam-Wells et al., 2005; O'Neill et al., 2005). Headlam-Wells et al. (2005) reported on two mentoring programs, Empathy and Empathy-Edge, run by the Business School at the University of Hull, UK. The programs were designed to address women's disadvantages in the business world. The Empathy-Edge program combined face-to-face mentoring with e-mentoring. More than 50% of the mentoring took place online, but was complemented by telephone and face-to-face meetings. One hundred and twenty-two women volunteers were matched into pairs and split into six different e-moderating groups. Empathy-Edge provided much support for participants including, "e-activities" and "e-moderation" (p. 449). E-moderators were program administrators whose role was to offer advice and guidance online to both the mentee and mentor. The software used to facilitate the e-mentoring was provided by iCohere and allowed mentees and mentors the ability to log on to a secure system that provided, "news, discussion, online meetings, mentoring guidance, resources and weblinks" (p. 450). Both synchronous and asynchronous communication was available

through the online meetings and discussions. Headlam-Wells et al. developed a pre-mentoring, mid-mentoring, and post-mentoring evaluation scheme that included self-report surveys, system statistics, focus group interviews, and interviews to collect data. Support by program developers and administrators also included technical support through a helpdesk facility, an online user guide, and telephone support. The level of support provided by Empathy-Edge program developers and administrators is a challenge for smaller e-mentoring programs. Both the UK government and the Equal Opportunities Commission funded this program. Headlam-Wells et al. suggested that maintaining the technology infrastructure and support for mentors and mentees is important to program success. They also said that, when using synchronous communication, factors such as speed and cheap Internet access need to be considered. Sixty-seven percent of the participants felt that electronic communication was effective in facilitating supportive mentoring relationships crucial to women's development in the business world. Headlam-Wells et al. cautioned that technical support is important in an e-mentoring program, but that, ultimately, technology is not as important as the quality of mentoring that takes place and what e-mentoring programs can do to create supportive mentoring relationships. O'Neill et al. (2005) concurred with the research conducted by Headlam-Wells et al. (2005) on the challenge of maintaining technology infrastructure and support. O'Neill et al. (2005) highlighted *limiting administrative overhead* as one of the top five challenges of e-mentoring programs. They recognized that e-mentoring programs have a unique set of administrative demands, including providing "appropriate oversight and assistance to mentors and mentees who may be located at a great distance from program administrators" (p. 114).

Infused within the challenges of providing adequate training, program structure and goals, and maintaining technology infrastructure, program developers and administrators of e-mentoring programs should be concerned with matching mentors and mentees. Although no studies specifically investigated best practices of e-mentoring matching, it was cited consistently as a crucial factor in participants' perception of a good mentoring experience (de Janasz et al., 2008; Headlam-Wells et al., 2005; Kasprinsin et al., 2003, 2008; O'Neill et al., 2005; Perren, 2003; Rickard & Rickard, 2009).

The E-Mentoring Debate

More research on formalized e-mentoring programs is needed in order to fully realize the potential of this new mentoring arena. Although some challenges and limitations are similar to those faced by formal face-to-face mentoring programs, e-mentoring programs face a unique set of benefits and limitations. Research on existing e-mentoring programs agrees that e-mentoring is not the panacea to problems inherent in face-to-face mentoring programs. In fact, some researchers say e-mentoring should only be available when face-to-face mentoring is not feasible or appropriate (O'Neill et al., 1996; Rickard & Rickard, 2009).

Two other issues that arise when considering e-mentoring implementation are cost and scalability. The technology that is required to sustain a comprehensive e-mentoring program is not always available to non-profit and educational organizations, which are typically operating on a smaller budget (Single & Muller, 2001). Some programs have instituted e-mentoring structures because it is not as expensive as face-to-face mentoring. Still other research maintained that the technology required to establish effective mentor--mentee matching as well as to facilitate management and evaluation is not readily

available to small organizations (Single & Muller, 2001). However, when organizations have the resources to support e-mentoring technology, e-mentoring is more scalable than traditional face-to-face mentoring (Single & Single, 2005b).

Studies that advocate for the inclusion of e-mentoring technology in already established mentoring programs or for the creation of mentoring programs that rely solely on e-mentoring typically cite the benefits described in this review. These include ease of scheduling time to meet for mentees and mentors and for the development of mentoring relationships where traditionally there has been limited access, such as in the sciences and for women and minorities (Bennett et al., 1998; Harasim et al., 1998; Headlam-Wells, 2004; Megginson, 2000).

A thorough review of e-mentoring research uncovers programs with a variety of designs, objectives, and participants. Persistent within the research are findings that support training for participants and careful mentee and mentor matching (de Janasz et al., 2008; Headlam-Wells et al., 2005; Kasprinsin et al., 2003, 2008; Shrestha et al., 2009; Single et al., 2005). Documenting the benefits and challenges of e-mentoring provides a useful framework of components on which to focus within a study of e-mentoring for new school principals. Whereas most research has been conducted in the healthcare and business sectors, e-mentoring research within education, especially as a way to develop and support new principals, warrants a close examination of the context in which these new leaders work (O'Neill et al., 2005; Perren, 2003). Will the same benefits and challenges exposed in previous e-mentoring research apply in a public school setting where a principal's success is tied tightly to the success of the organization in which he or she works?

Mentoring and Learning Organizations

An important concept in Senge's (1990) learning organization theory is that individual development is required for organizational development. Clearly, mentoring programs are concerned with individual development, but often missing from the research is reference to how individual development is, or is not, enhancing the organizational development of the schools in which the mentees work. Ignoring the context of the principal's work is a major flaw in mentoring research.

Most studies on formal mentoring programs for new principals do not reference the mentee principal's school. This highlights a discrepancy between the reasons more mentoring programs are cropping up and actual practice (Wallace Foundation, 2007). More research on the effect of mentoring programs on the host organization is needed. Most mentoring programs are designed to equip novice principals to lead schools. Researchers who investigate the effectiveness of mentoring, but do not investigate how the mentoring translates into a novice principal's ability to better lead his or her school are not capturing a complete picture. Of the studies reviewed thus far, Daresh (2007), Kamler (2006), Stead (2005), and Thorndyke et al. (2008) refer to the benefits. Stead (2005) also reports detriments. Still, little empirical data was evidenced.

If mentoring is going to continue to be a widely used leadership development system, then more rigorous studies investigating the effectiveness of mentoring are required, especially given the changing role of school leaders and the documented shortage of qualified principals (Copland, 2000; DiPaola & Tschannen-Moran, 2003; Duke et al., 2003; Engelking, 2008; Fenwick, 2000; Sergiovanni, 2001). This literature review provides a comprehensive review of existing research on formal mentoring

88

programs for school leaders. This review encompasses research on district new principal

mentoring programs (Browne-Ferrigno & Maynard, 2005; Daresh, 2007; Kamler, 2006),

university mentoring programs (Browne-Ferrigno and Muth, 2004; 2006), state

mentoring programs (Alsbury & Hackmann, 2006) and national programs (Crow, 2007;

Lim, 2004). Due to the lack of research on formal mentoring programs for school leaders,

this review included research on formal mentor programs in the business and healthcare

sectors (Ladyshewsky, 2007; Stead, 2005; Thorndyke et al., 2008). A synthesis of this

research indicated that mentoring research lacked rigor due to the methodologies

employed. Other themes included a lack of discussion of the organizational benefits of

mentoring and the observation that most mentoring research is conducted in Australia and

England. A thorough investigation of a principal preparation program that synthesizes

these components is warranted.

What can be culled from this literature review is a of list frequently cited

components of mentoring programs that have led to either positive or negative outcomes.

These components are mentor--mentee matching, time for mentees and mentors to meet,

and mentor--mentee training. E-mentoring research revealed e-mentoring technologies

contributed to positive and negative outcomes for mentors and mentees in different ways

from face-to-face mentoring. Educational policymakers and mentor program developers

should consider these components carefully.

A consistent theme within this body of research was the lack of rigor due to

methodology. Most data collection included self-report methods, single point data

collection, and lack of data suitable for triangulation, all issues raised by Hansford and

Ehrich (2006). Daresh (1995) stated, "there have been relatively few published

89

descriptions of research related to the structure, implementation, evaluation or outcomes of mentoring programs designed to enhance the professional development of leaders" (p. 2). More than 15 years later, some progress has been made, but as this literature review has established, most studies published in peer reviewed journals ask participants their perceptions of the mentor program. This literature review exposed benefits and challenges associated with e-mentoring and also uncovered the need for more thorough research on facets of e-mentoring.

Chapter III: Methodology

The exponential growth in mentoring programs for new principals is evidence that it is the premiere preparation and support mechanism sought by districts, states, universities and colleges, professional organizations, and other partnerships for developing new principals. The field of mentoring has adapted to the 21st century by incorporating e-mentoring technologies as a key component of the mentoring activities (Bierema & Merriam, 2002; Lenear, 2007; O'Neill et al., 2005; Perren, 2003; Rickard, 2004; Rickard & Rickard, 2009; Single & Single, 2005a). The gap in mentoring research is in measuring the effectiveness of e-mentoring technologies. Are e-mentoring technologies a viable component for formal mentoring programs for new principals? Before this question can be answered, research is required to understand the experiences of participants in mentoring programs using e-mentoring technology. The purpose of this study is to examine a formal mentoring program that utilizes an e-mentoring component to understand the impact of e-mentoring for new principal development.

E-mentoring technology experiences in a new principal mentoring program have not been studied; therefore, a qualitative research design was employed. Creswell (2007) explained that qualitative research is used when a "problem or issue needs to be explored" (p. 39). Merriam (1988) stated that "qualitative research is an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 5). I am concerned with understanding the authentic experiences of mentees, mentors, and program developers and administrators with e-mentoring technologies.

This study was guided by the following research questions:

1. How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?

2. Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?

3. What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program developers and administrators?

4. What do mentors and mentees suggest should be done to enhance the effectiveness of e-mentoring technologies?

Research questions were addressed through the systematic collection and analysis of five sources of evidence used most commonly in case studies. These sources are documentation, archival records, interviews, direct observations, and physical artifacts (Yin, 1994).

Epistemology

The epistemological stance guiding this study can best be described as interpretive/constructivist according to Merriam's (2009) four distinctions among qualitative research. Merriam wrote that this stance "assumes that reality is socially constructed, that is, there is no single, observable reality" (p. 8). When considering the topic of e-mentoring, this stance helped me develop research questions that revealed the voice of participants engaged in e-mentoring. Senge's (1990) learning organizational theory provided a lens by which to limit what was observed. Learning organizational theory also grounds the belief that it is not just what happens within the mentoring program that is important, but how it relates to the school organization, the context in which a principal operates. By first understanding the experiences of those engaged in e-

mentoring, future studies can advance the knowledge base of best professional

development practices in preparing school leaders.

Research Design

The specific qualitative research design employed was a descriptive case study of

a mentoring program for new principals using e-mentoring technologies. Yin (1994)

asserted "the need for case studies arises out of the desire to understand complex social

phenomena" (p. 3). Bierema and Merriam (2002) stated, "overall, the literature thus far

on electronic mentoring reflects only the most tentative forays into this potentially rich

medium" (p. 215). The case study method allowed for a holistic and meaningful view of

e-mentoring activities within a new principal mentoring program. Yin outlined three

rationales for a single-case study design, one being that "the case represents an *extreme

or unique case*" (p. 39). Similarly, Patton (1990) described critical case sampling as a

strategy for selecting a purposeful sample (p. 169). The new principal mentoring program

in this research project was chosen specifically because it is one of a few new principal

mentoring programs in the United States that utilizes e-mentoring technologies. Case

study research is "a particularly suitable methodology for dealing with critical problems

of practice and extending the knowledge base of various aspects of education" (Merriam,

1988, p. xiii). This case study investigates the problems of practice associated with e-

mentoring technology.

Yin (2009) advocated the use of case study research when research questions ask

"how" and "why" (p. 10) and when "examining contemporary events, but when the

relevant behaviors cannot be manipulated" (p. 11). This study fits Yin's criteria. The case

study research design was the best method for this study because the e-mentoring

experience can only be understood in the context of the new principal mentoring program being used.

The problem of practice as identified in the review of literature is: What constitutes e-mentoring best practice in mentoring programs? This study attempts to fill the research gap in understanding the experiences of mentees, mentors, and program developers and administrators using e-mentoring technologies in a new principal mentor program through a comprehensive case study research approach.

Research site. Site selection was an issue of the research design. Two months were spent researching mentoring programs for new principals that utilized e-mentoring technologies. Emails and phone calls with individuals from 75 different programs proved that most programs encourage the use of e-mentoring technology between mentors and mentees, but do not mandate it. Once learning that ABC County would be piloting an e-mentoring requirement, it was deemed the best possible site for study.

The site was a mid-sized urban public school system that serves roughly 20,000 students. The school system employs four high school principals, five middle school principals, and 22 elementary school principals. The school system engages new principals in a one-year mentoring program designed to support new principals. The mentoring program, run by the Assistant Superintendent of Administrative Services, has been in existence for 10 years. The mentoring program matches each new principal with an experienced principal and designs mentoring activities throughout the course of the year. The program blends face-to-face mentoring with e-mentoring. This program was chosen for study because e-mail and Skype are the main e-mentoring technologies utilized. The program traditionally used face-to-face mentoring. E-mentoring technology

94

was piloted during the 2011--2012 school year. Participants were expected to Skype with their mentee or mentor at least once a week.

Veteran principals mentor new principals. Veteran principals are chosen by the Superintendent and the Assistant Superintendent for Administrative Services. The program is an unbudgeted program that only runs when new principals are hired. In years when no new principals are hired, the program is dormant. The 2011--2012 school year is unique in that three new principals were hired. There has not been much turn over in principals in ABC county. Prior to the 2011-2012 school year, only one new principal was hired within five years.

Participant selection. Participants selected for interview included program developers and administrators, as well as principals from each building level, elementary, middle, and high school, within the new principal mentoring program. Purposeful sampling (Patton, 2002) was used so participants chosen would represent individuals with access to key information regarding program development. Three new principals were hired for the 2011--2012 school year, and these three principals and their mentors became the sample and represented complete saturation. One new elementary principal was matched with a mentor elementary school principal and two new middle school principals were matched with mentor middle school principals. These six principals served as the principal sample in the study. The Assistant Superintendent for Administrative Services was also selected for interview because she was the person charged with setting up and running the program.

Data Sources

The descriptive case study investigated the mentoring experience when e-mentoring technology was employed and the challenges and benefits e-mentoring presented to mentees, mentors, and program developers and administrators. Yin (1994, 2009) described six sources of evidence used in a case study: documentation, archival records, interviews, direct observations, participant observation, and physical artifacts. Five of these sources were utilized in this case study. Participant observation was not utilized because I am not a member of the mentoring program.

Documentation. Documentation reviewed in this case study included mentor and mentee e-mail, Skype transcripts of mentee--mentor engagement, and work samples of mentees and mentors. Review of documents provides a rich understanding of the mentee and mentor experience within the program as well as corroborates information from other sources, including interviews and observations. Yin (2009) stated, "documents play an explicit role in any data collection in doing cases studies" (p. 103). I heeded Yin's advice and sought to understand the specific purpose and audience of each document. I conducted a systematic search for relevant documents during all phases of the study. Reviewing documentation helped gain insight into research question 1, "How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?" and research question 2, "Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?"

Archival records. The archival records reviewed in this case study included survey data of past participants' satisfaction with the mentoring program. The archival records were analyzed for accuracy and to determine the conditions under which they were produced (Yin, 2009, p. 106). The purpose of this research procedure was to gain

insight into the history of the program and its evolution. An examination of archival records helped answer research question 2, "Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?" This research procedure also aligns specifically with research question 3, "What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program developers and administrators?"

Interviews. Interviews were the most important procedure in this case study. Three mentors and their three mentees were interviewed. Interviews were open-ended and semi-structured in nature, designed to capture the participant's thoughts and feelings concerning the use of e-mentoring technologies and the mentorship relationship. Yin (2009) refers to this as an "in-depth" interview (p. 107). Two interviews were conducted during the middle and end stages of engagement in the mentoring program. The interviews provided a better understanding of how the mentoring relationship and participants' engagement with e-mentoring technologies may have or may not have changed over time. Interviews helped answer research questions 1 and 3, "How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?" and "What challenges and benefits do e-mentoring technologies present to mentees, mentors and program developers and administrators?"

Open-ended semi-structured interviews were conducted with the Assistant Superintendent of Administrative Services, the person considered the program developer and administrator. These interviews helped answer research question 2, "Why did program designers incorporate e-mentoring technologies into the new principal

mentoring program?" Two interviews were conducted, one before the principal

interviews took place, and one after the data analysis stage of the research process.

Direct observations. Direct observation took place to better understand the

participants' engagement with Skype technology. Data garnered from direct observations

were gathered by careful observation and note taking. Notes were reviewed and clarified

before leaving the site. Observations were recorded on a digital recording device and later

transcribed. Observations were used to triangulate data compiled during the first

interviews. The main goal of the direct observations was to notice the physical interaction

with e-mentoring technology, specifically, the instinctive reactions of participants.

Physical artifacts. Yin (2009) described physical artifacts as "a technological

device, a tool or instrument, a work of art, or some other physical evidence" (p. 113). The

physical artifacts investigated in this case study were some of the participants' school

management plans and PowerPoint presentations created by the principals. The

investigation of physical artifacts helped me better understand mentoring activities within

this mentoring program and helped triangulate findings with other data.

Adaptiveness and flexibility were exemplified with the decision to continue with

case study methodology despite a lack of information garnered from the different data

sources, with the exception of the interviews. The informal nature of the program

prohibited the analysis of rich data sources, but the value of hearing the voices of

principals engaging with Skype outweighed any decisions to stop or change the study.

Case Study Protocol

Instrumentation included the development of a case study protocol. A protocol

contains an overview of the case study project, field procedures, case study questions,

and a guide for the case study report (Yin, 1994, p. 64). In essence, Chapters 1 through 3, are the case study protocol. The protocol reflects Yin's (1994) perspective on preparing a well-planned descriptive case study. Yin wrote, "the protocol contains the instrument but also contains the procedures and general rules to be followed in using the protocol" (p. 79). Yin also wrote, "empirical research advances only when it is accompanied by theory and logical inquiry, and not when treated as a mechanistic data collection endeavor" (Yin, p. xiii). I agree with Yin's statement and designed a case study protocol using Senge's learning organization theory as a lens by which to view and construct the study. The development of this protocol will provide focus and increase the reliability of the research. I also developed an interview protocol for all interviews and used an audio digital recording device to ensure accuracy in the interview process. Other instrumentation used in this study included a code book to keep track of categories and themes during data analysis.

Data Collection

Preparation for data collection began three years prior to this case study, when I began learning about proper research design, data collection, and analysis through The George Washington University's Educational Administration and Policy Studies (Educational Administration Concentration) doctoral program. Yin (2009) insisted that a good case study investigator must ask good questions, be a good listener, exercise adaptiveness and flexibility, and have a firm grasp of the issues being studied. Grounded in learning organization theory, and having already prepared a literature review encompassing principal professional development, mentoring, and e-mentoring, I felt I had a firm grasp of the concerns being studied, including theoretical and policy issues at

play. Much time was spent carefully crafting research questions, as well as interview questions. These questions were reviewed and practiced with peer researchers. I "listened" with more than my ears. Yin wrote, "listening takes the form of worrying whether there is any important message *between* the lines" (p. 70). Exercising adaptiveness and flexibility came into play when I realized the ABC mentoring program was more informal then I had originally thought. Finding a lack of documentation, archival records, and physical artifacts, interviews became the main source of data within the study. Overall, I fulfilled the qualities of a good case-study investigator.

Investigation of documentation, archival records, and physical artifacts began following the approval by George Washington University's Internal Review Board (IRB). ABC County also had a research approval process, and I was granted access to conduct the study by the ABC board in February. Standards set by these two boards were adhered to and followed exactly. This investigation of documentation, archival records, and physical artifacts helped me more fully understand the context of the school district, the individual schools of the mentors and mentees, and the mentoring program. Information included demographics and test scores, which helped situate the case study, and the interviews, which provided the most meaningful information and allowed me to get closer to answering the research questions.

Data collection from interviews occurred by first developing an appropriate interview protocol and then practicing with a colleague. The first round of interviews began during March. Each participant was contacted via telephone to determine her willingness to participate in the study. Each of the three mentors and mentees agreed to participate. I obtained verbal consent as outlined in the approved IRB application. I

contacted each participant by phone to determine the best time, date, and location to meet. All interviews took place in the principal's office, except two, which were held at local coffee shops. The interview with the program administrator took place in her office. (See Appendices A, B, and C for interview protocols.) After greetings, the consent form was reviewed and I asked the participant if she had any questions and obtained permission to record the interview. I used the Voice Memo application on the iPhone to record each interview digitally. During the interviews, I maintained the positive interactions outlined by Merriam (2009), "respectful, nonjudgmental, and non-threatening" (p. 107). As necessary, I repeated questions or asked probing questions to clarify and keep the conversation fluid. The participants shared their stories and I jotted down observable interactions. I was sensitive to the level of comfortableness the participant exhibited when talking about different subjects and the level of animation exhibited through hand gestures, pace of talk, and level of audibility.

I employed the method of "memoing" after each interview (Strauss, 1987). In fact, this process of jotting down thoughts, connections, theories, and questions proved indispensable in my ability to make sense of the data. Memos were written, not just after the interviews, but frequently throughout the day, when thinking of, or reviewing data. These writing sessions began immediately after the interview, in order to capture memorable words, thoughts, or ideas using the Notes application of the iPhone. These first thoughts were then expanded upon in the code book in the evening and further refined the following morning. Usually, I added more writing to each participant's interview memo, after each interview. I noted nonverbal behaviors, first impressions, and interpretive thoughts. Often, the digital recording was played several times during these

writing sessions. I began to make connections and notice patterns within the first few

interviews. As Strauss (1987) contended, this process of writing helped me make sense of

the data:

> The initial memos tend to look a little like those written by novices at this general
> style of memo writing: at first, a high proportion of them may be operational
> (what data to collect, where to go to do this), or reminder notes (don't forget to…,
> or don't forget this point), or scattered "bright ideas," or fumbling around with a
> flood of undifferentiated products of coding, or just thinking aloud on paper for
> purposes of stimulation in order to see where the thinking will lead, and so on.
> Later memos will incorporate the results of the (early, frequent and later,
> occasional) microcoding; focus on emerging major categories and their
> relationships with each other and the minor categories; struggle with whether to
> choose one or more core categories; intergratively summarize pervious memos
> and coding; suggest pinpointing bits of data to fill out points in the analysis; and
> so on. (p. 109)

Memos were integral to both the data collection and data analysis processes.

I listened to the recorded interview five or six times after each interview. Once

verbatim transcripts were returned from the transcription service, Verbalink, and checked

with the original recording, they were sent to the participant for member checking.

Data Analysis

Merriam (2009) maintained "Data collection and analysis is a simultaneous

activity in qualitative research" (p. 165) With this in mind, I began the process of analysis

directly after the first interview and continued until the point of saturation. "Memoing"

described in the data collection process is a form of analysis (Strauss, 1987). Merriam

(1988) wrote:

> A qualitative design is emergent: One does not know whom to interview, what to
> ask, or where to look next without analyzing data as they are collected. Hunches,
> working hypotheses, and educated guesses direct he investigator's attention to
> certain data and then to refining and/or verifying one's hunches. The process of
> data collection and analysis is recursive and dynamic. (p. 123)

I used the "recursive" and "dynamic" process of data analysis described above. Data analysis included constant reading of all elements of the case study database. Readings included a search for relevant information with regard to the research questions.

In an attempt to describe the cyclical nature of qualitative analysis, Merriam wrote, "emerging insights, hunches, and tentative hypotheses direct the next phase of data collection, which in turn leads to the refinement of reformulation of questions" (p. 165). At this point, I developed the protocol for the second round of interviews (see Appendix D). A similar pattern of digesting the data as described previously was followed. I re-engaged in open coding. I read the transcripts and highlighted notable segments. These were segments of data that I thought were significant, related to my research questions, or what I believed would help describe the "real-life" experience of engagement in the mentoring program. As I read, commonalties within questions were highlighted. For each segment of highlighted data, I assigned a code. The interview was read and coded several times. Frequently, between the second and third run through the data, codes were refined, deleted, or added. Creswell (2007) described open coding as "coding the data for its major categories of information" (p. 64). From the open coding, axial coding is completed. Axial coding involves the assembling of data in new ways from open coding (Creswell, 2007, p. 97). Data collected from all five sources of evidence were broken into what Lincoln and Guba (1985) called "units of information that will, sooner or later, serve as a basis for defining categories" (p. 132). According to Lincoln and Guba, each unit of information must be related to the research questions and cause the reader to think of how it relates to other units of information and be so small that it can stand by itself, needing no other information to explain it (p. 345).

It was during this emergent process that I began to form categories for the codes. Strauss (1987) stated, "Once the core category or categories are suspected or decided upon, then be certain to relate all categories and subcategories to that core, as well as to each other" (p. 81). At the heart of this process, I continually reflected on Senge's learning organization theory and the five leadership disciplines. Yin (2009) emphasized the importance of theory during the data collection phase of case study research because it helps guide the type of data collected. I found the theory particularly helpful when weeding through large amounts of data. The disciplines of personal mastery, mental models, building a shared vision, team learning, and systems thinking were ever present in my mind as I poured over the words of principals engaged in e-mentoring. Merriam (1988) stated "developing categories, typologies, or themes involves looking for recurring regularities in the data" (p. 133). While some categories related directly to the research questions, others did not. All of the categories were reviewed and reshaped several times. Guba and Lincoln (1981) maintained that this is both a convergent and divergent process (p. 93). The code book became a crucial tool in keeping track of categories and in accurate archive analysis. Merriam (2009) described categories as a "theme, a pattern, a finding, or an answer to a research question" (p. 178). I also saw my original notes, some of which became codes, merge into categories. The longer I reviewed the original data and made comparisons between interviews, these preliminary categories eventually became themes.

From this point in the analysis process I will move up "from the empirical trenches to a more conceptual overview of the landscape" (Miles & Huberman, 1984, p. 228). Here I looked at overarching themes and concepts within the data to make sense of

104

the experience of the mentees, mentors, and program developers and administrators engaged in the e-mentoring process. The themes were triangulated with the other sources of evidence. This analysis sought to describe accurately the e-mentoring experience as it is understood by mentors, mentees, and program developers and administrators.

The second round of interviews followed similar procedures as the first. However, the interview protocol was developed using the interview question typology developed by Strauss, Schatzman, Bucher, and Sabshin (1981). This typology guides the kinds of interview questions asked. The four major categories of questions are hypothetical, devil's advocate, ideal position, and interpretive questions. (See Appendices D and E for Interview Protocols). This typology was used because it invited the interviewees to describe what it was like to be engaged with e-mentoring technology. Merriam wrote, "Devil's advocate questions are particularly good to use when the topic is controversial and you want respondents' opinions and feelings" (p. 97). This approach was considered useful because mentees and mentors seemed reluctant at times to critique the mentoring program or speak candidly their thoughts and feelings. Merriam described the use of ideal questions in evaluation studies because they reveal both the positives and negatives or shortcomings of a program. Although this was not an evaluative study, evaluative information was sought to elicit information and opinion that helped answer the research questions.

Lincoln and Guba (1988) describe four guidelines for knowing when to end the process of data collection and analysis. The theoretical guidelines are: exhaustion of sources; saturation of categories; emergence of regularities; and over-extension. Exhaustion of sources occurred when I had spoken to all mentees, mentors, and program

105

developers and administrators and ancillary persons. Saturation was revealed to me when no new information emerged in data collection and analysis. Emergence of regularities occurred when similar patterns emerged from multiple data sources and over-extension occurred when information emerged from the data that did not relate to the research questions and was far removed from delegated categories and themes. Finally, I had reached the point in the research process where the description and analysis of themes can be presented with "assertions, or an interpretation of the meaning of the case" (Creswell, 2007, p. 75).

Validity and Reliability

Merriam (1988) wrote "validity and reliability are concerns that can be approached through careful attention to a study's conceptualization and the way in which the data are collected, analyzed, and interpreted" (p. 165). The focus of this research study was to give voice to mentees, mentors, and program developers and administrators engaged in e-mentoring activities. Data collection and analysis procedures were used "to achieve specific understanding through documentation of concrete details of practice" (Erickson, 1986 as cited in Merriam, 1988). Erickson termed this *interpretive* research. Therefore, as Merriam wrote, "if *understanding* is the primary rationale for the investigation, the criteria for trusting the study are going to be different than if discovery of a law or testing a hypothesis is the study's objective" (p. 166). In order to maintain internal validity, I consulted with participants throughout the study as a means of clarifying thoughts, actions, and words. I was ultimately working to portray "a more or less honest rending of how informants actually view themselves and their experiences" (Taylor & Borgan, 1984, p. 98 as cited in Merriam, 1988). Other strategies for ensuring

internal validity included triangulation of the multiple data sources, gathering data over a year-long period, peer examination, and disclosing the researcher's biases (Merriam, 1988).

Reliability was ensured through the establishment of the case study protocol and the case study database (Merriam, 1988; Yin, 1994; 2009). Lincoln and Guba (1985) suggested thinking of reliability in terms of the dependability and consistency of the results. The goal is not to make sure that outsiders can get the same results, but that the results are consistent with the data. Reliability is strengthened because the researcher has used full disclosure in the purpose for the case study and reasons for selecting participants, using multiple methods of data collection, and mapping each step taken along the research endeavor (Merriam, 1988, p. 172).

External validity will be left to the reader. A critique of the case study method is that it is not generalizable (Merriam, 1988; Yin 1994, 2009). However, some methodologists have reframed what it means to be generalizable and offered that the extent to which a reader applies the knowledge gleaned from a case study is up to the person in the new situation, and thus constitutes how generalizable the case study information becomes (Merriam, 1988). Framing external validity this way, it becomes the burden of the case study researcher to provide rich detail of all aspects of the study. My use of a case study protocol, data base, and code book increased external validity.

A concern for validity and reliability is evident by the data collection methods. Collecting multiple sources of evidence allowed for triangulation. Yin (1994) stated "the most important advantage presented by using multiple sources of evidence is the development of *converging lines of inquiry*" (p. 92). Yin further explained that the

107

converging lines of inquiry help address validity because the multiple sources of data "provide multiple measures of the same phenomenon" (p. 92).

Yin (1994) stated that case study researchers who do not distinguish between the data and the report of the investigator are a major limitation to case study research. For this reason, all notes were carefully archived and can be made public for future researchers. The employment of these data collection processes revealed a concern for validity and reliability.

Human Participants and Ethics Precautions

Ethical precautions were considered when designing this study. Full disclosure of the research case study was related to participants and only voluntary participation was included. Participant privacy was protected through the use of pseudonyms. I used great care to build a rapport with participants and answer any questions from participants. Anonymity and confidentiality was assured with all participants in order to create a healthy sharing environment.

Chapter IV: Results

This chapter presents data from each research question sequentially. The questions were designed to capture the voices of mentee and mentor principals engaging in e-mentoring. The first question asked each mentor and mentee principal to describe her mentoring experience when using e-mentoring technologies. The e-mentoring technology piloted in the e-mentoring program described in this descriptive case study was Skype. The principals in this study perceived Skype as an impractical technology for the ABC mentoring program. The second research question asked why program designers incorporated e-mentoring technologies into the new principal mentoring program. An honest and thorough description of conversations with the Assistant Superintendent in charge of the program is presented, along with a brief history of the program. Research question 3 asked the participants to relate the benefits and challenges they experienced using Skype. Challenges reported by the participants included not having Skype training, creating and committing time to Skype and, and unmatched technology experience between mentors and mentees. Participants reported no benefit of engaging with e-mentoring technology over the course of the year. The data show that the participants see the value of using Skype communication for new principal mentoring, but in different school districts. The participants were able to describe an ideal setting in which they believed e-mentoring technology would support new principal mentoring. The principals had specific suggestions of changes to their own ABC mentoring program that would facilitate a more fruitful e-mentoring environment. Their suggestions are covered in the data presentation of research question 4, which asked mentors and mentees to make suggestions to enhance the effectiveness of e-mentoring technologies. The findings

109

suggest that the participants believe a more structured e-mentoring program would help facilitate more effective e-mentoring. A description of the tools the participants suggested is provided.

Introduction to Mentees and Mentors

The aim of the research was to give voice to the participants in the mentoring program that utilizes e-mentoring technology. According to Yin (2009) the descriptive case study line of inquiry supports this aim because the researcher asks "how" and "why" questions about a contemporary event, over which the researcher has no control (p. 13). Because the intention was to describe the participants' encounter with e-mentoring technology, the participants' personalities, and their differing levels of experience, become important factors.

Mentee 1 was a new middle school principal. She had started her career as a teacher in ABC County in 1992, teaching social studies at the high school level. She taught for 11 years at the high school, taking one year out, half way through, to work at a city high school in another state. Upon her return to ABC County, she earned her administrator's license from a local college and took an assistant principalship in 2006 at the middle school. She worked as assistant principal at the middle school for four years, went back to the high school as an assistant principal for one year, and then received her first principalship at the middle school where she had started as an assistant principal.

Mentee 2 was a new elementary school principal. She started teaching English as a second language in ABC County in the 1980's. She left the area and taught in a number of different places. She came back to ABC County as an Instructional Technology Coordinator in 1996. She remained in this position for five years. After earning her

110

administrative license, she became assistant principal at an elementary school in southern ABC County. She then came to the northern end of the county and was assistant principal at her current school for six years. When the former principal retired, she became principal of the elementary school.

Mentee 3 taught band at a middle school in the Midwest for four years. She entered into an administrative license program and served as an assistant principal at two different middle schools before coming to a school district near ABC County. In this smaller school district she served as an assistant principal at the high school level for one year and then as principal for the only middle school in the district for five years. After her fifth year of principalship, she came to ABC County to be principal of a middle school.

Each new principal had a unique perspective on the mentoring program under study. Mentee 1 and 2 shared a long history of working in ABC County, and, although they were new to the principal position, they had many established contacts within the county on which they relied for information. They experienced more role socialization needs, whereas Mentee 3, who had been a principal previously in a different county, experienced more organizational socialization needs.

The Assistant Superintendent of Administrative Services chose the mentors in this study, except in the case of Mentee 1. Mentee 1 asked specifically for Mentor 1 based on Mentor 1's solid reputation in the county. The Assistant Superintendent made the other two matches. When making the selections, the Assistant Superintendent considered the level of the school and the personalities of the principals.

Mentor 1's entire career was in ABC County at the middle school level. She started in 1974 as a middle school French and Spanish teacher. She moved around to various middle schools within the county until she was encouraged to go into administration. She did her coursework at a local university and took a position as the first coordinator at the Office of Minority Achievement. She served in this capacity for five years, until she went into an assistant principalship at a middle school. She continued as the assistant principal until she was asked to serve as the acting principal for a middle school for six months. When she did not get the principalship at that middle school, she returned to her former middle school as assistant principal. Two years later, she received the principalship at the school in which she presides at present.

Mentor 2 started her teaching career in a rural area at a middle school. After two years, she left the public school to work on her Master's degree. During that time she worked as an instructional assistant at the university. After receiving her Master's degree, she worked in a Title 1 city school for six years. She then moved to the surrounding area and worked with Title 1 in several capacities. She worked in administrative positions where she was in charge of the parent programs and teacher in-services. She received her reading recovery training and soon became an assistant principal. She came to ABC County as an assistant principal, where she was part of the team that was opening up the elementary school where she serves currently as principal. She became principal of that school within four years of opening the school and is in her 15th year of principalship at the school.

Mentor 3 also had much experience in ABC County. She started out of state as a special education teacher. She took time off to raise children, but always remained active

in education. She then received her counseling degree and went back to education as a counselor. She worked as a Director of Counseling in a nearby jurisdiction for six years at a special education center. She then moved to an elementary school counselor position. She came to ABC County in 1994 to help the middle school where she serves currently as principal. She was originally the Director of Counseling, but moved to assistant principal, and then to principal of the school. At the time of the study, she was in her ninth year as principal at the middle school, 18th year at the school, and 29th year as an educator.

All three mentors had extensive experience in ABC County. All three mentors had worked at the school in which they eventually became principal under a different capacity, and all three stayed at the school, once they became principal, until the time of this study. Mentor 1 and Mentor 2 announced their retirement during the course of this study. Participants in this study included five white females and one black female. Neither race nor gender was raised in the data. Table 2 summarizes the experiences of the mentees and mentors.

Table 2: Experiences of Mentees and Mentors as of 2011

Participant	Years Completed as Principal	Mentored Principal Before	Years Working in ABC County	Years in Current School
Mentee 1	0	No	19	4
Mentee 2	0	No	15	6
Mentee 3	5	No	0	0
Mentor 1	12	No	37	12
Mentor 2	14	No	18	18
Mentor 3	8	No	17	17

The Context

The context of the schools is important to understand because the participants frequently referenced the "uniqueness" of their school or ABC County. Whether the schools are unique or not is left to the judgment of the reader. However, I wish to communicate that the participants unequivocally maintained that their school and school system are "unique" and that many of the discussions surrounding why e-mentoring technology was or was not working circled back to the participants' feelings of working in a specific context. Hence, it is important to provide some background on each of the six schools.

Mentee 1 works in a middle school with an enrollment of 933. It is one of five middle schools in ABC County. Mentee 2 works in an elementary school with an enrollment of 594. This is considered an average size of an elementary school in ABC County. Mentee 3 works in a middle school with 969 students, which is the largest middle school in ABC County. Mentor 1 works in a middle school with 726 students. Mentor 2 works in an elementary school with 575 students and Mentor 3 works in a middle school with 765 students. Enrollment numbers are reflective of the 2011--2012 September 30th school membership reported in the State Report Card.

Skype

Skype technology can be used on any computing device that uses Web 2.0, Internet connection, and a camera. It is a technology that has a free-of-charge function that allows users to communicate audio-visually, so that both users can see and hear each other. Users must sign up and create a login to utilize this function. There are many other functions of Skype, including the free Skype chat function that allows users to

114

synchronously type text to one another and make conference calls. More advanced uses

of Skype are available for a fee. These functions include group video calling and group

screen sharing, among other functions (Make the most of Skype, www.skype.com). The

function of Skype utilized in this study was the free audio-visual function.

Mentees and Mentors Engagement with E-Mentoring Technology

Each participant provided a unique window into the research questions. Because

the intent of this descriptive case study is to give voice to the participants engaged with

the technology, great effort was taken to present accurate thoughts and feelings from the

principals' perspectives. Data is presented by analyzing research questions sequentially:

Research Question 1: How do mentor and mentee principals describe their

mentoring experience when using e-mentoring technologies?

Research question 1 asked participants to describe their experience using e-

mentoring technology. As mentioned earlier, the first round of interviews began in March

of 2011. The three pairs of principals were matched in August. In October, the Assistant

Superintendent of Administrative Services asked the three pairs of principals to Skype as

part of the mentoring work. The Assistant Superintendent wrote in her e-mail:

> As part of this work, I am asking if you would have your ITC's (Instructional
> Technology Coordinators) set up Skype for you if you don't already have it and
> talk to each other about a time once a week when you can Skype each other to
> check in, ask/answer questions/share information and offer advice. (personal e-
> mail)

When the first round of interviews began in March, it became evident that most

pairs were not Skyping with each other on a regular basis. What follows is a description

of two principals' first encounters with the Skype technology. These two principals'

stories express the frustration felt by all the principals. These two principals' stories also

115

reflect different experiences with Skype. Although each principal had a unique experience, the lack of structure to support new technology usage within the program was common to both principals. On the spectrum of experience with Skype technology, Mentee 1 was on one end of the spectrum, having never used it before, and Mentor 3 was on the other end of the spectrum because she was a fluent user and set aside time to try and Skype with her mentee throughout the program.

Mentee 1's initial experience with Skype. Mentee 1 described how, even though her mentor did not express a great interest in the technology, she went ahead and tried to set up Skype on her work computer. She had never used the technology before and encountered complications setting it up. In the end, she never did get her Skype account to work and in reflection commented, "And I think it was largely sort of incorporating an understanding of the technology into what else was happening at the beginning of the year…this is just one more thing to do." Without a class, hands on demonstration, or any other type of support, Mentee 1 found her drive to learn the new technology slip away. Her mentor was also very supportive of using cell phones as the primary technology for communication. Mentee 1 related:

> What surprised me was she was really pushing me towards calling her cell phone, and I think that's probably 'cause I can find her better or she answers – she keeps it with her, I think. Because for a while I was calling her on her work line and that wasn't working, and she was kind of insisting of me, like, "Please do call me on my cell."

Mentee 1 explained that although she was willing to use the technology, with no one to show her exactly how it worked, no one insisting it be used, and no checking in on her progress with it, there was no incentive to use it. The cell phone became the most convenient way for her to reach her mentor.

Mentor 3's initial experience with Skype. Initial set up of Skype technology was not a smooth process. All principals in ABC County are given an iPhone and an iPad. Some laptop computers have cameras and all desktop computers can be outfitted with a camera. There was a plethora of technology options, but no assigned "technician" to help the principals navigate the options. Some participants, who were avid Skype users in their personal life, chose to use a home laptop, and others, the work desktop. Not all of the principals' desktops came equipped with a camera, so some principals needed to request a camera be set up on their work desktop. They were also charged with communicating their needs to their individual school's Instructional Technology Coordinator (ITC). The ITC's had never been contacted by the Assistant Superintendent about the pilot use of Skype in the mentoring program, but each ITC contacted by his or her principal was willing to gather and set up the required technology. Mentor 3 described involving the ITC and the multiple steps required to get started:

> So I had to go to my ITC and say, "You need to set this up for me on my computer so I can do it,"…I didn't have an iPad that had a camera. So then I had to get an iPad with a camera.

Inherent in her descriptions of her first encounters with Skype, are feelings of frustration. Skyping was "not too productive because although she (Mentee 3) could see me and I could see her, the voice on it was not working." Mentor 3 goes on to further explain that, although they were able to see each other on the computer, the sound function was not working properly, so they called each other on the cell phone while they watched each other on the computer, both laughing at the ineffective way to communicate. Mentor 3 has had similar technology failure problems with Skype in her personal life:

117

I use Skype with my grandchildren…Either their computer's not working just so, or ours wasn't working just so, or the connection wasn't working just so. That's something that we've run into with Skype before. It seems sort of a ludicrous thing to go through, the bother of the Skype. We did get the addresses and we did all of that. We set it all up but it seemed that it became easier for Mentee 3 to, as needed, ask for help rather than have a set time.

These two principals described their first physical encounters with Skype within the program as frustrating. The frustration experienced was attributed to the fact that they did not see alignment between the Skype initiative and the school district's practices. However, it is important to record that both Mentee 1 and Mentor 3 reiterated several times that, with proper support, they would be open to trying Skype as a form of e-mentoring communication. The principals discussed how they could see Skype and e-mentoring working better in other places, but that it was not a good fit for the ABC mentoring program.

The Practicality of Skype in ABC County

When asked to describe their experiences with e-mentoring technology, all six participants agreed that Skype was not a practical support for new principal mentoring. I asked many follow-up questions to ensure a true picture of participants' feelings in this matter. The participants all agreed that, within ABC County, Skype was not a practical e-mentoring technology. Factors contributing to this perception included: (a) the geography of the school county; (b) the comfort and convenience of other forms of communication; (c) the synchronicity of Skype communication.

Geography of the school county. Throughout the course of the interviews, the principals frequently cited the unique geography of ABC County public schools as a reason for the impracticality of Skype. ABC County, generally described as a small school district, with a population of 20,000 students, spans 16 square miles. The longest

118

distance that exists between the schools of any one of the three pairs of mentors and

mentees in this case study was 7.58 miles (www.mapquest.com). In addition to

understanding the geographic layout of the school district, it is important to understand

the frequency by which the principals are required to meet face-to-face. At a minimum,

school-level principals meet monthly, in addition to a monthly meeting where all the

principals in ABC County gather. The county is considered to have a collaborative

culture. Principals are encouraged by senior leaders to work together and mentees and

mentors are encouraged to meet as frequently as needed.

With ample opportunity for face-to-face meetings to occur, face-to-face

mentoring was the preferred way for the principals to support one another. Even though

"the hectic work schedule" of a principal was referenced several times throughout the

study, none of the principals felt they were too busy to create time for face-to-face

meetings. Mentor 2 described the importance of face-to-face meeting:

> For my particular team (elementary principals in her cluster, which would include
> her mentee), it works very well once a month to have breakfast. It takes us out of
> the building because when you do things in the building there are always so many
> other things going on. For us, I would say that has been one thing that has really
> worked… something I would share with other people who are mentoring would
> be trying to find that time monthly, even if it's just an hour, where you're out of
> the building and just the two of you can talk together.

Although much of the research presented in the literature centered on the difficulty of

finding time for mentoring to take place, the mentors and mentees in the ABC mentoring

program related that the county had established meetings for different levels of

principals. These required meetings were held monthly. Although the meetings had

specific agendas, there was exchange of information and learning among principals. The

close proximity of the mentee and mentor schools to the building in which these meetings

took place added to the convenience of mentors and mentees agreeing to meet before or after the required meeting. The principals in this case study viewed these meetings, and their informal pre- and post meetings, as embedded time for face-to-face mentoring to take place.

Mentor 2 described the collegiality she felt was a product of the size of ABC County:

> Our Assistant Superintendents here, they're very receptive to helping if you have a question, if you need additional support. Again, that's one of the things with the size of ABC County that I think is very, very helpful. I've been in very large systems. I've been in very tiny systems. ABC County just has a great flow about it, kind of that "just right" size where you know most of the people and there's a relationship where you can call on colleagues to help.

It was clear that the ample opportunity for face-to-face mentoring affected Skype usage and contributed to the perception that Skyping was an impractical form of e-mentoring. Mentee 2 reported:

> I think in ABC County, which is relatively small geographically, that Skyping for some people can seem impersonal. If I had a question it would be easier for me to meet someone for coffee or go to their school on the way home from my school, or even just to pick up the phone would be – would take a couple of minutes less time. So if I wanted to talk to one of my colleagues in ABC County I wouldn't Skype them, but if I worked in a large county, even a county like (a larger local county), I probably would – I could see the value of Skyping. So I think that the e-mentoring really depends on the location and probably depends also on the personalities of the people involved.

Mentee 2 continued to describe her extensive use of Skype with family members overseas. She described Skype as a practical form of communication when there are long distances between users, or when there are long gaps of time between users being able to get together. She reported that the close proximity of schools within ABC County and the frequent opportunities for principals to meet at scheduled meetings were factors in her perception that Skype was not a practical e-mentoring technology for ABC County. In

120

conjunction with the perception that Skype was not a useful tool to support e-mentoring, the participants also reported the ease of use of other forms of communication and they expressed specific beliefs of when different forms of communication should be utilized.

Comfort and convenience of other forms of communication. Throughout the duration of the one-year mentoring program, the form of technology used most often for mentoring, reported by all six principals, was the telephone or cell phone. This was followed by e-mail, and then Skype. Mentor 2 explained candidly, "To me, it's (Skyping) not as personal as meeting someone. I just don't see what the real benefit of Skyping is over a phone call." When further discussing the form of communication she used most frequently with her mentee, Mentor 2 established the needs of her mentee as criteria for choosing a medium:

> I think it really depends on the need that she has. If it's something very specific, e-mail is fine. Like something about our treasury and what's a procedure? If it's something that really deals more with personnel and something she's going through with a staff member, we use the phone. Then when we have breakfast once a month we really just put everything on the table and we run the gamut of what we talk about.

Mentor's 1 and 3 similarly referenced the ease of phone communication over Skype. Comfort zone was another theme that emerged through the data. Mentor 3 captured this theme:

> I've gotten very, very comfortable just e-mailing people back and forth. And, of course, I prefer to pick up the phone and have a conversation with somebody because sometimes e-mail has a different tone. So of the two, I think that Skyping allows an actual conversation, but the e-mailing is quick. You don't have to wait for anybody. They don't have to be right there. You can just ask your questions as they come up.

Synchronicity of Skype communication. Skype requires that both users commit to a mutually agreed upon time at which to communicate. Within the literature, this type

of e-mentoring technology is described as synchronous and is contrasted with the

asynchronous nature of e-mail (Lenear, 2007). E-mail is considered asynchronus because

typically, e-mail users are not e-mailing at the exact same time. Mentor 3 and Mentee 3

set up time to Skype each week. Mentor 3 related that although she and her mentee

carved out time, they frequently did not end up Skyping. One or the other principal would

end up breaking the Skype appointment because a work-related issue arose. Mentor 3

described:

> If it were something that I used as quickly and easily as I do e-mail, I'd be more
> likely to use it. It hasn't been that easy to do. Like I said, we set up some time. I
> said, "We're supposed to be Skyping." She said, "I don't have time to Skype
> today."

Although a time slot had been agreed upon, Mentor 3 definitely felt that the times she

really helped or "mentored" Mentee 3 happened in face-to-face meetings or via the

telephone. Recognizing that the Skyping did not always pan out the way both principals

intended, Mentee 3 spoke about the value she placed on carving out time to Skype. She

felt that because Skype required both principals to communicate and set aside time, she

was more likely to keep in contact with her mentor than if they had not tried Skype:

> So, we set up weekly Skype meetings to which we would schedule them on
> Thursdays at about 4:00 when we were both, kind of, finished with the day, and
> we would use it just to check in with each other – great interface because we got
> to see each other's faces and, kind of, see reactions to things in lieu of being able
> to meet because when you have a schedule like we have sometimes it's hard to
> carve time out of your schedule to meet. So, it gave us some face-to-face contact
> without having to disrupt our schedules, so to speak.
> I think it has definitely aided my ability to learn. For me, part of learning is also
> learning how to balance my schedule and scheduling it every week 'cause we
> often get tied up in our own things that we have to do, and even when you have a
> mentor, you can let that slide, and by scheduling it every week to talk via Skype,
> it kept us in constant contact. So, it helped me learn to balance the new schedule
> and to make sure that I kept in contact with a person who knew the ropes in ABC
> County anyway.

Mentee 3 was alone in describing the synchronous communication of Skype as

supportive of e-mentoring relationships. Although both principals found face-to-face

meetings, phone, and e-mail as more practical ways to communicate, they recognized the

importance of pre-scheduling time to connect, and appreciated that in order to Skype, this

is a requirement. Mentee 2 also related the importance of scheduling time to Skype, when

she spoke about using Skype technology in her personal life:

> Well, I think first of all, and this is kind of what we did with my daughter when she was in the Middle East, is that we set up a time, and I think that's the carving – it was like sometime Saturday morning between 9:30 and 11:00 both of us – my husband and myself and my daughter, all three of us agreed that we would Skype each other once a week in that timeframe. And I think that's really – you know, that's really essential, to have that time.

The principals communicated a sense of value that in order to connect via Skype, they

needed to pre-arrange meeting times. Mentee 3, who spoke more positively of Skype than

the other principals said:

> Because I think that's the important piece, to set this time aside and say, "At the end of the day today I'd like to get with you around 4:00 PM and if we can discuss some things that I've done today, or some questions that I may have had today."

This principal communicated a high willingness to use Skype for e-mentoring because

she valued seeing facial expressions when communicating with her mentor. Although the

principals talked about the value of setting aside time to Skype, and one principal talked

about the value of the visual element of Skype, the reality was that the synchronous

element of Skype precluded the principals from Skyping. More Skype appointments were

canceled than actually took place.

A feature of Skype that was addressed by only one principal is that the program

can be left "on" on one's computer, alerting the user when there is an incoming Skype

call. Mentor 1 commented, "You just can't pop in on somebody. To me it's like popping

in on them in their office. You never know who's there, what they're doing, and that kind

of thing." She also agreed with the other principals that in order for Skype to be

considered a practical tool in e-mentoring, scheduling time to meet is crucial. Although

all of the principals commented on the ease of using e-mail, because it can be answered at

the convenience of the users, all the principals were acutely aware of the need to keep

sensitive subjects out of e-mail. One principal related that questions dealing with policies

were fine to put in e-mail, but if her mentee had questions that pertained to personnel

issues, they always used the phone to communicate. This principal recognized the

permanence of e-mail and the county's policies on appropriate use. Therefore, the overall

feeling was that it was safer to talk about some topics via the phone, where it was felt

there could be less misinterpretation of communication and no formal documentation.

Mentor 1, who also agreed that some subjects were better discussed via phone,

highlighted that there are times when principals need documentation of conversations:

> So when you're Skyping someone, once you get off, that conversation is gone. It's
> not there anymore. And depending on the situation, you might want some
> documentation that you had the conversation. If you sent an e-mail, you've got
> documentation that you've had a conversation. I think that that piece is important.

She, like many of the principals, was aware of matching the right mode of

communication with the right situation. She perceived Skype as another tool to add to her

belt of communication tools, one that she used occasionally for interviewing candidates

who cannot access the school readily, but a tool that, in her eyes, did not fit for mentoring

a new principal in ABC County. Similarly, Mentee 2, an avid Skype user, did not see a fit

between the mentoring that was taking place and Skype technology:

> I know it's kind of a cool idea, and I think we've talked before — I'm a great
> technology user, but I think if it's the right tool for the job, and I think probably in
> ABC County, Skyping is not necessary.

These principals valued using multiple forms of communication at their disposal, but their already established communication practices precluded the principals from needing to Skype.

Values and leadership style. The data from research question 1 also garnered information on the principals' individual values and how their individual leadership styles influenced their description of e-mentoring engagement. Mentor 1 communicated the most deep-seated reasons for why she chose to use different forms of communication, and those choices were attached to her values. Throughout our conversations she communicated a strong sense of being a student-centered leader. She is principal of the only middle school that does not use walkie-talkies for communicating between the principal and assistant principals. She prefers face-to-face communication with her assistant principals and prefers walking through the building to find people, rather than contacting them via walkie-talkie. She adamantly described the impersonal nature of calling someone on the walkie-talkie. She related, "I've refused to have walkie-talkies here." The background experiences and knowledge of Mentor 1 informed how she engaged with the e-mentoring technology. She places value on face-to-face communication. The relationship-building skills she uses with her assistant principals and other colleagues at her school was transferred to her relationship with her formal mentee. In fact, she described her relationships with the other colleagues at her school as mentoring relationships. She absolutely preferred face-to-face communication. When asked what form of communication she used most frequently had with her mentee, she replied:

By phone and then when we see each other in person, but that's usually scheduled, like a Principal's meeting or something like that. Just like today she called me and she had some questions about what we were about to go into staffing. She had four or five questions that she wanted me to answer. She called me on my cell phone first because I did tell her, "The best way to reach me is on my cell phone because I try to keep it with me at all times."

Vital to this discussion is Mentor 1's focus on serving students. Throughout the interviews she continually tied the conversation to what was important for students. It was clear that this value affected every decision she made. For example, when discussing the ideal time for mentoring to take place, she reported that it should take place after the students have left the building. Once students and staff have left for the day is when she answers phone calls, reads and answers e-mails, and works on paperwork. Recognizing the importance of leadership development was also something that made Mentor 1 stand out. She was admittedly not the most avid technology user, and did not see the practicality of Skyping with her mentee, but her value of leadership development drove her to insist that her mentee call her, at any hour, on her cell phone. She also spoke about the necessity of ABC County to create leadership development opportunities for assistant principals:

> I also believe that there needs to be, here in this county, and it's the only one I speak to, a mentoring program for assistant principals as well. I think that we need to do a better job of getting assistant principals ready to be principals in ABC County and not have to go outside to get principals.

Mentor 1's tightly held value of the importance of face-to-face communication contrasts sharply with Mentee 3's value of what she perceived as the convenience of Skyping. Mentee 3 was proficient in Skype technology, and had used many different forms of technology to communicate throughout her doctoral program. When asked what

form of technology she preferred to use, she described preferring both the telephone and Skype:

> It's probably a tie between the phone and Skyping. The phone is really easy. You just pick it up, and you use it. However, Skyping is just as easy 'cause it's on the phone or the iPad so we can pick that up and use it again. It's really a matter of if I want to see the face and I want to get the reaction of what the face looks like, Skype provides that for me. If it's just like, hey, I have a quick question, and I need to get this answered, and I need, like, a three-word answer, the phone is quicker.

Mentee 3 valued the body and facial gestures that Skype afforded:

> It gives you that face-to-face contact without having to actually go through the physical act of being together. So much of the job that we do is communication, and communication is very important because you have to be able to read faces, and you have to be able to read body language which is very difficult to do in an e-mail and sometimes difficult to do over the phone. So, if you can actually read the face and see the body posture and just kind of pick on what the person's giving you without words, which Skype allows you to do that, I think you get a lot further in terms of facilitating the communication and moving things forward and relationships and all that other stuff.

The two different reactions of the principals provide insight into how principals described their engagement with e-mentoring technology.

E-mentoring conversation content. Important to the way the participants described their engagement with e-mentoring technology was the topics of their e-mentoring and mentoring conversations. Mentee 3 described, "I've asked her (Mentor 3) on occasion, 'What's the fastest or most efficient way to get something through the system?'" Mentee 1 described her mentoring conversations in a similar fashion, "It's really just, "How do I do this? How do I do that?'" The mentees also described the function of the mentor as a sounding board. Both the veterans and novices described the mentoring relationship as one in which the mentor was utilized as someone the mentee could turn to when questions arose. For example, Mentee 3 described, "If it's just like,

hey, I have a quick question, and I need to get this answered, and I need, like, a three-word answer, the phone is quicker." The nature of the mentoring conversation is one reason the phone became the most useful form of communication. The nature of the mentoring conversations also reflected the different needs of the three principals. Mentee 3 had been a principal before. She described her mentor as someone who:

> Helped me through – again, learning the new county system was the biggest thing, so she's really walked me through step-by-step of things that I had to do. For example, Middle School Fair was new to me, so she walked me through step-by-step of, "Okay, this is what it looks like. This is what it sounds like. Here's the three things you need to do before. Here's the three things you need to do after. Here's the deadlines, and by the way, this will be coming up, and then we'll walk through that." She really kind of did a good step-by-step of, "Here's what might be new to you, and here's what it's going to look for you, and here's the things that you have to do." She was pretty good at getting down to the nitty-gritty of these are the seven things that you have to do.

The needs of Mentee 3 are contrasted by the needs of Mentee 1, who had worked in the county for several years. She described using her mentor as a sounding board and for emotional support:

> I do have the sense that she would advocate and probably had advocated on my behalf without me even knowing it. And I also appreciate her honesty. I feel that she listens to the issue. She asks intelligent questions, and she's candid about her perspective.

She continued to frame the exchange of information as mentee-initiated. Mentee 1 continued, "she was good at helping me when I brought an issue to the table, helping me recognize a constituency I might have overlooked." While the mentees all described the conversations with their mentors differently, common to all three pairs was that the conversations were consistently mentee-initiated.

Network of mentors. Another important theme that emerged when looking at the data set on how principals described their engagement with e-mentoring technology was

the notion that all of the principals utilized a network of mentors in their leadership development. Notably, when asked who was most influential in their leadership development, the mentees described someone other than their assigned mentor. The mentors also identified others important to their leadership development. These individuals ranged from a family member such as a husband or father, to colleagues, such as another principal in the county, an assistant superintendent, or a former colleague from a previous work setting. Although each principal identified a unique mentor that helped develop her leadership capabilities, common among all the principals was the importance of having multiple mentors. There existed a sense that having a network of informal mentors was important because different people have different expertise. Mentee 2 explained, "That's why it's good to have more than one person that you can go to. I think that I have a couple of principals that I can call if I have a very specific question." Although the six principals did not use e-mentoring technology to engage with their informal mentors, it is an appropriate theme to mention here, because this study unearthed the fact that principals had established a network of informal mentors. The principals valued their network of mentors and it is with these individuals that conversations about vision, mission, and leadership growth took place.

Significance of Program Structure

Integral to the conversation on the impracticality of Skype was the participants' perception that the e-mentoring program was informal in nature. Throughout the course of the interviews, the participants gave several examples of how the informal structure of the program had an impact on their Skype usage. The Assistant Superintendent in charge of the program described the connecting of novice and veteran principals as more of a

129

strategy to support new principals than a formal program with an evaluation component. Consequently, some of the frustrations chronicled below need to be understood from this perspective. I never sensed the principals were blaming the program for lack of support, but simply voicing the reality of their situations. Throughout the interviews, participants continually referenced structural components of the program. For example, Mentor 3 lamented that she felt she could have helped her mentee more if she had had more time to prepare to mentor. She had never been a mentor before, and this, compounded with being asked to use new technology was expressed as overwhelming:

> I think that things were just a little bit ahead of where I was in terms of being ready to begin this. I was notified at the Administrative Conference that's what I was doing (mentoring). There wasn't a lot of lead-time for either one of us to get used to it. Of course those are three of the busiest weeks you have, right after Administrative Conference and starting school. I'm sure I could've been more helpful in my time to my mentee except that I had my hair on fire myself.

Although she was an experienced principal, well respected by the community, her staff, and those above her, she did not feel she was well prepared to support a new principal via a new piece of technology. In fact, in reflection, she recounted the informal way she found out she was to be a mentor:

> I have no idea. All I know is that…In fact, maybe Mentee 3 said – I'm trying to remember how I heard about this. I don't know how I heard about it. And then I said something to the Assistant Superintendent in charge of the program and she said, "Oh I thought I had told you." Or maybe she said, "Now you're going to be Mentee 3's mentor and Mentor 1's going to be Mentee 1's mentor." And I said, "Oh," I said, "Did you tell me?" Anyhow, she thought she had already told me this. It was, as usual in ABC County, very informal, just sort, "We should do this kind of thing."

Listening to the unstructured way in which she was assigned to a mentee and asked to Skype, it was evident that she did not place blame on ABC County in any way. She was accustomed to the informal operations of the county and, in fact, compared it to her first

year as principal. She was assigned a mentor and another new principal was not. She

reflected laughingly that she was never sure if it was just an oversight, or if the county

did not have as much faith in her as they did in the other new principal.

The informal nature of the mentoring program came through when participants

were asked to describe how frequently they connected with their mentor or mentee.

Mentee 3 explained:

> I think there was a minimum expectation that we would at least meet once a
> month, and then I think the rest of it was left up to us. My mentor always left the
> door open and said, "Anytime you need to meet, anytime you need to call me,
> here's my 8,000 numbers; you can have them." She was very open to me calling
> at any time to ask any kinds of questions.

With a lack of formal expectations for how mentees and mentors should support one

another and a lack of structured mentoring activities, how mentees and mentors engaged

with one another was guided by their own personalities and experiences. All of the

principals agreed that Skype could be considered an effective e-mentoring tool under the

right conditions, but within the ABC mentoring program, it was not widely used. The

participants related that within a more highly structured program, they might have been

more apt to use Skype technology. Mentee 1 had specific advice on how to improve the

structure of the overall mentoring program to facilitate more Skyping:

> Well, I think they (principals) need to know about how to Skype. I think they
> need to be supported on site and setting up their Skype accounts and having some
> practice sessions. I think it's a real assumption to make sure that everybody's on
> the same spectrum. Skyping wasn't part of our TSIPs (Technology Standards for
> Instructional Personnel) or that sort of thing. And then I think you need to
> somehow work with the principals, maybe the mentors more than the mentees, in
> carving out times during the school year and day, perhaps, because I think it's so
> easy to allow yourself to get caught up in that stream of never-ending to-dos that
> while you're well intentioned, if you don't designate that time to Skype when I
> think certainly in a county as small as ABC County, it feels more intuitive to pick
> up the phone, then it's just creating a culture of using technology to communicate.

Mentee 1 described how the informal nature of the ABC mentoring program did not

support wide-spread Skyping as a part of e-mentoring practices. The principals agreed

unanimously that professional development on how to use Skype in an e-mentoring

program was a much-needed structural element of the program, but even without the

professional development, an openness to trying the technology came through in the

interviews. Mentor 1 explained:

> Is Skype out? No, I don't think it should be. It's something to try. But again, you
> have to set those parameters for it. And again, that might be one of the
> professional development pieces. How do you make this effective?

The informal structure of the program was referenced widely by the participants

as they discussed their engagement with e-mentoring technology. The following section

will delve deeper into the inception of the ABC mentoring program and piloting of the e-

mentoring component.

The Skype Initiative

Research question 2: Why did program designers incorporate e-mentoring

technologies into the new principal mentoring program?

Research question 2 asked why program designers incorporated e-mentoring

technologies. The ABC mentoring program has a unique history. It began with the

leadership team of ABC County valuing mentoring and having the resources to support it.

The Assistant Superintendent of Administrative Services described how the program had

changed over the years. At its inception, there were four recently retired principals. There

was low principal turn-over in the county, and a higher assistant principal turn-over, so

the retired principals would work with the Assistant Superintendent and each would

132

mentor a few new assistant principals. The mentors and Assistant Superintendent worked

as a team to support the new assistant principals in a variety of ways:

> So we had a cadre of about four of them. They would meet with me and we'd divide up in the beginning of the year. They'd each take two or three administrators (new administrators) and mentor them. They'd meet together with them the beginning of their time together. As a group we all met together and then the retired folks would go out to the schools and meet with them about once a month, once or twice a month, to just kind of be with them for a day, a half a day to walk through their day with them, to review what they were working on and give suggestions and support, and be kind of general mentor in and a phone call away kind of person if they had an issue.

There was funding for the retired principals to serve as mentors. When the funding

stopped and the retired principals moved on to other things, the program changed to use

sitting principals as mentors to new principals.

A brief description of the current ABC mentoring program follows. The Assistant

Superintendent will ask newly appointed internal principals if there is a particular

principal he or she would like to have as mentor. The Assistant Superintendent matches

the new principals coming from outside the county with a sitting principal.

When making these matches, she considers the level of the school. New

elementary principals are matched with elementary school mentors, and so forth. The

Assistant Superintendent also considers her firsthand knowledge about and personality of

the mentor principals. She also supports the new principals by running monthly meeting

for new principals. At these meetings she checks in with the new principals, they have a

focused learning discussion on a topic important to new leadership, and they are

introduced to other leaders in various departments throughout the county.

The expectation is that the mentor will support the mentee throughout their first year of principalship. The Assistant Superintendent explained the informal nature of the program when she was asked if mentors had any concerns about being asked to mentor:

> So when you ask – when I ask someone to be a mentor who hasn't done it before they'll – they might be a little anxious "Do I have – how am I going to take care of somebody else?" You know, "How much work is this going to be?" And there's not a set time you have to put in, five hours a week to do this; it's nothing like that. But the expectation is there would be frequent check-ins and follow-up, and when we are all together to kind of check in with the person to make sure that they've got – that they're understanding the whole new teacher evaluation system. It's hard enough for anybody asking the mentors just to check in with the new administrators to make sure that they get their questions answered or is there anything else that they're not understanding.

Once the matches have been made and the mentors given some guidance on how to support their mentee, the Assistant Superintendent continued to check in with both mentors and mentees throughout the year. The entire program was described as very informal, with no evaluation component. It was described by the Assistant Superintendent as providing the new principals with a point of contact for questions and guidance. One important challenge to note in the ABC mentoring program is the small pool from which to pull mentors. There are only five middle schools in the district and the year this study was conducted, there were two new middle school principals.

Understanding the informal nature of the program is an important contextual element in understanding the mentors' and mentees' experiences with Skype technology. The Assistant Superintendent asked the principals to engage in e-mentoring technology because she believed it would save time. She frequently hears how overworked principals feel and, as noted above, has firsthand experience with some of the fear principals associate with the time commitment on mentoring. In her eyes, mentees and mentors

using Skype technology to communicate would relieve the stress of time spent traveling to meet. She also felt it important for principals to stay abreast of new technology.

Challenges and Benefits of E-Mentoring Technologies

Research question 3: What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program designers?

Research question 3 asked the participants to describe the challenges and benefits of using e-mentoring technology. This question was designed to more fully understand the experiences of participants engaged with e-mentoring technologies. The responses shed light on an unstudied phenomenon. Specific to e-mentoring, the challenges included lack of Skype training, creating time to Skype within the scope of principal duties and responsibilities, and unmatched technology experience between mentors and mentees.

Lack of Skype training. As chronicled earlier in this chapter, participants in the ABC mentoring program were given no formal training on Skype technology. When asked about the challenging aspects of e-mentoring technology, participants who were not proficient in Skype found navigating its set-up and use challenging. Mentee 1 was the only participant who had never used Skype before. She found the process of securing a camera for her desktop and setting up her Skype account to be challenging. When asked about receiving any help in the set-up process, she described her perception of a hands-off approach, "Figure it out yourself and do it." Mentee 2 also voiced the challenge of using any type of technology. She explained that with even the most commonly used technology, there are times when it fails. "The other disadvantage is that as we all know, that there's often glitches in technology and you have to be able to work through those

135

and be patient." The three mentors, all of whom had used Skype in staff interview settings, also found the process of setting up Skype challenging.

The challenge of receiving little help with Skype set up and use highlighted the need for professional development. The desire to access professional development on using Skype for e-mentoring purposes was a common theme throughout the interviews of all six principals. Mentee 3's words best capture this theme. She, who had used Skype regularly in her doctoral program, and was matched with a mentor who was less adventurous with technology, felt professional development on Skype was a major missing link of the ABC mentoring program. She felt her Skyping experience would have been smoother had her mentor received more support on the nuances of the technology. She was proud of the effort her mentor put into using it, but felt more extensive use of Skype could have happened had there been more training:

> I think encouraging people to use the technology but teaching them how to use it is also helpful. I think that it was fine for me because I already knew Skype, but I know that the other person did not. And so, she had to rely on her ITC to help her with it, who I'm not sure was completely helpful. So, I think also making sure that people are comfortable with the platform before even going into it so that there's not that nervousness of, "Oh, my gosh, how do I do this?" The comfort level is already there. If you take that human barrier out of it, then the technology doesn't become the issue anymore. That's kind of been my experience with technology across the board. If you take that barrier out of it, you take the human "I don't know how to do this. I'm afraid" – the self-efficacy out of it, then the technology no longer becomes an issue. It's just a medium to use.

Mentee 3 also felt that specific professional development on how to best utilize Skype for mentoring would have been helpful for all participants, even avid Skype users.

Creating time to Skype within the scope of principal duties and responsibilities. Another theme prevalent in the data set on challenges was the concern participants voiced over the necessity of setting aside time to Skype, and then committing

to the appointment. The mentor principals described hectic, long days, and how

unexpected happenings frequently change a principal's best laid plans. The mentee

principals also found committing to Skype appointments as a challenge, but felt a more

structured accountability effort could have changed this. All participants agreed that

finding time to Skype was necessary to build a good e-mentoring relationship.

The veteran principals seemed the most unenthused over using Skype and piloting

e-mentoring. Throughout the interviews they described working many late nights and

weekends, and struggling to implement new initiatives, which they felt demanded their

attention constantly. Adding one more thing to the schedule seemed frustrating to some.

Mentor 2 described the challenge of not just committing to Skype time, but also to

supporting her mentee in any way:

> I think one of the challenges we all face is finding time because the job never
> stops. If you're here at 7:00 AM there are people at your door at 7:00 AM. If
> you're here at 7:00 PM at night there are people at your door at 7:00 PM at night.
> You need to get your observations done, meet with parents – I think this area; it's
> more intense than in most. I think finding that time consistently is a challenge for
> all of us.

Mentor 3 described the challenge of a finding a mutually agreeable time to Skype:

> We had some fits and starts with the Skype not working. And I had to get Skype
> set up here and I'm not as tech savvy as some. And (my mentee) was interested in
> Skyping on the weekends and I really try to save my weekends, as much of them
> as possible, for my family so I said, "Well, I'd rather do it after school, 4:00,
> 5:00."

The two principals did set and agree to Skype appointments, but it is a challenge worth

noting because several principals had different ideas of when appointments would best

work. Mentor 3, the mentor who used Skype most often, described herself as most useful

to her mentee by being available when questions arose, rather than in pre-arranged Skype

appointments. "We set it all up but it seemed that it became easier for Mentee 3 to, as

needed, ask for help rather than have a set time." The other two mentors also saw the

value of scheduling Skype appointments and sticking to them in order for e-mentoring to

benefit both principals. Mentor 3 also echoed this when asked if mentoring either

supported or did not support her growth as a leader:

> I think that if we had had a more scheduled – "Okay every first Tuesday we'll
> Skype." Or, "Once a week we'll do this. We'll go out to eat, or whatever." Having
> a regular time to meet I think would have been a little more systematic and as far
> as my growth as an administrator perhaps. …It's sort of hard to make time for
> some of these extra things. We've got so much stuff piling on.

Despite the recognition that creating time to Skype was difficult, the veteran principals

clearly voiced the necessity to create the time, because they valued mentoring. Mentor 1

captured this:

> Because I think that's the important piece, to set this time aside and say, "At the
> end of the day today I'd like to get with you around 4:00 PM and if we can discuss
> some things that I've done today, or some questions that I may have had today."

What impeded her frequent use of Skype was her belief that her time was better spent

with the students. This, as mentioned earlier, was a clear value of Mentor 1. When

reflecting on how time issues could be resolved, her student-centered perspective was at

the forefront:

> I think what has to happen is the logistics of it need to be worked out. And again,
> that (to me) means, "When are we going to do this?" We're administrators. Our
> primary time is spent with kids. I very rarely close my door. So I don't do work
> while the kids are there.

While her first concern was always students, she also valued mentoring not just new

principals, but assistant principals. She firmly believed that more should be done to

mentor and help assistant principals who want to become principals.

The mentee principals voiced similar challenges related to finding time to Skype

with all of their new responsibilities as principal. Another challenge to setting Skype

appointments voiced by one participant was the lack of accountability set by the informal nature of the mentoring program. When describing why more Skyping did not occur, Mentee 1 explained, "I also think it's probably lack of delegated time, both between the folks in the relationship, but then also it was not an expectation from the higher ups, either." Had there been more oversight in who was Skyping when, she felt more principals would have pushed outside their comfort zone instead of relying on what was most comfortable, using face-to-face meetings, the telephone, or e-mail.

In summary, both mentors and mentees voiced setting up and committing to Skype appointments as a challenge. Within the data set on challenges, this was the number one challenge, closely followed by the challenge of unmatched technology experience between mentors and mentees.

Unmatched technology experience between mentors and mentees. Some participants referenced differing levels of technology experience as a challenge of e-mentoring. The participants perceived an unmatched degree of enthusiasm to experiment with Skype. The mentees, having just been appointed new principals, followed their mentor's lead in frequency of Skyping. They expressed gratitude for the opportunity to work with an experienced principal and were therefore unwilling to push technology usage, if their mentor preferred face-to-face meetings. For example, one mentee stated, "I had some struggles sort of figuring out the technology and my mentor was not at all willing to participate." She continued, "I was open and game, and I knew from the get go, my mentor wasn't interested. What could I have done?" When asked, "Did you feel confident initiating the Skype conversation, or did you follow your mentor's lead?" she replied, "I followed her lead." Another mentee related:

I think what's important is that the person that's making the pairings has to make sure that the person that's doing the mentoring has the time and the energy and the interest and they see e-mentoring philosophically as something that they would like to do.

Mentee 3 was open about the differences in technology experience:

There is a bit of an age difference between me and my mentor, who she admittedly says she's not very comfortable with technology, although she was a real trooper in saying, "Yes, I'll do it. I'll figure it out." So, I think maybe a generation gap was a little bit more difficult for us. Because I will say when I did use it in my dissertation, everybody was about my age with my technology level, and again, we used it all the time. So, it was a little bit easier.

Mentee 1 expressed the concern of burdening her mentor:

I'm not going to bother her unless I figure I'm really in it, big. But I think if it were a more structured kind of give and take, I would be more willing to kind of have that ongoing conversation.

Her words demonstrated one reason mentees were unwilling to insist their mentors Skype. They respected and valued their mentors. It was clear when interviewing the mentees that they were reluctant to speak ill of their mentor. However, one mentee discussed candidly the differences she perceived between herself and her mentor. She felt they were not able to build the trusting, supportive mentor relationship that the mentee had hoped would develop. Therefore, she did not push the Skype initiative with her mentor at all.

In conclusion, all three mentees followed the lead of their mentor with regard to Skype usage. The difference in technology experience between the pairs was a challenge to the mentees, but also a challenge recognized by the mentor principals. The three challenges categorized above, lack of Skype training, committing to Skype appointments, and the unmatched technology experience of principals, were the main challenges displayed in the data.

In addition to the challenges, research question 3 asked participants to explain the benefits e-mentoring technologies present to mentees, mentors, and program developers and administrators. The main benefit the Assistant Superintendent hoped participants would experience by using Skype was saving travel time. She felt that participants could receive the benefits of face-to-face meetings without pulling principals from their buildings. She also believed it was important for principals to stay abreast of technology, and to model technology use for teachers. The mentees and mentors experienced limited benefits because there was limited Skyping taking place. When the principals did expound upon benefits, they referenced the benefits of Skype for different school districts or places, not for the ABC mentoring program. The principals also described the benefits of Skype in activities other than mentoring. For example, Mentor 1 described the cost saving benefit of Skype use in teacher hiring practices:

> You're still seeing the person, just like they were sitting there. You're asking them the interview questions and that kind of thing and it actually saved a bundle of money because the person didn't have to fly in or drive in-thirty minutes and it's done.

Using Skype in an interview setting or for personnel connections with far away family members were the most familiar engagements with Skype. This was the first time all the principals used Skype in e-mentoring. Skype was described as a tool useful in larger districts, where face-to-face meetings were not practical.

Mentee 3, held the strongest pro-Skype voice among all the principals. She also was accustomed to using Skype in educational settings; she had used it frequently to communicate with colleagues in her doctoral program. Interestingly, she compared the visual aspect of Skype to the nonvisual aspect of the telephone, in contrast to the other principals who described the visual aspects of Skype as impersonal. However, in their

141

descriptions, they were comparing Skype to face-to-face meetings. For example Mentor 2 said, "To me it's not as personal as meeting someone."

Suggestions to Enhance the Effectiveness of E-Mentoring Technologies

Research question 4: What do mentors and mentees suggest should be done to enhance the effectiveness of e-mentoring technologies?

Research question 4 asked the participants to make suggestions on enhancing the effectiveness of e-mentoring technologies. This information is important because the ABC mentoring program is the only documented case where Skype was piloted in e-mentoring new principals. Much care was taken to present the following suggestions accurately, in the voice of the participants. Having set expectations and guidelines for e-mentoring was important to the participants. Infused throughout the discussions of structure, was the necessity for structural elements to be practical. By practical, the participants communicated a need for structural elements of the program to support and work within the confines of principals' duties and responsibilities. The principals worried that too much structure would hinder their ability to mentor effectively. What follows are the suggestions the principals shared to enhance e-mentoring technologies. The data was garnered through discussions of what worked throughout the full year of mentoring, what did not work, goals and aims of mentoring, and discussions of ideal e-mentoring situations.

Call for more programmatic elements in e-mentoring. All the principals were in agreement that more structure would enhance the e-mentoring experience. Mentee 1 compared the very prescriptive teacher-mentoring program of ABC County with the very loose mentoring for new principals:

Well, I mean first it needs to be a mentoring program. You know, what I appreciate from a T-Scale perspective is that it is deliberate, it's systematic, it's funded, although less so now, and there's an oversight to it, a management of the program. And so if we were going to institute that for our leaders I would expect the same thing with benchmarks and incentives, if you will, for folks to act as mentors…

Similarly, Mentor 3, made a comparison between the expectations in both student and staff mentor situations:

Well, I think there should be a list of expectations. For instance, when we mentor kids as a staff with teachers, there was a list of expectations that were given out when we first started the program. When people are new mentors we need to have a better job of following up with that. We did a lot of that at the very beginning, years ago, and then we sort of – as new people have come in we haven't spent the same kind of time saying, "This is what you should be doing as a mentor. This is what you should not be doing."

These two examples capture the overarching desire to have a more structured mentoring program. The principals cited specific elements when envisioning a more structured e-mentoring program, which included tools geared at facilitating a more meaningful exchange of information between mentee and mentor.

The mentors in this case study had not ever mentored before and, in reflection at the end of the year, two stated specifically they felt they could have done a better job of being a mentor if they had been given more guidelines. One principal said she would not mind attending a class or training on mentoring, but for the most part, the principals agreed they were well equipped to mentor. They cited examples of their experiences mentoring staff, such as teachers and their administrative teams, as preparation for mentoring a new principal.

The mentor principals expressed the desire for tools that would enhance their mentoring capabilities. It was suggested that having a calendar of monthly duties would help the veteran principals remind and prepare the novice principals of important

responsibilities. Mentor 3 referenced a particular meeting that occurred every fall. She

felt badly that she had not discussed the meeting, which requires considerable

preparation, until a few days before the meeting. It was her mentee who called her and

inquired about the protocols for the meetings. Mentor 3 referenced that such a calendar

would help her anticipate, "what somebody might not know because I've been doing it so

long it never, ever occurred to me to mention it to (my mentee)." Another useful tool

included a list of topics generated by the mentees that they would like more information

about. One mentee stated:

> I think, also, one of the things I've been frustrated with this whole mentoring
> thing is it's not particularly structured, so I feel like I would probably set some
> parameters about how many times you need to be meeting or what you're
> touching in about sort of like what we do with our teacher mentors at Back-to-
> School Night, you need to make sure your mentee's set for that, or when you're
> exporting your first-quarter grades.

The mentors were conflicted about what information to share with their mentees.

These suggestions, from the viewpoint of the mentors, were small ways in which they felt

a little more oversight of the program would have contributed to more substantial

mentoring conversations. Having a list of research-based issues or concerns of new

leaders would have helped guide Skype conversations as well. When speaking about the

need for more structure in an e-mentoring program, the principals were envisioning a

structure that allowed for and facilitated more information sharing. Although the mentees

valued the advice and support they received from their mentors, they felt they could have

used more information. The mentors, in turn, did not know what their mentees wanted.

The mentees also expressed different needs. Mentee 3 was in a unique situation because

she had been a principal in another district for four years. She characterized her needs as

needing to understand "the ABC County way." Her mentor expressed concern over what

type of information to share. She did not want to insult her mentee by sharing information she already knew. Overall, the mentors struggled with what information to share with their mentees, preferring instead, that the mentees come to them with the questions. A true mismatch of expectations over who should initiate the mentoring conversation between the mentor and mentee was revealed throughout the course of the study.

When speaking about how to enhance e-mentoring technologies, the principals highlighted that the Skype initiative did not mesh with the way the mentoring of new principals had been set up traditionally in ABC County. Skype was not a practical form of communication when a new principal wanted to ask a quick question of her mentee. However, using Skype to communicate twice monthly on a focused topic was envisioned as a practical use of e-mentoring technology. The principals recognized that more information, other than the need-to-know, right-away logistics that was often part of the mentoring conversation, could be shared in this more structured e-mentoring environment.

Need for balance. Although all participants voiced the need for more structure, they were careful to clarify that too much structure would hurt the commitment one makes to mentoring. The time and energy commitment of mentoring was in the forefront of many principals' minds. Mentee principals referenced the importance of finding mentors who are eager to mentor. The principals in this case study collectively valued mentoring and were devoted to sharing their ideas on the appropriate balance of structure required to enhance e-mentoring. The principals, especially mentor principals, were acutely aware of the time they commit to their jobs. They were not looking for "extra duties," but meaningful structures that would enhance the overall mentoring experience.

The principals felt too much structure would hurt both mentees and mentors. Being

loaded down with too many extra requirements, such as personality inventories, team-

building activities, or work projects, were not things the principals felt would enhance the

e-mentoring experience. However, having someone outside the program determine

minimum time expectations for Skype meetings, and the tools listed in the preceding

paragraph were all suggestions the principals felt would enhance the effectiveness of e-

mentoring.

When the conversation turned to the professional development piece, the

principals preferred having someone come to their office to demonstrate new technology

in a hands-on way. However, attending a small class was another common suggestion.

Mentor 2 discussed the need for principals to be able to ask timely questions and how

principals sometimes do not want to admit what they don't know in front of colleagues.

She had experience with larger trainings and felt them to be less effective, "I do think

sometimes when we have training classes, they're so large that you really don't get much

out of it. And you need to be able to ask those questions right when you need to ask

them."

The need for e-mentoring technology to be practical became salient when one

principal described the ease and practicality of another piece of new technology. She

described with a positive tone how she was introduced to the concept of writing teacher

evaluations on her iPad:

> I did my observations this year on my iPad. And great, it just, it made my life
> easier. It was, you know, I walk around with my iPad usually anyway, and then
> instead of writing them and then coming back and having to type, really very
> handy to walk around with that. So that was a new technology. I worked with my
> ITC. I collaborated with a couple of other principals on doing that. So, to me, that
> makes really good sense.

146

When asked about the professional development piece for iPad observations she described:

> Just somebody…basically giving me the template and sitting down with me. And actually, what we did is I sat down and looked at the template with my ITC, and then a couple of us, three or four principals got together with my ITC, and we talked about tweaking it and what would make it better. Then we used it, and then we got back together. So I mean, again, very practical. It's right, it's the right tool for the job.

Her positive experience with the training and use of a new piece of technology provided a concrete example of some of the same elements that other principals suggested needed to happen to make e-mentoring more effective. The training was done in a small group, it was done in the principal's office, there was the opportunity to ask questions and give feedback, and the technology itself was viewed as something positive. Ipad observations were a real time saver. It relieved the principals from having to go to their office to write evaluations. The Skype initiative, as it was rolled out and described in this case study, did not have the same effect.

Because creating structures to enhance e-mentoring was important to the principals, but doing so in such a way that does not impede upon their already established duties and responsibilities, I asked the participants' opinions of where and when e-mentoring should occur. All principals agreed that when students are in the building, it is not ideal, or even feasible, to focus on mentoring. July and August, and after students and staff leave school, were the top suggestions. One principal suggested the first period of the day, once students and staff have arrived, and the first class begins, as a suitable time. She believed this time slot would provide fewer disruptions.

One mentee, who shared the belief of others that an area in need of improvement was an easier flow of information, brought up coaching conversations, but questioned the feasibility:

> I'm open to the idea that a mentoring relationship could be a coaching relationship, but I think that's different than putting out fires, or logistics, and to have to roll all of that into one, would be ideal, but the amount of time required by the mentor is significant and I don't know if that's realistic. I think if you're going to have that, it can't be an active principal. It needs to be somebody who's retired or who doesn't have the daily demands. So ideally, yeah, I think you need to have a leadership coach who's also familiar with the system and can tell you who to call when, and give you some feedback about logistics as well as being sort of a – sort of aware of the arc of chronology within a year, when you're going to need that support. But I don't know that that can be done by somebody who's active duty.

The desire for coaching, but the worry of its feasibility, described above, accurately depicts the multifaceted feelings expressed by other principals. The principals expressed a desire for more structure in e-mentoring, but only if the structure could practically improve their e-mentoring experience and not serve to become overwhelming.

Overall, the principals communicated a desire for more in-depth mentoring conversations, but were unclear as to how to achieve this, except for the few examples provided.

The results of this study provide empirical data on the effectiveness of an e-mentoring program for new principal support. Understanding these experiences is the first step toward understanding the viability of e-mentoring for new principal development.

Chapter V: Interpretations, Conclusions, and Recommendations

This descriptive case study depicts the experiences of mentors, mentees, and program designers engaged with e-mentoring technologies. The following research questions served as the road map for this inquiry.

1. How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?

2. Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?

3. What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program developers and administrators?

4. What do mentors and mentees suggest should be done to enhance the effectiveness of e-mentoring technologies?

Support for New Principals

A good principal affects student achievement. However, increased demands of the job, high stakes testing, principal burnout, an aging principal population, and teachers unwilling to become principals are all factors contributing to a principal shortage. Districts, states, universities and colleges, and professional organizations have recognized the need to support new principals and have introduced mentoring as a component of their leadership development strategies. As the number of mentoring programs increases, there is a need for research on effective program components in order to inform program designers and educational policymakers. The literature review in Chapter 2 exposes the effectiveness of e-mentoring technology as the gap in mentoring research. Are e-mentoring technologies a viable component in supporting new principal mentoring?

This study gives voice to mentors, mentees, and program developers engaged with e-mentoring technology. I believe that finding adequate ways to support new principals is a worthwhile venture. Providing a window into the lives of six principals engaged with e-mentoring technology will help shape the future of e-mentoring use in new principal development. Interview questions and other data collection methods were designed to capture the experiences of principals engaged with e-mentoring technology.

Key Findings

Findings included eight elements that impact e-mentoring: 1) background knowledge and experience of the participants; 2) technology experience of the participants; 3) job-related duties and responsibilities of the participants; 4) goals and aims of the e-mentoring program; 5) content of the e-mentoring conversations; 6) technology training provided to participants; 7) synchronous or asynchronous nature of the technology involved; and 8) support for multiple mentors and mentees. Each element will be discussed in relationship to existing literature on face-to-face mentoring and e-mentoring. Positing these ideas within the broader scope of literature exposes commonalities and divergences between this study and others and helps to further the study of e-mentoring for new principal development.

Background knowledge and experience of the participants. When describing why e-mentoring was working or not working, the principals' background knowledge and experience was an influence. Tied to background knowledge and experience is the notion of the willingness of the principal to enter into an e-mentoring relationship. All of the participants agreed that a precursor in e-mentoring success is the initial desire for the principal to engage in the e-mentoring relationship. This desire to engage with e-

mentoring was also linked to several different preconceived notions of e-mentoring. While the principals all valued mentoring, they did not have much background experience or knowledge with e-mentoring. Most described Skype as an effective tool for e-mentoring in another school district, and not within their school district. As discussed earlier, ABC County provided ample time for face-to-face meetings. A willingness to engage as a requisite to a healthy e-mentoring experience is documented by DiRenzo, Linnehan, Shao, and Rosenberg (2010). Their research ascertained that mentees who had prior positive mentoring or e-mentoring experiences had positive e-mentoring outcomes. The quantitative study suggests the frequency of contact between mentors and mentees in an e-mentoring environment plays a vital role in determining positive post-program outcomes. Although studies on e-mentoring address the individuality of participants, most of these studies are conducted on highly structured e-mentoring programs (Hamilton & Scandura, 2002; Rickard & Rickard, 2009; Shrestha et al., 2009). Within such programs there is typically high accountability for participant involvement, which is very different from the current study.

Technology experience of the participants. A significant element in an e-mentoring program is the principals' experience with technology. The principals' technology experience influenced the level of e-mentoring usage and the principals' perception of the viability of e-mentoring to support new principals. Although five of the six principals had used Skype technology for other purposes, none of the principals had used it for e-mentoring. However, the principal with the most experience with a variety of different forms of communication technology was the principal who expressed the greatest desire to Skype and who offered the most positive benefits of using Skype for e-

mentoring. This finding is congruent with other studies that have documented technology

experience as an important element in the success of e-mentoring. Fluency in online

communication is a vital skill (Hamilton & Scandura, 2002; Homitz & Berge, 2008).

Shrestha et al. (2009) investigated a blended face-to-face and e-mentoring program called

E-Success, designed to support first-year university students in the United Kingdom, and

revealed the importance of online communication skills for mentors and mentees.

    Similar to the participants in the present study, the participants in Shrestha's et al.

(2009) study expressed mixed opinions regarding the impersonality of online interaction.

Some mentors in Shrestha's et al. (2009) study felt thoughtfulness and clarity of ideas

could be reached through electronic communication and other did not. The researchers

concluded that the skills needed for face-to-face mentoring are different from those

needed for e-mentoring. A mentor with good face-to-face mentoring skills might not have

good e-mentoring skills, similarly; a shy mentor, one who is not confident in face-to-face

communication, might flourish in the virtual mentoring environment.

The principals in the ABC mentoring program cited unmatched technology

experience as an obstacle in creating an effective e-mentoring environment. Although

they valued face-to-face mentoring activities, each one felt she could communicate

effectively with Skype technology, if given training and support.

Important to the discussion is the principals' personal preference in using

different forms of e-mentoring technology. The principals chose to communicate in a

form that they perceived as comfortable and convenient. Fluent in e-mail, all of the

principals in this study cited specific criteria for when to use e-mail versus the telephone.

Research supports providing mentors and mentees a multitude of e-mentoring technology

options for communication (Shrestha et al., 2009). Rickard and Rickard's (2009) findings showed differing opinions regarding the effectiveness of e-mail for e-mentoring. One participant said, "I am really comfortable with e-mail, and in some ways it probably meant I could be more frank," whereas another participant said, "e-mail contact is not the most efficient form of communication" (p. 759). Overall, these studies demonstrate that experience with technology is personal, and has a significant impact on successful e-mentoring.

Job-related duties and responsibilities of the participants. Despite differing levels of experience with technology, common to all principals in this study are their duties and responsibilities in leading schools. Their work demands were cited frequently in their descriptions of ideal e-mentoring situations or in justification for why more e-mentoring did not take place. The participants in this study prioritized issues related to student learning, and communicated a clear reality of the vast amounts of time it takes to be an effective school leader. The mentor principals cited examples of increased responsibilities and all principals expressed a concern for having the time to accomplish their goals. Creating time to accomplish big and little tasks was a prevalent theme voiced by principals. Because the principals valued mentoring, some created time for it during evening hours.

Unique to this study is that the participants expressed clear concern for e-mentoring to be compatible with their work schedules, but did not view the virtual element as a time-saving benefit. This finding diverges from previous e-mentoring research that cites the time one can save by engaging in e-mentoring versus face-to-face mentoring as a major benefit of e-mentoring (Goldman, 1997; Colky & Young, 2006).

153

Scheduling time to meet without the added strain of travel also is mentioned in the literature (Bierema & Merriam, 2002; Colky & Young, 2006; Goldman, 1997; Single et al., 2005). As documented in the results section of this study, the principals preferred face-to-face mentoring, and did not consider themselves too busy to meet. The school division practices supported face-to-face mentoring time. Embodied within the principals' attempts to make clear to me what was practical and impractical about using e-mentoring technology was the common belief that e-mentoring technology should be utilized in conjunction with traditional face-to-face mentoring. Even Mentee 3, the biggest proponent of Skyping, said, "I could not imagine not meeting with my mentor." When conjecturing on the uses of e-mentoring in more rural school districts, where face-to-face mentoring may not be as feasible, all of the principals underscored the importance of face-to-face meetings. This is consistent with the findings of Shrestha et al. (2009), who studied a United Kingdom mentoring program designed to support first-year undergraduate students. The program provided a plethora of e-mentoring options to graduate students paired as mentees and mentors. Face-to-face interaction was the primary means of providing support to mentees. Some participants felt the impersonality of the electronic interaction was compensated through face-to-face meetings. The principals in this study were open to piloting e-mentoring but did not see it as a replacement for traditional face-to-face mentoring. The visual element Skype provided was not considered advantageous in developing the mentoring relationship. O'Neill et al. (1996) and Rickard and Rickard (2009) also maintained that e-mentoring should be available only when face-to-face mentoring is not feasible or appropriate.

Finding time to conduct face-to-face mentoring was an issue first recorded in research on formal new principal mentoring programs (Alsbury & Hackmann, 2006; Ehrich et al., 2004; Hansford & Ehrich, 2006). With the advent of e-mentoring, the issue of time is still a component under study. Single et al. (2005) commented that time investment was "modest, convenient, and effective in terms of influencing female STEM students' knowledge and confidence about what their future careers may hold" for mentees and mentors in MentorNet. Time spent with e-mentoring technology that is balanced between convenient and effective is at the heart of many e-mentoring programs. Shrestha et al. (2009) found that the flexibility in mentoring hours that e-mentoring provided emerged as a positive factor for mentors.

Although the program described in the present study was intended to have loose structure, several principals communicated a desire for more structure. The principals articulated the clear need for a balance between too much and too little structure. While more structure was desired by some, and thought to enhance the e-mentoring experience, the principals indicated that too much structure would impede the mentoring experience. Overall, structure was cited as an important element in the e-mentoring experience. This case study explored a program with loose structure; other research has advocated for more involved structure. Thompson, Jefferies, and Topping (2010) concluded that effective e-mentoring should involve "systematic induction, mapping all support channels, needs assessment, differentiation and blended forms of communication (p. 314)." The data revealed three elements related to program structure. These are program goals and aims, structures to support e-mentoring conversation, and technology training.

No matter which research questions was addressed, the data made clear that structure matters.

Goals and aims of the e-mentoring program. Several researchers have documented program goals and aims as a challenge for e-mentoring programs and program developers (Headlam-Wells et al., 2005; O'Neill et al., 2005). The administrator of the ABC County mentoring program described the goals and aims of the mentoring program as providing "a point of contact" for new principals in the county. The loose structure of the program did not necessitate frequent Skype mentoring. The school division's practices allowed ample face-to-face meeting time and supported a collaborative culture among administrators. The principals saw each other frequently at county meetings and were able to support each other by answering questions and checking in with one another. The participants did not see alignment between the programs goals and aims and the Skype initiative. There was not much incentive to Skype each other when they could easily call, e-mail, or meet face-to-face. The principals valued the aims and goals of the ABC mentoring program as they understood them, but in order for more in-depth e-mentoring conversation, more program support was deemed necessary. Literature has identified various goals and aims of principal mentoring programs, including role socialization (Alsbury & Hackmann, 2006; Browne-Ferrigno & Maynard 2005; Browne-Ferrigno & Muth 2006; Crow, 2007; Kamler, 2006). Although leadership development was not a goal or aim of the e-mentoring program in this study, leadership development is a goal of many new principal mentoring programs (Villani, 2006).

Content of the e-mentoring conversations. The principals felt more meaningful e-mentoring conversation could take place with more structure and support from program developers and administrators. As documented earlier, the ABC County program goals and aims did not necessitate conversations concerning leadership development. The mentees relied on mentors for answers to specific questions or as sounding boards. A quick e-mail or phone call resolved the issue. For this reason, Skype was deemed impractical by the participants in this study. The principals were open to using Skype to discuss leadership development or other more in-depth topics, and made suggestions for tools and guides to help facilitate these types of conversations, but typically these conversations took place with their informal, self-identified mentors.

The content of mentoring conversation is a vein of research in both face-to-face mentoring (Clutterbuck, 2004; Daresh, 2007; Kram, 1985) and e-mentoring (Headlam-Wells et al., 2005; Single et al., 2005; Stead, 2005). Clutterbuck (2004) and Kram (1985) maintained that the value of mentoring is that participants can deal with real, complex issues, related to the mentors' and mentees' line of work. Stead's (2005) case study on a mentoring program for senior leaders found that the issues raised in the mentoring relationship exposed both vulnerability of the leaders and an overreliance on mentors. Her key finding was that mentoring has the potential to be controlled by the issues raised. The mentoring relationship can become narrowly focused, and broader leadership issues are not addressed. Daresh (2007), found this to be true when interviewing mentor principals. The principals expressed frustration with the desire of mentee principals to want to focus on managerial items and not instructional leadership. Stead (2005) concluded there was a need for a structure to be in place to guide the mentoring activities.

Headlam-Wells et al. (2005) found that technology was not the central factor in e-mentoring, but rather the quality of the relationships developed through conversation.

Single et al. (2005) analyzed the content of e-mentoring conversations at MentorNet and found that a significant portion of the conversations included exchanges about backgrounds, the sharing of social and personal information, and even jokes. The researchers concluded that, although much of e-mentoring focuses on the relevant exchange of information, the importance of good relationship-building skills in an e-mentoring relationship should not be forgotten.

A recommendation from two participants in the study to heighten the content of e-mentoring conversations related to new principal support was to use the Interstate School Leaders Licensure Consortium Standards for School Leaders (ISLLC) as a guide. One challenge is for the various stakeholders involved in new principal development to come to consensus on the structural elements that most adequately support new principals. With the original release of the ISSLC standards in 1996, there has been some standardization on what is considered effective qualities of new principals. The Council of Chief State School Officers (CCSSO) in its publication *Educational Leadership Policy Standards: ISLLC 2008* reported that many new principal preparation programs use the ISSLC standards to inform their licensing and induction programs (p.11). Principal evaluations are also being designed around the standards. The standards are described as "broad, high priority themes that education leaders must address in order to promote the success of every student" (CCSSO, p.6). The standards are:

1.   Setting a widely shared vision for learning;

2. Developing a school culture and instructional program conducive to student learning and staff professional growth;

3. Ensuring effective management of the organization, operation, and resources for safe, efficient, and effective learning environment;

4. Collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources;

5. Acting with integrity, fairness, and in an ethical manner; and

6. Understanding, responding to, and influencing the political, social, legal, and cultural contexts.

Each standard is then followed by a list of specific functions that should be completed by a school leader possessing the quality described in the standard. The ISLLC standards are useful in setting common expectation for educational leaders. Therefore, it makes sense to use the ISSLC standards as a guide in supporting meaningful e-mentoring conversations. Several states, such as Ohio and Illinois, have designed their new principal mentoring programs around these standards (Holloway, 2004; Illinois New Principal Mentoring Program, www.ilprincipalmentoring.org).

Whereas much e-mentoring research has centered on the mode of communication, only some research has scratched the surface in how to better support the content of e-mentoring conversations. The participants in this study expressed the desire for deeper discourse between mentors and mentees.

Rickard and Rickard's (2009) study investigated patterns in the characteristics of effective and ineffective e-mentoring partnerships. Their study explored program structure. The structure, which provided timelines and prompts for actions, was found

159

useful by mentees. Mentees commented that the structure was useful because it helped manage expectations, maintained momentum, provoked discussion, and defined where to begin and end. The participants in the ABC mentoring program suggested specific tools to be used in conjunction with e-mentoring technology to help facilitate and enhance the mentoring conversation. Suggestions included a calendar of topics that correlate to specific duties principals encounter monthly and a list of research-based topics important to new leaders. As mentioned in the previous chapter, mentor principals felt they did not know what their mentees wanted, and therefore let the mentees initiate the conversation, resulting in an exchange of information that included on Maslow's hierarchy of questions, low level questions, advice, and sounding board efforts. The participants expressed a desire for deeper discourse.

Technology training provided to participants. Another key finding of this study is that technology training is significant to the vitality of e-mentoring. The principals in this study experienced no formal training on Skype for e-mentoring and received no formal assistance with setting up Skype accounts or with using Skype technology for e-mentoring. Each principal voiced the importance of training for e-mentoring to work. The principals articulated clear opinions on how this could be achieved and common to all was the belief that training occurs best when students and staff are not in the building. The principals preferred the trainer coming to their office, direct instruction and practice, but were also open to small classes.

The importance of training is an aspect well explored in the literature. The studies released on MentorNet found that mentee training increased time spent with mentors, and that mentors had a higher satisfaction with their e-mentoring experience when their

mentees participated in training (Kasprinsin et al., 2003, 2008). This finding has important implications because some studies have documented the correlation between time spent engaged in mentor--mentee contact and overall mentor program satisfaction (de janasz et al., 2008; Rickard & Rickard, 2009). The researchers associated with MentorNet concluded that, for organizations where mentors are voluntary, the ideal model would include mandated training for mentees and voluntary training for mentors.

Some researchers have indicated that online training is a benefit over face-to-face training due to cost (Kasprinsin et al., 2003, 2008). Headlam-Wells et al. (2005) investigated an e-mentoring program designed to support business women and found that comprehensive training to address technology skills and the ability to communicate online supported participant satisfaction. Evaluations revealed that 88% of the participants felt the training prepared them "completely" or "quite well" for the mentoring experience (p. 454).

Clearly, research demonstrates the significance of training for participants in e-mentoring programs. Shrestha et al. (2009) explored topics in training mentors and mentees and found that some mentors reported being uncomfortable with the electronic mode of communication even though they possessed high technology skills. Findings indicated that mentors need to possess the skills required to make a good face-to-face mentor and good written communication skills, as well as a comfort level with electronic communication. The principals in this case study expressed the need for training in technology in order for e-mentoring to be successful, a finding consistent within e-mentoring research.

Current research in face-to-face mentoring supported the benefit of training for both mentors and mentees (Alsbury & Hackmann, 2006; Crow, 2007; Daresh, 2007; Hansford & Ehrich, 2006; Stead, 2005; Thorndyke et al., 2008). Some of the principals in this study favored learning more about mentoring practices. Elementary and secondary principals in Alsbury and Hackmann's (2006) study reported being satisfied with mentor training, but the superintendents interviewed suggested training be provided during the summer months. The principals in this study also echoed this sentiment. They felt the summer months provided optimal time for training opportunities.

Synchronous or asynchronous nature of the technology involved. Skype was the piloted e-mentoring technology in this study. E-mail was another e-mentoring technology. The principals expressed dislike of the synchronous quality of Skype. Making time for Skype appointments, and following through with these appointments, was not convenient to the principals' schedules. The ABC program goal -- mentor as supportive contact for new principal -- did not align with the work required to communicate via Skype. Some principals did not like that Skype requires the mentor and mentee to engage simultaneously. Much of the support the mentor principals provided mentees in this case study was via e-mail. One mentee commented on the convenience of e-mail, "I could e-mail her my question, while I was thinking of it, and know she would get back to me versus waiting until we Skype and then having to remember what my questions was." The real-time interactions of Skype versus the conveniences of e-mail were influences the principals considered when deciding how to communicate via e-mentoring technology.

Lenear (2007) looked at synchronous and asynchronous e-mentoring environments to compare feelings of closeness and support, among other elements. Her research upheld that of Styles and Morrow (1992) and Bischoff, Bisconer, Kooker, and Woods (1996) and concluded that there was no significant difference in feelings of closeness and support when comparing synchronous and asynchronous environments. Lenear's (2007) findings suggested there may be a link between the level of closeness participants in an e-mentoring environment experience and mentor participation. The mentors in synchronous environments were perceived by their mentees as active, responsive, and involved. Lenear reported this results in "positive perceptions of interaction, structure and support, and increased levels of satisfaction and feelings of closeness" (p. 6). This positive perception also prevailed in the asynchronous environments, but only when the mentors were involved more actively and initiated more conversations.

Single et al.'s (2005) research on MentorNet, a mentoring program that combines several different types of e-mentoring technologies, found that the participants preferred the asynchronous quality of e-mail for the convenience it provided. These studies indicate that participant involvement or engagement varies depending on the qualities of the e-mentoring technology utilized. The present study reveals that Skype's synchronous communication style was not useful to the principals.

Support for multiple mentees and mentors. Another important finding of this study is that the principals made use of multiple mentors and mentees for leadership development. Each principal communicated the importance of having more than one

mentor. The principals also described having more than one mentee. The network of mentees included assistant principals and teachers.

In describing their mentoring practices with their formal mentor or mentee, the participants frequently referenced their informal mentees and mentors. When describing where leadership development practices were learned, the principals detailed mentors that existed outside the mentoring program and included a wide variety of people, such as a husband, another trusted principal, and an assistant superintendent. The principals engaged with the e-mentoring program in this study utilized a wide network of informal mentors and mentees. This suggests that e-technology should support that network to enhance the effectiveness of e-mentoring. Several e-mentoring programs are designed to connect mentees with multiple mentors or mentors with multiple mentees; however, there is limited published research that looks at the effectiveness of such programs. Lenear's (2007) research provided some insight into the multiple mentee model, but it is still a facet of e-mentoring research that deserves attention. Lenear found that, when more than one mentee was assigned to a mentor in an e-mentoring environment, if the mentor did not initiate discussions, mentees emerged as mentors, to form what she coined as a *protégé collaboration model* of mentoring. The mentees initiated the interactions in this model and were able to provide advice and support to one another.

The finding described above has important implications for e-mentoring research. What is the ability of e-mentoring technology to support multiple mentors and or mentees? Documented in the literature (Ensher & Murphy, 2005; Higgins & Kram, 2001) is a clear benefit of a network of mentors and mentees, but the ability of e-mentoring technology to support this network for principals is unknown.

Not a Learning Organization

Senge's (1990) five tenets that contribute to a learning organization serve as the conceptual framework guiding this study. Throughout the data collection and analysis process, I could not find evidence of these five tenets. In the present study, some of the eight elements proved to be obstacles to creating a true learning organization. For example, the goal of the ABC mentoring program was not leadership development. Therefore, it makes sense that the leadership capabilities discussed by Senge were not present in the data. The program structure did not provide the necessary tools to support more meaningful dialogue.

Personal mastery. Senge et al. (2000) describe personal mastery as the ability to commit to one's own vision while also honing the ability to see one's current reality. According to Senge, it is a discipline achieved through reflection. The tension created between picturing one's personal vision and understanding current reality keeps one solution and resolution focused. Within the ABC mentoring program, mentees relied on mentors for answers to quick questions:

> I knew that there would be an issue or 6 or 12 that I didn't know the best way to handle, and so I was really grateful that I had been sort of paired with my mentor given that she has extensive experience. So it was my expectation that she would not have difficultly sort of pointing me in the right direction, and I had full trust in what she suggested I do.

Another mentee provided an example of how personal mastery was not addressed, not only within the mentor program, but also among all administrators in the district. She related:

> ABC administrators, even when we get together– we never talk. I mean like – maybe other people are luckier than I, but if I want to talk about vision, if I want to talk about leadership or talk about growth, I mean do that with – I mean I think

not even that people aren't capable or they don't want to, I just think people just don't have time.

Without alignment between program goals and careful consideration of supports that would guide e-mentoring conversations, the participants in this study did not engage in personal mastery.

Mental models. Senge et al. (2000) explains how two people can view the same incident and come to different conclusions. This is true because we use our own assumptions in interpretation. The core task of mental models is "bringing tacit assumptions and attitudes to the surface so people can explore and talk about their differences and misunderstandings with minimal defensiveness" (p. 67, Senge et al., 2000). Not being able to break through one's own mental model limits one's ability to change. The data from this case study provides examples of how the mentees valued the opinions of their mentors, and yet, shows that views and assumptions were rarely challenged. Using mental models in an organization helps leaders examine deeply held attitudes and beliefs; however, the leaders in the present study did not describe the mentorship in this way. One mentee related:

> Well, I think it's sort of a safety net. Or at the very least I feel like Mentee 1 was in my corner and if I screw up really badly she might even advocate for me. But it hasn't been vital. I don't consider it – I would probably be able to muddle through on my own.

The mentees looked to their mentors for answers related to their duties and responsibilities and used their mentors as sounding boards, but the mentorship was not a forum to challenge mental models and come to new conclusions.

Shared vision. Senge et al. (2000) describes the discipline of shared vision as a process of bringing all stakeholders together, finding common ground, and using the

commonalities to drive purpose. Senge believes shared vision spreads through personal

contact. Creating a shared vision entails putting aside differences and sparking aspirations

through strategic processes. There was no evidence of shared vision making in the data of

this case study. In fact, some comments from participants suggest that the culture among

administrators has a long way to go before reaching a point of shared vision making. For

example, one mentee reflected:

> What has happened over the last 10 years, 8 years is that people are much more
> competitive. You know, we are not in a nurturing environment as administrators.
> ...I think that, you know, again, talking to people who work for Booz-Allen or
> work for the government or who have jobs who are accountants, account
> executives, in some way it seems like they are more nurturing among themselves
> than school principals are, and I think that's really kind of – that says a lot.

The principal was reflecting on the culture of the administrators within the school district,

and not the mentoring program, but there was no evidence to suggest mentees and

mentors addressed shared vision making. An obstacle to achieving shared vision can be

cited as the misalignment between some of the eight key findings from this study. The

program goal did not support leadership development where shared vision could be

addressed. Therefore, e-mentoring conversations did not address leadership issues. The

technology did not support a multiple mentor format, and when mentees did discuss

leadership issues, the data shows they did so with their informal mentees and mentors.

The lack of technology training also precluded the participants from feeling confident and

comfortable with Skype as an e-mentoring technology. Senge clearly describes shared

vision making as a creative process that requires trust and putting aside fears. Without the

proper confluence of these elements, shared vision making was not evident.

Team learning. Team learning is the practice of communicating in a new way.

Senge uses the word *dialogue* to describe a process of sustained inquiry. The deliberate

process begins with inviting individuals to participate, suspending assumptions in order to analyze them, with the goal of group learning from the process. The process is meant to draw deeper connections between those present. The previous sections have already described the nature of the e-mentoring program conversations. Dialogue, as described by Senge, did not occur between mentors and mentees. However, some of the participants expressed a desire for deeper discourse. They felt that more technology training and guidance for conversations were necessary. One mentee addressed the need for a change:

> How do we change our climate to be a little more collegiate and not so competitive? How do we make people feel like as if they can relax with one another and be honest? And again, the big thing is time. You know, if you have someone be a mentor then what do you have them not do? We're always adding things to peoples' list of responsibilities. If you're going to add something, now we really need to take something away.

Her words reflect the need for alignment among the duties and responsibilities of the principal, the program goals, and e-mentoring conversations.

Systems thinking. Systems thinking requires a leader to look at problems and goals as part of a larger picture, or system, and not as isolated items. Senge et al. (2000) maintains that through the use of feedback loops and pattern searches, leaders can gain a better understand of issues and not simply react with short-term solutions. Capitalizing on the skill of systems thinking requires that a leader employ personal mastery, mental models, shared vision, and team learning. Evidence of systems thinking in this case study is not possible without evidence of the other four tenets. The data reveal that the mentees initiated conversation with their mentors for quick fixes, and not for large-scale problem solving.

Conclusions

Using Senge's (1990) five tenets as criterion, it becomes clear the ABC mentoring is not a learning organization. Looking holistically at the ABC e-mentoring program, there are three critical components: the principals; the program structure; and the e-mentoring technology. Each of the eight findings presented and discussed above can be grouped by these three components. Table 3 organizes the findings by these three main components.

Table 3: Findings Organized by Program Component

E-mentoring Program Component	Findings from Descriptive Case Study
Principals	-Background knowledge and experiences -Technology experience -Duties and responsibilities
Program Structure	-Program goals and aims -Conversation content -Technology training
E-mentoring Technology	-Synchronous vs. asynchronous -Supports multiple mentors and mentees

Previous research has affirmed that e-mentoring can develop and support personal mastery, mental models, shared vision, team learning, and systems thinking (see Table 1 in Chapter One). The eight elements identified as crucial to an e-mentoring program for new principals can also be described as drivers of a learning organization. If working together, these elements can be the drivers of a learning organization. If not, as was evident in this case study, these elements can be obstacles in the creation of a learning organization.

Applying learning organization theory to the ABC mentoring program helps show how the eight elements impact one another. Senge et al. described systems thinking as "a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behavior of systems" (Senge, Ross, Smith, Roberts & Kleiner, 1994, p. 6) The eight findings from this study should not be considered isolated elements of an e-mentoring program. How these elements come together and influence one another has a striking impact on the e-mentoring experience.

For example, after careful analysis of the connections between the eight elements in the ABC mentoring program, it becomes clear why Skype was not a good e-mentoring tool. The structure of the ABC program was described as loose; the goal of the program was to provide the mentee with a veteran mentor. The mentee principals utilized their mentors as a person to call when they had a quick question. The Skype technology did not support this mentoring function. The technology piloted in this study required both principals to work synchronously. Compounding this issue was school division's allowance of quality face-to-face time between principals. Consequently, the synchronous quality of Skype was not viewed as advantageous to the principals, and overall Skype was deemed as an impractical tool for e-mentoring in this instance. However, this does not mean Skype should not be considered an effective e-mentoring technology.

Systems thinking helps explain why the principals in this study expressed the desire for more in-depth e-mentoring conversation, but the data presented do not include conversations centered on leadership development. The program's goals and aims did not support the facilitation of such conversations. Conversations surrounding leadership style

or mission and vision took place between the mentors and mentees informal mentors and mentees. Neither the technology, nor the program goals, supported multiple mentors and mentees. The technology experience of participants is important to consider when planning technology training.

The graphic below uses Senge's systems thinking tenet to visualize the connections between the each of the three main components of an e-mentoring program with specific elements from this descriptive case study. Understanding the convergences of the different themes raised in this study moves us closer to understanding the viability of e-mentoring for new principal development, and its ability to support learning organizations.
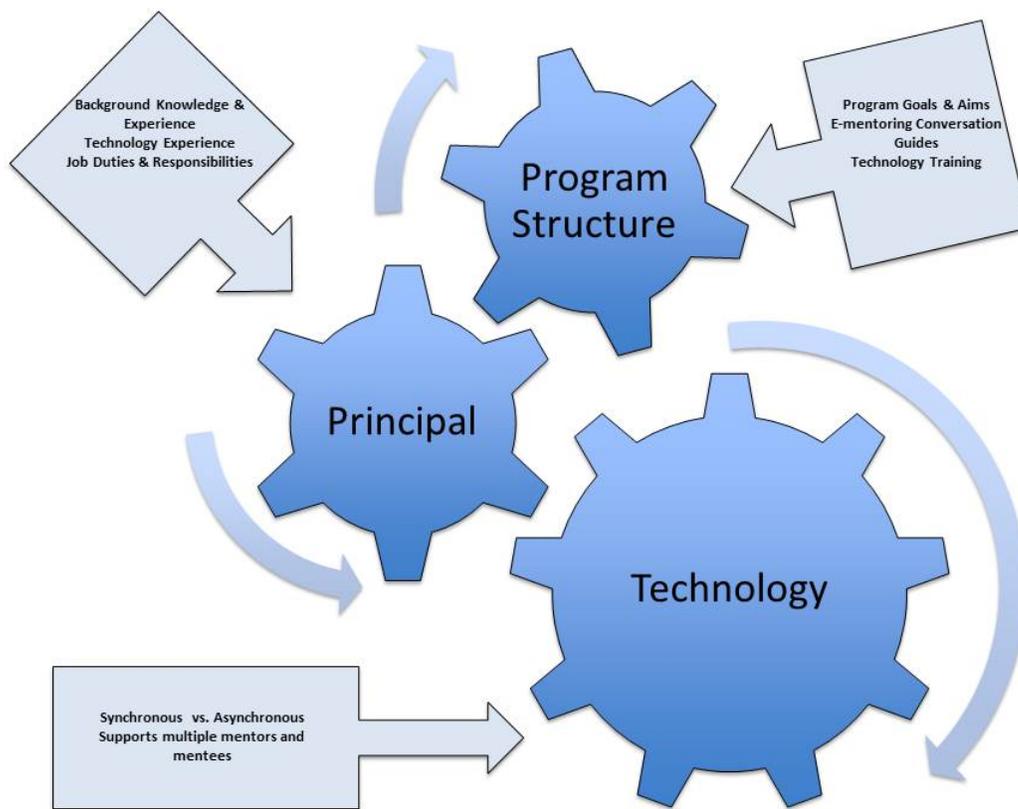

Figure 1: Elements of an E-mentoring Program

The figure above depicts the interconnectedness of the findings from this descriptive case study, but can also serve as blueprint for practitioners and policymakers considering e-mentoring for new principal development. Systems thinking dictates that there are "no right answers" (Senge et al., 1994). Although Skype was not deemed a sufficient tool for the ABC mentoring program, it does not mean e-mentoring cannot produce a learning organization. With the systems thinking tenet, "from any element in a situation (or 'variable'). You can trace arrows ('links') that represent influence on another element" (Senge et al., 1994). The challenge to an e-mentoring program designer is to investigate the elements of an e-mentoring program and the links between the elements and make adjustments that produce the desired outcome. Senge cautions "links never exist in isolation. They always comprise a circle of causality, a feedback 'loop,' in which every element is both 'cause' and 'effect'- influenced by some, and influencing others…" (p.56). Systems thinking makes it possible to use the information from this descriptive case study to envision an e-mentoring program for new principals that encompasses leadership development, one in which mentoring can help transform the mentee's and mentor's school into a learning organization. Such an e-mentoring program would require clearly articulated goals and aims. Careful consideration of the background knowledge and experiences, including the technology experience, of participants, as well as a complete understanding of the duties and responsibilities of the principals would be a prerequisite in the planning process. Matching the e-mentoring technology and training with this information would be crucial to program success. Ideally, the technology would support multiple mentors and mentees and tools and structures would be set forth to facilitate leadership development conversations. The benefits of and challenges to using

synchronous and asynchronous technology would also be considered. Although the ABC

mentoring program did not present all of the elements of a learning organization as

described by Senge (1990), adjustments to the eight elements discussed here and using

systems thinking to highlight the interconnectedness of the elements, has the potential to

transform the program into a learning organization.

It is important to remember that this study was not intended as an assessment of

the degree to which the ABC mentoring program is a learning organization. However, the

theory helps ground the study and highlights the interconnectedness of the eight findings.

The choice to use learning organization theory as a lens by which to view e-mentoring

was intended to underscore the connection of new principal mentoring to the school in

which the principal works. Redding (1997) contends that learning organization

assessment can help identify areas for intervention, and thus improvement, in a program

or company. A worthwhile secondary purpose of conducting such an assessment can be

to spark "innovation and creativity" (Redding, 1997, p. 63). Once participants or workers

expose, through the assessment process, what is working and what is not, changes to the

status quo often produce a more successful entity (Redding, 1997). Although a learning

organization assessment was not used in this study, it may be a worthwhile venture.

Recommendations for the ABC Mentoring Program

Skype was the piloted e-mentoring technology in this case study. The participants

did not deem it a practical technology for the ABC mentoring program. The geography of

the school district, the convenience of other forms of communication, and the

asynchronous quality of Skype technology were all factors that contributed to the

principals' perception of Skype. Integral to this data set was the informal nature of the

mentoring program, which impacted the participants' engagement with Skype. Without clear guidelines and follow-up on what to discuss during Skype sessions, the participants found it easier to call or e-mail one another. Challenges cited by the participants were not having the Skype training, finding time to Skype, and unmatched technology experience between mentor and mentees. If the ABC mentoring program continues with its informal goals and aims, then it is recommended that Skype not by utilized. However, the participants valued more in-depth mentoring and, if the ABC school division leaders want to support such mentoring, then the eight findings from this study should be considered in program development.

Recommendations for Policymakers

There is a documented shortage of principals within the United States. A survey conducted by the Northeast Regional Elementary School Principals' Council in 2006 revealed that more than 42% of principals and assistant principals in nine Northeastern states reported that they will be retiring from their positions within the next five years (Ryan, 2006). Principals are leaving the job, and qualified candidates are not applying for myriad reasons, including: long hours, too many job-related demands, job isolation, government mandates and accountability, stress, and inadequate pay. In order to combat this shortage, school districts, universities, and educational associations are instituting mentoring programs to support new principals (DiPaola & Tschannen-Morgan, 2003; Usdan, McCloud, & Podmostki, 2000). The benefits of new principal mentoring on psycho-emotional, role socialization, and leadership development capabilities are well-documented, but no research has investigated how e-mentoring technology can contribute to the already established benefits of new principal mentoring (Alsbury & Hackmann,

174

2006; Browne-Ferrigno & Maynard 2005; Browne-Ferrigno & Muth 2006; Crow, 2007; Kamler, 2006). Educational policymakers should look at how e-mentoring is being realized in business, healthcare, and human resource industries and adopt policies that will encourage those charged with supporting new principals to experiment with e-mentoring technology.

Although this study was the first of its kind, e-mentoring research in other disciplines posits advantages of e-mentoring, such as low cost of maintenance and a form of mentoring with egalitarian qualities (Ragins & Kram, 2007). If e-mentoring for new principal development is going to be realized, agreement and standardization of best program components should be established. In order for the notion of e-mentoring for new principals to progress, mores studies within the field of education need to be conducted. Educational policymakers should support and fund researchers willing to commit time and energy to the investigation of e-mentoring as an innovative way to combat principal shortages and better support school leaders ready to take on the challenges of 21st century schools.

Recommendations for Future Research

To create an effective e-mentoring program for new principals, an effort must be made to understand the experiences of new principals engaged with e-mentoring technology. This study, which exposed the voice of such principals, provides the first step. Throughout this descriptive case study, it seemed at times that more questions than answers were presented. Some of these questions are worthy of future study.

The mentee principals in this case study utilized a broad network of mentors to help develop their leadership capabilities. They did not rely solely on their formal

175

mentor. The mentor principals also identified various individuals as mentors. Both mentee and mentor principals valued their self-selected mentors and also valued the various informal mentees they identified. How can e-mentoring support a network of mentors or a network of mentees?

The principals in this case study felt the ease by which they could conduct face-to-face mentoring meetings made Skype an impractical e-mentoring tool. In a large district, or more rural environment, where face-to-face access is not as convenient, is Skype an appropriate form of e-mentoring technology to support new principals?

The principals in this study expressed different, but specific reasons for engaging with different types of technology throughout this study. What e-mentoring technology best supports specific learning styles? Further investigation into the connections between e-mentoring technology and learning styles is warranted.

The program in this study was designed to provide emotional support and a point of contact for new principals within ABC County. The aims and goals of the program had an impact on the principals' perception and level of usage of e-mentoring technology. Further investigation into the alignment between program goals and aims and e-mentoring technology that can create a supportive e-mentoring experience for both mentors and mentees will be a significant contribution to e-mentoring literature.

References

Abernathy, S. F., (2007). *No Child Left Behind and the public schools*. Ann Arbor: The

University of Michigan Press.

Alsbury, T. L., & Hackmann, D. G. (2006). Learning from experience: Initial findings of

a mentoring/induction program for novice principals and superintendents.

Planning and Changing, *37*, 169-189. Retrieved from

http://proxygw-.wrlc-.org/login-?url=http://proquest-.umi-.com-.proxygw-.wrlc-.o

rg/pqdweb-?did=1224424311-&Fmt=7-&clientId=31812-&RQT=309-&VName=

PQD

Argyris, C., & Schon, D. (1978). *Organization learning: A theory of action perspective*.

Reading, MA: Addison-Welsley.

Asgari, M., & O'Neill, D. K. (2005).What do they mean by "success"?: Examining

mentees' perceptions of success in a curriculum-based telementoring program. In

F. K. Kochan & J. T. Pasarelli (Eds.), *Creating successful telementoring*

programs (pp. 225-251). Greenwich, CT: Information Age Publishing.

Bass, T. S. (2007). To be or not to be: Issues influencing educators' decisions to enter the

principalship. *AASA Journal of Scholarship and Practice, 2*(4), 19-30.

Bennett, D., Tsikalas, K., Hupert, N., Meade, T., & Honey, M. (1998). *The benefits of*

online mentoring for high school girls: Telementoring young women in science,

engineering, and computing project- year 3 evaluation (Research Report).

Retrieved from The Center for Children and Technology website:

http://cct.edc.org/admin/publications/report/telement_bomhsg98.pdf

Bierema, L. L., & Merriam, S. B. (2002). E-mentoring: Using computer mediated communication to enhance the mentoring process. *Innovative Higher Education, 26*(3), 211-227. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ645438&site=ehost-live

Bischoff, W. R. Bisconer, S. W., Kooker, B.M., Woods, L.C. (1996). Transactional distance and interactive television in the distance education of health professionals. *The American Journal of Distance education, 10*(3), 4-19.

Bohm, D. (1965). *The special theory of relativity*. New York, NY: W. A. Benjamin.

Boice, R. (1990). Mentoring new faculty: A Program for implementation. *Journal of Staff, Program and Organizational Development, 8*(3), 143-152.

Boice, R. (1993). New faculty involvement for women and minorities. *Research in Higher Education, 34*(3), 291-341.

Browne-Ferrigno, T., Maynard, B. (2005). Meeting the needs of students: A rural high-need school district's systemic leadership development initiative. *Rural Educator 25*(3), 5-18. Retrieved from http://proxygw.wrlc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ783819&site=ehost-live

Browne-Ferrigno, T., & Muth, R. (2004). Leadership mentoring in clinical practice: Role socialization, professional development, and capacity building. *Educational Administration Quarterly, 40*(4), 468-494. doi: 10.1177/0013161X04267113

Browne-Ferrigno, T., & Muth, R. (2006). Leadership mentoring and situated learning: Catalysts for principalship readiness and lifelong mentoring. *Mentoring and*

Tutoring: Partnership in Learning, 14(3), 275-295.

doi:10.1080/13611260600635530

Buck, M. A. (2004). Mentoring: A promising strategy for creating and sustaining a

learning organization. *Adult Learning, 15*(3/4), 8-11.

Cao , G. T., Walz, P. M., Gardner, P. D. (1992). Formal and informal mentorships: A

comparison on mentoring functions and contrast with nonmentored counterparts.

Personnel Psychology, 45(3), 619-636. doi: 10.1111/j.1744-6570.1992.tb00863.x

Carnine, L., Denny, G.S., Hewitt, P., & Pijanowski, J. (2008). *The Status of School

Leadership in Arkansas.* Fayetteville, AR: Research and Advocacy Network.

Retrieved from http://cied.uark.edu/PrincipalStudy2008.pdf

Christie, K., Thompson, B., & Whitely, G. (2009). *Strong Leaders, Strong Achievement:

Model Policy for Producing the Leaders to Drive Student Success*. Retrieved from

Education Commission of the States website:

http://www.ecs.org/clearinghouse/79/23/7923.pdf

Colky, D. L., & Young, W. H. (2006). Mentoring in the virtual organization: Keys to

building successful schools and businesses. *Mentoring & Tutoring, 14*(4), 433-

447.

Condition of Education. (2010). *National Center for Educational Statistics.* Retrieved

from http://nces.ed.gov/programs/coe/

Council of Chief State School Officers. (2008). *Educational leadership policy standards:

ISLLC 2008.* Retrieved from www.ccsso.org.

Copland, M. A. (2000). Problem-based learning and prospective principals' problem

framing ability. *Educational Administration Quarterly, 36,* 585-607.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.)*.* Thousand Oaks, CA: Sage Publishing.

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, N.J: Merrill.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches.* Thousand Oaks, CA: Sage Publishing.

Crow, G. (2007). The professional and organizational socialization of new English headteachers in school reform contexts. *Educational Management Administration and Leadership, 35*(1), 51-71. doi:10.1177/1741143207071385

Daresh, J. C. (1995). Research base on mentoring for educational leaders: What do we know? *Journal of Educational Administration*, 33(5), 7.

Daresh, J. C. (2004). Mentoring for school leaders: Professional promise or predictable problems. *Educational Administration Quarterly, 40*(4), 495-517.

Daresh, J. C. (2007). Mentoring for beginning principals: Revisiting the past or preparing for the future? *Mid-Western Educational Researcher, 20*(4), 21-27. Retrieved from

http://proxygw.wrlc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ808944&site=ehost-live

Davis, S., Darling- Hammond, L., LaPointe, M., & Meyerson, D. (2005). *School leadership study: Developing successful principals*. Stanford Educational Leadership Institute. Retrieved from

http://www.stanford.edu/dept/seli/research/documents/SELI_sls_research_review.pdf

DeLone, W. H., & McLean, E. R. (1992). Information systems success: The quest for the

dependent variable. *Information Systems Research*, *3*(1), 60-95. doi:

10.1287/isre.3.1.60

De Janasz,S. C., Ensher, E. A., & Heun, C. (2008). Virtual relationships and real benefits:

Using e-mentoring to connect business students with practicing managers.

Mentoring & Tutoring: Partnership in Learning, 16(4), 394-411.

DiPaola, M., & Tschannen-Moran, M. (2003, March). The principalship at a crossroads:

A study of the conditions and concerns of principals. *National Association of

Secondary School Principals Bulletin, 81*(634), 43-65.

Duke, D., Grogan, M., Tucker, P., & Heinecke, W. (Eds.). (2003). *Educational

leadership in an age of accountability: The Virginia experience.* Albany, NY:

State University of New York Press.

Duncan, H. E., & Stock, M. J. (2010). Mentoring and coaching rural school leaders: What

do they need?. *Mentoring & Tutoring: Partnership In Learning, 18*(3), 293-311.

doi:10.1080/13611267.2010.492947

Dymock, D. (1999). Blind date: A case study of mentoring as workplace learning.

Journal of Workplace Learning: Employee Counseling Today, 11(8), 312-317.

Education Commission of the States. (2011). *Mentor Programs*. (Research Report No.

58). Retrieved from Education Commission of the States website: www.ecs.org.

Educational Research Service. (2000). The principal, keystone of a high-achieving

school: Attracting and keeping the leaders we need. Arlington, VA: Educational

Research Service.

Ehrich, L.C., Hansford, B., & Tennent, L., (2004). Formal mentoring programs in

education and other professions: A review of the literature, *Educational

Administration* Quarterly*, 40*, 518-537. doi:10.117/001316X04267118.

Engelking, J. L. (2008). *Action-oriented principals: Facing the demands of external

pressures*. Lanham: Rowman & Littlefield Education.

Ensher, E. A., & Murphy, S. E. (1997). Effects of race, gender, perceived similarity, and

contact on mentor relationships. *Journal of Vocational Behavior, 50*(3), 460-481.

Ensher, E. A., & Murphy, S. E. (2005). *Power mentoring: How successful mentors and

proteges get the most out of their relationship.* San Francisco, CA: Jossey-Bass.

Farkas, S., Johnson, J., & Duffett, A. (2003). Stand by me: What teachers really think

about unions, merit pay and other professional matters. A report from Public

Agenda. New York, NY: Public Agenda.

Fenwick, L. T. (2000). The principal shortage: Who will lead? Cambridge, MA: The

Principal's Center, Harvard Graduate School of Education.

Freedman, M. (1992). *The kindness of strangers: Reflections on the mentoring movement.*

Philadelphia, PA*:* Public/Private Ventures.

Garvin, D. (1993), Building a learning organization, *Harvard Business Review*, *17*(4),

80–93.

Goldman, M. (1997). Perspectives on telementoring and mentor center. *National School

Network Telementoring and Mentor Center.*

Goldring, E., & Sims, P. (2005). Modeling creative and courageous school leadership

through district-community-university partnerships. *Educational Policy*, *19*(1),

223-249.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine Publishing.

Glidden, H. (1999). Making Standards Matter 1999: Executive Summary. Retrieved from http:// www.aft.org/edissues/standards99/index.htm

Grogan, M. (2004). Keeping a critical, postmodern eye on educational leadership in the United States: In appreciation of Bill Foster. *Educational Administration Quarterly*, *40*(2), 222-239.

Grogan, M., & Andrews, R. (2002). Defining preparation and professional development for the future. *Educational Administration Quarterly*, *38*(2), 233-256.

Groves, K. S. (2007). Integrating leadership development and succession planning best practices. *Journal of Management Development, 26*(3), 239-260.

Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation*. San Francisco: Jossey-Bass.

Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *The American Journal of Distance Education, 11*(3), 8-26.

Hale, R. (2000). To match or mis-match? The dynamics of mentoring as a route to personal and organizational learning. *Career Development International 4*(3/5), MCB University Press.

Hamilton, B. A., & Scandura, T. A. (2002). E-mentoring: Implications for organizational learning and development in a wired world. *Organizational Dynamics*, *31*(4), 288-402.

Hansford, B., & Ehrich, L.C. (2006). The principalship: How significant is mentoring? *Journal of Educational Administration, 11*(1), 36-52. Retrieved from

http://www.emeraldinsight.com.proxygw.wrlc.org/Insight/viewPDF.jsp?contentType=Article&Filename=html/Output/Published/EmeraldFullTextArticle/Pdf/0740440102.pdf

Harasim, L., Starr, R. H., Teles, L., & Turoff, M. (1998). *Learning networks.* Cambridge, MA: MIT Press.

Harris, J., Rotenberg, L., & O'Bryan, E. (1997). *Results from the Electronic Emissary Project: Telementoring lessons and examples.* Denton, TX: Texas Center for Educational Technology. Retrieved from http://www.tcet.unt.edu/pubs/em/em01.pdf.

Headlam-Wells, J. (2004). E-mentoring for aspiring women managers. *Women in Management Review, 19*(4), 212-218. doi: 10.1108/09649420410541281

Headlam-Wells, J., Gosland, J., & Craig, J. (2005). There's magic in the web: E-mentoring for women's career development. *Career Development International*, *10*(6/7), 444-459.

Hess, F. M., & Kelly, A. P. (2006). Learning to lead?: What gets taught in principal preparation programs. Report prepared for Program on *Education Policy and Governance*. Cambridge, MA: Harvard University Press.

Hewitt, P. M., Denny, G. S., & Pijanowski, J. C. (2011). Why teacher leaders don't want to be principals. *Journal of Scholarship and Practice, 8*(1), 13-23.

Higgins M. C., & Kram K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review*, 26(2), 264-288.

Holloway, J. H. (2004). Mentoring new leaders. *Educational Leadership, 61*(7), 87-88.

Huberman, M. (1989). The professional development cycle of teachers. *Teachers College Record*, *9*(1), 31-57).

Illinois New Principal Mentoring Program. Retrieved from www.ilprincipalmentoring.org.

Jackson, B. L., & Kelley, C. (2002). Exceptional and innovative programs in educational leader-ship. *Educational Administration Quarterly*, *38*(2), 192-212.

Kamler, E. (2006). The aspiring superintendents' study group: Investigating a mentoring network for school leaders. *Mentoring & Tutoring: Partnership in Learning, 14*(3), 297-316. doi:10.1080/13611260600635548

Kasper-Fuehrer, E. C. & Ashkanasy, N. M. (2003): The inter- organizational virtual organization: Defining a weberian ideal. *International Studies of Management and Organization*, *33*(4), 34-64.

Kasprinsin, C. A., Single, P. B., Single, R. M., & Muller, C. B. (2003). Building a better bridge: Testing e-training to improve e-mentoring programmes in higher education. *Mentoring & Tutoring: Partnership in Learning, 11*(1), 67-78. doi:10.1080/1361126032000054817

Kasprinsin, C.A., Single, P. B., Single, R. M., Ferrier, J. L., & Muller, C. B. (2008). Improved mentor satisfaction: Emphasizing protégé training for adult-age mentoring dyads. *Mentoring & Tutoring: Partnership in Learning, 16*(2), 163-174. doi: 10.1080/13611260801916424

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2005). *Transferring learning to behaviors: Using the four levels to improve performance.* San Francisco, CA: Berett-Koehler.

185

Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott Foresman.

Ladyshewsky, R. K. (2007). A strategic approach for integrating theory to practice in leadership development. *Leadership & Organization Development Journal 28*(5), 426-443. Retrieved from

http://www.emeraldinsight.com.proxygw.wrlc.org/Insight/viewPDF.jsp?contentType=Article&Filename=html/Output/Published/EmeraldFullTextArticle/Pdf/0220280503.pdf

Leech, D., & Fulton, C. R. (2008). Faculty perceptions of shared decision making and the principal's leadership behaviors in secondary schools in a large urban district. *Education, 128*(4), 630-644.

Lenear, P. E. (2007). E-mentoring interaction models. Online Submission. Retrieved from

http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED504399&site=ehost-live

Lick, D. W. (1999). Proactive comentoring relationships: Enhancing the effectiveness through synergy. In C. A. Mullen (Ed.), *New directions in mentoring: Creating a culture of synergy*. London: Routledge Falmer.

Lim, L. H., (2004). Monitoring versus trusting in management: Practices of school principals in Singapore. *Management in Education, 18*(2), 30-33. Retrieved from http://web.ebscohost.com.proxygw.wrlc.org/ehost/pdf?vid=2&hid=116&sid=cd567cb0-c163-4b32-bab0-6255dac36d1a%40sessionmgr107

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Lombard, M., & Ditton,T. (1997). At the heart of it all: The concept of presence. *Journal of Computer-Mediated Communication, 13*(2).

Martin, J., & Robertson, J. (2003). The Induction of First-Time Principals in New Zealand - A Programme Design. *International Electronic Journal for Leadership in Learning, 7*(2).

Megginson, D. (2000). Current Issues in mentoring. *Career Development International, 5*(4/5), 256-61. doi:/10.1108/EUM0000000005364

Mentor Scout, (n.d.). Retrieved from www.mentorscout.com.

Merriam, S. (1998). *Qualitative research and case study application in education* (2nd ed.). New York, NY: Jossey-Bass.

Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousands Oaks, CA: Sage Publications.

Mohn, C., & Machell, J. (2005). Reconceptualizing school leader learning: Blurring the lines between staff development and university-based principal preparation programs. *Planning and Changing, 36*(1-2), 120-128.

Moore, D. E. (2003). A framework for outcomes evaluation in the continuing professional development of physicians. In B. D. Davis & R. Fox (Eds.), *The continuing professional development of physicians: From research to practice* (pp. 249-274). Chicago, IL: American Medical Association Press.

Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.). *Theoretical principles of distance education* (pp. 22-38). New York, NY: Routledge.

Mueller, S. (2004). Electronic mentoring as an example for the use of information and communication technology in engineering education. *European Journal of Engineering Education, 29*(1), 53-63.

Mullen, C. A. (2005). *Mentoring primer*. New York, NY: Peter Lang Publishing.

Muller, C. B. (2009). Understanding e-mentoring in organizations. *Adult Learning, 20*(1,2), 25-30.

Muller, C. B. & Single, P. B. (2001) Benefits for Women Students from Industrial E-Mentoring. In Stromei, L. K. (Ed.), *Creating mentoring and coaching programs.* (pp. 107-122). Alexandria, VA: American Society for Training & Development *In Action Series*.

National Association of Elementary School Principals. (2003). *Making the Case for Principal Mentoring*. Providence, RI: Brown University.

Neils, D. (1997). *The Hewlett Packard E-Mail Mentoring Project*. Symposium conducted at the BBN National School Network Conference, Cambridge, MA.

No Child Left Behind (NCLB) Act of 2001, 20 U.S.C.A. § 6301 *et seq*.

Noe, R. A. (1988). An investigation of the determinants of successful assigned mentoring relationships. *Personnel Psychology, 41*, 457-479.

Oglensky, B. D. (2008). The ambivalent dynamics of loyalty in mentorship. *Human Relations, 61*(3), 419-448.

O'Neill D. K., Wagner R., & Gomez L. M. (1996). Online mentors: Experimenting in science class. *Educational Leadership*, *54*(3), 39-42.

O'Neill, K. D., Weiler, M., & Sha, L. (2005). Software support for online mentoring programs: A research-inspired design. *Mentoring & Tutoring: Partnership in Learning, 13*(1), 109-131. doi:10.1080/1361126050004061

Palloff, R. M., & Pratt, K. (1999). *Building learning communities in cyberspace*. San Francisco, CA: Jossey-Bass.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Newbury Park, CA: Sage.

Perren, L. (2003). The role of E-mentoring in entrepreneurial education and support: A meta-review of academic literature. *Education & Training, 45*, 517-525. doi.org/10.1108/00400910310508900

Quinn, T. (2003). Helping principals cope. *Principal 82*(4), 16-21.

Ragins, B. A., & Cotton, J. L. (1991). Easier said than done: Gender differences in perceived barriers to gaining a mentor, *Human Relations, 42,* 1-22.

Ragins, B. A., & Cotton, J. L. (1999). Mentor function and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology, 84*(4), 529-550.

Ragins, B. A., & Kram, K. E. (2007). *The handbook of mentoring at work: Theory, research, and practice.* Thousand Oaks, CA: Sage.

Ravert, S., & Layte, M. (1997). *Technology-based training*. Houston, TX: Gulf Publishing.

Redding, J. (1997). Hardwiring the learning organization. *Training & Development, 51*(8), 61–67.

Revans, R. (1983). *The ABC of action learning*. Bromley: Chartwell-Bratt.

Rickard, K. (2004). E-mentoring and pedagogy: A useful nexus for evaluating online

    mentoring programs for small business? *Mentoring & Tutoring: Partnership in*

    Learning, 12(3), 383-401. doi:10.1080/030910042000275972

Rickard, K., & Rickard, A. (2009). E-mentoring for small business: An examination of

    effectiveness. *Education & Training, 51*, 747-768. Retrieved from

    http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ864378&sit

    e=ehost- live;

Ryan, J. T. (2006). As boomers retire, principal shortage looms in the Northeast. *Central*

    Penn Business Journal 22(38).

Salmon, G. (2004). *E-Modertating: The key to teaching and learning online* (2nd ed.).

    London: Routledge Falmer.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning*

    organization. New York, NY: Doubleday.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning*

    organization (2nd ed.). New York, NY: Doubleday.

Senge, P. M., Cambron McCabe, N. H., Lucas, T., Kleiner, A., Dutton, J., & Smith, B.

    (2000). *Schools that learn: A fifth discipline fieldbook for educators, parents, and*

    everyone who care about education. New York, NY: Doubleday.

Senge, P. M., Kleiner, A., Roberts, C., Ross, R. B., & Smith, B. (1994). *The fifth*

    discipline fieldbook: Strategies and tools for building a learning organization.

    New York, NY: Doubleday.

Sergiovanni, T. J. (2001). *The principalship: A reflective practice perspective*. Boston,

    MA: Allyn and Bacon.

Shrestha, C. H., Heaton M., May, S., Edirisingha, P., Burke, L., Linsey, T. (2009). From

    face-to-face to e-mentoring: Does the "e" add any value for mentors?

    International Journal of Teaching and Learning in Higher Education, 20(2), 116-

    124. Retrieved from http://www.isetl.org/ijtlhe

Single, P. B., & Muller, C. B. (1999, April). Electronic mentoring: Issues to advance

    research and practice. Paper presented at the Annual Meeting of the International

    Mentoring Association, Atlanta, GA.

Single, P. B., & Muller, C. B. (2001). When email and mentoring unite: The

    implementation of a nationwide electronic mentoring program. In L. K. Stromei

    (Ed.), *Creating mentoring and coaching programs* (pp. 107-121). Alexandria,

    VA: American Society for Training and Development In Action Series.

Single, P. B., Muller, C. B., Carlsen, W. S. (2000, April). Electronic mentoring: Testing

    features of a structured program. Paper presented at the annual meeting of the

    American Educational Research Association, New Orleans, LA. Retrieved from

    www.uvm.edu/pbsingle.

Single, P. B., Muller, C. B., Cunningham, C. M., Single, R.M., & Carlsen, W. S. (2005).

    Mentornet: E-mentoring for women students in engineering and science. *Journal*

    of Women and Minorities in Science and Engineering, 11, 295-309.

Single, P. B., & Single, R. M. (2005a). E-Mentoring for social equity: Review of research

    to inform program development. *Mentoring & Tutoring: Partnership in Learning,*

    13(2), 301-320.

Single, P. B., & Single, R. M. (2005b). Mentoring and the technology revolution: How

    face-to-face mentoring sets the stage for e-mentoring. In F. K. Kochan & J. T.

Pasarelli (Eds.), *Creating successful telementoring programs* (pp. 7-27).

Greenwich, CT: Information Age Publishing Inc.

Society For Organizational Learning, website. Retrieved from http://www.solonline.org

Southworth, G. (1995). Reflections on mentoring for new school leaders. *Journal of Educational Administration*, *33*(5), 17-28. Retrieved from http://www.emeraldinsight.com.proxygw.wrlc.org/Insight/viewPDF.jsp?contentType=Article&Filename=html/Output/Published/EmeraldFullTextArticle/Pdf/0740440102.pdf

Sproull, L., & Keisler, S. (1986). Reducing social context cues: Electronic mail in organizational communication. *Management Science, 17*, 1492–1512.

Stead, V. (2005). Mentoring: A model for leadership development? *International Journal of Training and Development, 9*(3), 170-184. doi:abs/10.1111/j.1468-2419.2005.00232.x

Strauss, A. (1987). *Qualitative analysis for social scientists*. Cambridge, England: Cambridge University Press.

Styles, M. B., & Morrow, K. V. (1992). *Understanding how youth and elders form relationships: A study of four Linking Lifetimes program*. Philadelphia, PA: Public/Private Ventures.

Teitel, L. (2005, April). The landscape of leadership for school superintendents: Approaches to executive training and support. *American Educational Research Association.* Symposium conducted at the meeting of the American Educational Research Association, Montreal, Canada.

Thompson, L., Jeffries, M., Topping, K. (2010). E-mentoring for e-learning development. *Innovations in Education and Teaching International, 47*(3), 305-315. Doi:10.1080/14703297.2010.498182.

Thorndyke, L. E., Gusic, M. E., & Milner, R. J. (2008). Functional mentoring: A practical approach with multilevel outcomes. *Journal of Continuing Education in the Health Professions, 28*(3), 157-164. doi:org/10.1002/chp.178

Usdan, M., McCloud, B., Podmostko, M. (2000). Leadership for student learning: Reinventing the principalship. *The Institute for Educational Leadership,* 1-24.

U.S. Department of Education, The National Commission on Excellence in Education, *A Nation at Risk: The Imperative for Educational Reform*, Washington, D.C., April 1983.

U.S. Department of Education, Office of Innovation and Improvement, *Innovations in Education: Innovative Pathways to School Leadership*, Washington, D.C., 2004.

Vassalou, L. (2001). The learning organization in health-care services: Theory and practice. *Journal of European Industrial Training, 25*(7), 354-365.

Villani, S. (2006). *Mentoring and induction programs that support new principals.* Thousand Oaks, CA: Corwin Press.

Wallace Foundation. (2007). *Perspective Getting Principal Mentoring Right: Lessons from the Field*. New York, NY: The Wallace Foundation.

Whiting, V., & de Janasz, S. C. (2004). Mentoring in the 21st century: Using the Internet to build skills and networks. *Journal of Management Education, 28*(3), 275-293.

Windschitl, M. and Lesehm-Ackerman, A. (1997). Learning teams, students, and the

    college e-mail culture. *Journal of the Freshman Year Experience and Students in*

    Transition, 9, 53-82.

Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks,

    CA: Sage.

Appendix A

First Mentee Interview Protocol

1. Please describe your first encounters with e-mentoring technology.

2. Please describe the mode of communication you most frequently use with your mentor and why.

3. Which mode of communication do you prefer and why?

4. Please describe your comfort or discomfort level with e-mentoring technology.

5. What do you feel are the benefits of using e-mentoring technologies?

6. What do you feel are the challenges of using e-mentoring technologies?

7. What do you hope to gain from participating in the mentoring program?

8. Please describe your relationship with your mentor.

9. Specifically, in what ways has he/she supported, or not supported, your leadership development?

10. What mentoring activities have been most useful to your growth as a leader?

11. How has the e-mentoring experience aided or not aided your ability to personally grow and learn? How has the e-mentoring experience altered or not altered your personal vision?

12. Has your school benefitted from your participation in the mentoring program? In what ways?

13. What suggestions do you have to enhance the e-mentoring experience?

Appendix B

First Mentor Interview Protocol

1. Please describe your first encounters with e-mentoring technology.

2. Please describe the mode of communication you most frequently use with your mentee and why.

3. Which mode of communication do you prefer and why?

4. Please describe your comfort or discomfort level with e-mentoring technology.

5. What do you feel are the benefits of using e-mentoring technologies?

6. What do you feel are the challenges of using e-mentoring technologies?

7. What do you hope to gain from participating in the mentoring program?

8. Please describe your relationship with your mentee.

9. Specifically, in what ways has he/she supported, or not supported, your leadership development?

10. What mentoring activities have been most useful to your growth as a leader?

11. How has the e-mentoring experience aided or not aided your ability to personally grow and learn? How has the e-mentoring experience altered or not altered your personal vision?

12. Has your school benefitted from your participation in the mentoring program? In what ways?

13. What suggestions do you have to enhance the e-mentoring experience?

Appendix C

Interview Protocol for Program Developer/Administrator

1. When did this mentoring program begin?

2. What were/are the program goals?

3. How are mentors selected and matched with mentees?

4. What training is provided for mentors/mentees?

5. How is the program assessed?

6. Why and how was e-mentoring technology introduced into the program?

7. What benefits have the introduction of e-mentoring technology brought to this program?

8. What challenges have the introduction of e-mentoring technology brought to this program?

9. What suggestions do you have to enhance the e-mentoring experience?

Second Mentee Interview Protocol

Hypothetical

Expectations:

Suppose I knew nothing about the ABC mentoring program. How would you describe its goals and aims to me?

If you were to rate the program now, do you feel it has been successful?

Follow ups:

When you reflect on the success/failures of this year? How much of your success do you attribute to the mentoring that took place?

Structure:

Suppose that you were matching new principals with mentors next year. How would you do that?

Follow ups:

Suppose you were requiring principals to Skype, what type of preparations do you feel are necessary? How would you describe the professional development pieces necessary to prepare a principal to mentor?

Suppose you were creating the schedule, how would you create time for mentoring to take place?

Trust:

Suppose you really wanted to use Skype, but you knew your mentor didn't, what would you have done? Did you feel confident initiating the Skype conversation?

Devil's Advocate

Why do you think people are not Skyping with each other on a regular basis?

What do you suggest should be done to enhance the effectiveness of e-mentoring technology? Why hasn't e-mentoring technology appealed to principals?

Ideal

Describe your relationship with your mentor. Is this the type of relationship you expected?

Describe your idea mentoring relationship.

Describe an ideal mentoring program for ABC county.

Interpretive

Expectations:

Now that you can reflect on your first year, who has been most influential in your leadership development?

Structure:

Now that you can reflect on your first year, what mentoring program structures are needed to help further new principal leadership development?

Trust:

What key components are necessary for building a trusting/supportive mentee/mentor relationship? How do you build that trusting relationship?

Now that the year is coming to a close, what type of information do you share with your mentor?

Follow ups:

How would you describe the level of support you experienced with your mentor?

How do you define trust?

How do you think you build a trusting/supportive relationship?

Second Mentor Interview Protocol

Hypothetical

Expectations:

Suppose I knew nothing about the ABC mentoring program. How would you describe its goals and aims to me?

If you were to rate the program now, do you feel it has been successful?

Follow ups:

Do you feel your mentee had a successful first year? How much do you think you contributed to that success? In what ways do you feel you contributed to their success?

Structure:

Suppose that you were matching new principals with mentors next year. How would you do that?

Follow ups:

Suppose you were requiring principals to Skype, what type of preparations do you feel are necessary? How would you describe the professional development pieces necessary to prepare a principal to mentor?

Suppose you were creating the schedule, how would you create time for mentoring to take place?

Trust:

Suppose you really wanted to use Skype, but you knew your mentee didn't, what would you have done? Did you feel confident initiating the Skype conversation?

Devil's Advocate

Why do you think people are not Skyping with each other on a regular basis?

What do you suggest should be done to enhance the effectiveness of e-mentoring technology? Why hasn't e-mentoring technology appealed to principals?

Ideal

Describe your relationship with your mentee. Is this the type of relationship you expected? If you were asked to mentor a new principal next year, what would that look like?

Describe your ideal mentoring relationship.

Describe an ideal mentoring program for ABC county.

Interpretive

Expectations:

Now that you can reflect on this year, who has been most influential in your leadership development?

Structure:

Now that you can reflect on your first year as mentor, what mentoring program structures are needed to help further new principal leadership development?

Trust:

What key components are necessary for building a trusting/supportive mentee/mentor relationship? How do you build that trusting relationship?

Now that the year is coming to a close, what type of information do you share with your mentee?

Follow ups:

How would you describe the level of support you provided for your mentee?

How do you define trust?

How did you think you build a trusting/supportive relationship?

Appendix F
Observation Protocol

Date:	Time:	Place:

Time:	Observation:	Interpretation:

Appendix G
Informed Consent

Informed Consent Form
E-Mentoring for New Principals: A Case Study of a Mentoring Program
IRB # 121123
Principal Investigator: Dr. Tekleselassie
Primary Contact Number: 202-994-0132
Student Researcher: Erin Russo
Primary Contact Number: 703-946-4790

INTRODUCTION

You are invited to take part in a research study being conducted by Dr. Tekleselassie, principal investigator, and Erin Russo, a student in The George Washington University's Educational Administration and Policy Studies doctoral program.

You are being asked if you want to take part in this study because you are in the Arlington County Public School Mentoring Program or are a program developer/administrator. Please read this form and ask me any questions that will help you decide if you want to be in the study. Taking part is completely voluntary and even if you decide you want to, you can quit at any time. Your employment status will not be affected in any way should you choose not to take part or to withdraw at any time.

PURPOSE

The purpose of this descriptive case study is to give voice to mentees, mentors, and program developers/administrators engaged in a new principal mentoring program that utilizes e-mentoring technologies. The study is guided by the following research questions:

1. How do mentor and mentee principals describe their mentoring experience when using e-mentoring technologies?

2. Why did program designers incorporate e-mentoring technologies into the new principal mentoring program?

3. What challenges and benefits do e-mentoring technologies present to mentees, mentors, and program developers/administrators?

4. What do mentors and mentees suggest should be done to enhance the effectiveness of e-mentoring technologies?

PROCEDURES

If you are a mentor or mentee:
The total amount of time you will spend on this study is two hours over the course of one year.
If you consent to this study you will be interviewed three times for approximately thirty minutes.

203

	Approximate Time Frame	Length of Activity
First Interview	January	30 minutes
Second Interview	April	30 minutes
Third Interview	July	30 minutes
Observation of Skype Conversation	April-July	30 minutes

If you are a program developer/administrator:
You will be asked to participate in one interview lasting approximately thirty minutes.
All interviews and observations will be audio recorded using a digital recorder.
Data collection will also include the use of any archival records and physical artifacts pertinent to the e-mentoring program. All identifiable information will be removed. Mentees, mentors, and program developers/administrators will help identify such records and artifacts

RISKS & CONFIDENTIALITY

This study has the following risks:
You may feel some emotional stress/discomfort answering interview questions or being observed. You are free to skip any questions or stop the interview or observation at any point.
There is a small chance that someone could find out that you took part in the study or somehow connect your name with the information you provided. However, the following steps are being taken to reduce this risk:
1. The records of this study will be kept private. The use of pseudonyms will be used in any published material. No identifying information will be included.

2. After interviews are conducted, the researcher will de-identify the data by using alphanumeric coding linked to a key stored in a separate locked file drawer.

3. The transcription service will be asked to destroy records after member checking is complete.

4. The computer used to store research is password protected.

BENEFITS

Taking in part in this research study will not help you directly, however the benefit to society and Arlington County Public Schools will be a better understanding of the use of e-mentoring technology for leadership development.
QUESTIONS

Please talk to the principal investigator Dr. Tekleselassie at 202-994-0132 or student researcher Erin Russo at 703-946-4790 if you have any questions. For questions regarding your rights as a participant in human research please call the GWU Office of Human Research at 202-994-2715

DOCUMENTATION OF CONSENT

To ensure anonymity your signature is not required. Your willingness to participate in this research study is implied if you proceed. Please keep a copy of this document in case you want to read it again. The student researcher will call you in one week's time to answer questions and obtain verbal consent.

DO NOT USE ON OR AFTER THE EXPIRATION DATE OF: 1/18/2013
APPROVED *The George Washington University Institutional Review Board*
·FWA00005945·