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**FROM MY SIDE OF THE SCREEN: A HERMENEUTIC  
PHENOMENOLOGICAL STUDY OF OLDER TEACHERS,  
ADMINISTRATORS, TECHNOLOGY COORDINATORS, AND THEIR  
EXPERIENCES WITH THE IMPLEMENTATION OF TECHNOLOGY  
IN RURAL WEST TENNESSEE SCHOOLS**

Donnie Lee Bailey

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FROM MY SIDE OF THE SCREEN:  
A HERMENEUTIC PHENOMENOLOGICAL STUDY OF OLDER  
TEACHERS, ADMINISTRATORS, TECHNOLOGY COORDINATORS,  
AND THEIR EXPERIENCES WITH THE IMPLEMENTATION OF TECHNOLOGY  
IN RURAL WEST TENNESSEE SCHOOLS

by

Donnie Lee Bailey

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Education

Major: Higher and Adult Education

The University of Memphis

May 2019

I have to dedicate this dissertation to my loving husband, Adam Franklin Bishop, because he is what a husband should be. We only have one life, and so much energy was spent on this work. We sacrificed so much time that could have been spent together for the completion of this text, but he only smiled and encouraged me to press on to the end because he knew what it meant to me. That kind of love and dedication is sadly rare. I love you sugarly

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My mother provided me with an example of what education can do, how it can change lives. She lifted herself from a waitress in her 30s to a nurse by 40, while raising three children. How could I not acknowledge the impact of this on my life? Many in my immediate family did not even finish high school, so her (with no example of success) having worked so hard in the dark to improve her family's circumstances still inspires me. I'll never reach that level of dedication, but I try every day.

For my committee who put so much time into helping me improve my work, I say a hearty thank you. It has been a lesson in humility and grace. To Dr. Wendy Griswold, you will never know how you saved me. I was on the verge of throwing in the proverbial towel when your kindness entered out of the blue. A novel or movie could not have timed it any better! I know that Rebecca (my lifeline) and I will always be grateful! I hope your students know how lucky they are to have you as a teacher and mentor.

Lastly, I want to acknowledge the participants who freely shared raw and intimate feelings with me about their experiences. Anybody who has worked in a public school understands how precious time is to us and how stressful and rewarding the work can be. Thus, for them to take the time to talk to me is a blessing that I count dearly. Our education system isn't perfect, but there are great people trying to make a difference every single day. Thanks to those nine who shared their time and stories with me.

## **Abstract**

This hermeneutic phenomenological study centered on the lived experiences of older teachers, administrators, and technology coordinators as they navigate the acquiring, teaching, learning, using, and evaluating of technological resources in the classroom. In particular, this study sought to understand this phenomenon through the eyes of the participants as they interact with teachers with 20 or more years of teaching experience in two rural West Tennessee school districts.

Using social learning theory as the backbone of analysis, I had nine participants engage in three in-depth interviews each. The first interview acquired background and foundational knowledge in relation to the use of technology and its use in education by the participants; the second interview looked more closely at the experiences that participants have in relation to the phenomenon; and the third interview gave the participants the opportunity to reflect on their experiences in order to expose deeper meaning for analysis. I also kept a journal of notes and thoughts throughout the process, and participants had opportunities to review transcripts and annotation and make changes to ensure clarity and accuracy of voice.

Data was input into NVivo 11 and was coded using the participants' own thoughts. Through this process four major themes emerged: (a) the need for connection and understanding, (b) the availability of resources and training, (c) the catalyst of pressure and expectation, and (d) the importance of time. Afterward, these themes were linked with existing literature to explore gaps in the research and potential for future exploration.

As the goal of such research is not to arrive at an ultimate answer, no attempt to solidify an overarching description was given. Instead, the understanding of the significance of this phenomenon to the participants is described in-depth. Overall, participants expressed an optimism as to the potential of technology to help their practice and a frustration at the lack of adequate training to achieve proficiency with such resources. Similarly, participants decried the lack of structure by which to find help and the general uncertainty surrounding the obtaining of resources.

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## **Chapter 1**

### **Introduction**

This hermeneutic phenomenological study explored the intersection of the lived experiences of older teachers with 20 or more years of teaching experience, technology coordinators, and school administrators around the phenomenon of using technology in and for the classroom in rural West Tennessee schools. This chapter begins with an overview of the problem and its history, then transitions into a brief capsulation of both the research questions and the limitations of the study. This chapter concludes with important definitions and a summary of the chapter and its contents.

### **Background of the Problem**

Teachers often lack the confidence and competence to incorporate technology into their classroom practices successfully (Ertmer & Ottenbreit-Leftwich, 2010). Also, they may find themselves underprepared by technology classes in college and reliant on work-based learning to fill gaps in their knowledge (Bakir, 2016). Indeed, even when teachers are trained through such in-service offerings, they often claim to feel uncomfortable with technology and are afraid of looking foolish (Schrum, 1999). This problem is compounded by the systemic breakdown in communication between those responsible for implementing the technology, being the teachers, and those responsible for paving the way for such successful implementation, although more avenues than ever exist for the sharing of resources (Saettler, 2004). Thus, the poor training of the teachers, combined with the poor training of administrators responsible for helping teachers actualize technology use in their classrooms (Brown & Jacobsen, 2016) and the broad and strained

position of technology coordinators (whose job it is to help find and service such technology) (Sugar & Holloman, 2009), results in technology either being misused or underused.

Older teachers, in particular, are prone to abandon the use of technology in the classroom, citing training, self-perception of ability, and timing issues as reasons for such decisions (Ertmer & Ottenbreit-Leftwich, 2010), even though the use of technology has become a marker by which both teachers and schools are judged for their educational effectiveness (Tennessee Department of Education, 2017). Hence, such pressures and the combined unpreparedness of teachers, especially older teachers; technology coordinators; and administrators make it imperative that we seek to understand the lived experiences of those struggling to meet the needs of both the students and themselves on both personal and professional levels. This is where hermeneutic phenomenology helps to fill the gaps in our knowledge.

Hermeneutic phenomenology is, at its heart, an attempt to interpret the experiences of another for the purposes of “understanding and the reconstruction of experience and knowledge” (Laverty, 2003, p. 26). This is already a problematic proposition because it requires a researcher to delve deeply into the lives and experiences of the participants and make connections within him or herself. Within this microcosm, the line between the experiences of the participants and the interpretation of the researcher becomes muddled. However, hermeneutic phenomenologists accept this as an inevitability because such researchers view all life as interpretive (van Manen, 1990). From the thoughts in our very own minds to the attempt to understand the experiences of

another, such phenomenologists behold all experiences, including shared experiences, as part of an interpretive spectrum.

Because of this, hermeneutic phenomenology, like other forms of phenomenology, does not seek to arrive at an ultimate answer, description, or interpretation of the phenomenon. Rather, the researcher approaches the task with the understanding that the phenomenon is both personal and shifting in nature, as is the interpretation (van Manen, 1990). Due to the lack of a working hypothesis, such phenomenological studies are rather fluid in their nature and provide the researcher with the opportunity to give participants an authentic and emotive voice. This essential part of hermeneutic phenomenology makes such research cryptic. Ricœu, Reagan, and Stewart (1978; as cited in Vlacos, 2014, p. 124), conjecture that meaning is not directly delivered by the source; instead, researchers must strive to become “contemporary” and “familiar” with the text, “making it [their] own,” requiring the researchers to close the metaphorical distance between themselves and the text. Only when this is accomplished can true interpretation of the phenomenon be achieved.

This connective ability opens the avenue for research that seeks to understand the lived experiences that bring different types of people together around a shared phenomenon. With technology being so important to the effective teaching of students, teachers are being pressed to include it in various parts of their curriculum (Bakir, 2016). In fact, in the state of Tennessee, teachers are evaluated on their inclusion and utilization of technology, and this information is used to determine pay increases, bonuses, and retention (Department of Education, 2017). Thus, the door opens to ask how teachers and those who support them are experiencing this expectation and how it is impacting their

senses of self, both personally and professionally. In addition, the question arises as to whether all are equally equipped to deal with this expectation or whether some are at an advantage or disadvantage in its application.

Indeed, technology in education has become a given, offering many paths for achieving one's educational goals. The rapid expansion of online learning offers the opportunity both to decrease educational obstacles and increase the proliferation of education across barriers (Bowen, 2015). Furthermore, learners are now able, through innovations such as online and distance education, to overcome numerous hindrances (work schedules, transportation, and family) that would have prevented such education (Li, 2008). This, however, has engendered a new form of inequality. Known as the "digital divide," this redefining of the "haves" and "have nots" has spurred new research into the causes and effects of mass technology and its presence in education (Gonzales, 2010, p. 7). Broadly speaking, the results of this research have revealed that the so-called "digital divide" touches individuals in multiple contexts, affecting people based on their gender, socioeconomics, age, race, geographic location, and education level (Epstein, Nisbet, & Gillespie, 2011); and has a profound influence on their abilities to find success in education.

As a point of interest for this research, age has proven to be a significant marker for technological differentiation across a myriad of studies. In a self-perception study of 262 adults from ages 18 to 92, Van Volkom, Stapley, and Amaturro (2014, p. 571) found that, while differences between their male and female participants were minimal, their oldest participants were "more frustrated when using technology, less likely to view cell phones and websites as user-friendly, and more likely to feel that the pace of

technological innovation moves too fast.” According to Keller (2006), older learners, Baby-Boomers in her particular case, feel that they are at a significant disadvantage in education because of the ever-evolving nature of technology, and Cammack (2008), in a study of 86 college students, found that age was the most significant factor in determining attitude toward educational success. Older learners, it was found, not only scored lower on technological assessments but also felt inferior to their classmates. Considering the forward trend of expecting teachers of all ages to use technology in the classroom, these findings are disturbing, especially when one considers that by the end of the twenty-teens about one quarter of American workers will be over the age of 55 (Wolfson, Cavanagh, & Kraiger, 2014).

Due to this surge in technological advances and the increase of older workers, imperatively, educational facilities need to start reaching older adults, or they “will become further marginalized” (Timmermann, 1998; as cited in Githens, 2007, p. 331). Indeed, this necessity is only further illustrated by the fact that not having these technological skills can both take away one’s sense of control over one’s own life and lead to social isolation, especially in older adults (Chaffin & Harlow, 2005). Ultimately, these older adults, according to Chaffin and Harlow (2005), have to fight the notions that they are “unable to do much” and are of questionable physical and mental state, which is contrary to findings that suggest that mental acuity is higher than ever among aging persons.

In addition to age, access to technology is a primary area of concern. In underserved areas, such as rural communities, learners may not have access to high-speed internet and other technology because they are not regulated like public services

(Eberhart, 2004). This leads to some's not having access to "the most reliable telephone service or the fastest or most convenient Internet services," a key marker of the "digital divide" (Selwyn, 2004, p. 344). The lack of equity between urban and rural areas filters deeper into the educational sphere, however, with rural areas tending to be more impoverished and having higher teacher turnover than their urban counterparts (Monk, 2007). These factors, combined with the isolation that teachers often feel in rural communities (Burton & Johnson, 2010), create a nexus that calls for exploration and understanding.

### **Statement of the Problem**

The push to use technology in the classroom has created an intersection between teachers, technology coordinators, and administrators; with the classroom serving as the experimental chamber where individual experiences meet with professional expectations (Stallard & Cocker, 2014). With the "digital divide" taken into consideration, the necessity of understanding the experiences of older teachers (and those whose mission includes teachers' successful integration of technology) becomes paramount. However, the collision of these three groups around the phenomenon of technology implementation in the classroom has not been covered in the research literature, and with many educational professionals stretched to meet their obligations to the students in the most dire of circumstances, both the needs of such students and the mental well-being of the professionals in charge of meeting those needs are neglected (Knaak & Knaak, 2013).

Although much research has been done on the "digital divide" and even on individual subgroups within the "divide," such as older learners (Broady, Chan, & Caputi, 2010; Fisher, 1998; Van Volkom, et al., 2014), the lived experiences of those



impacted is often ignored in the data. Indeed, qualitative data for such groups (Githens, 2007; Keller, 2006; Wolfson, et al., 2014) is lacking in abundance when compared to quantitative equivalents (Cammack, 2008; Lam & Lee, 2006; Marquie, Jourdan-Boddaert, & Huet, 2002; Ritzhaupt, Feng, Dawson, & Barron, 2013; Sugrue & Rivera, 2005; Van Volkom, et al., 2014). Of course, a phenomenological study takes a close look at very specific participants in order to gauge their interpretations of a given phenomenon. This makes it particularly difficult to replicate data from context to context, participant to participant, even within a very similar set of circumstances. Each person's experiences are lived through his or her eyes only (van Manen, 1990). Because of this, the intersection of any two particular groups of individuals in trying to discover a shared lived experience will produce a different interpretation of the phenomenon in question.

### **Purpose of the Study**

The purpose of this study was to understand the shared experiences of older teachers in the classroom, administrators, and technology coordinators, in regard to the insuring of effective utilization of technology by teachers with 20 or more years of experience. In particular, this study sought to understand the significance of this phenomenon to employees in two school districts in rural West Tennessee by giving them a voice in the body of research. The goal of this dissertation was to enrich existing literature by helping us to understand the experiences, pressures, and expectations of those responsible for the implementation of technology and its successful integration into curriculum.

The setting for this hermeneutic phenomenological research project was two rural school districts in West Tennessee. According to the United States Department of

Agriculture, as of 2016, approximately 22.6% of Tennessee's 6.5 million residents live in rural areas. Such areas are those that are described as not being part of a "larger labor market area," having "open countryside," having rural towns (typically fewer than 2,500 residents), and being centralized on urban areas of fewer than 49,999 people. Those in urban areas of the state make approximately 1.4 times the income of those in rural areas (\$46,067 in urban areas, compared with \$33,930 in rural areas), and they experience a lower rate of poverty (14.9% in urban areas, compared with 18.9% in rural areas). Additionally, rural communities in Tennessee have a lower rate of college completion (14.7%, compared with 28.6% in urban areas) and higher rates of not completing high school (18.7%, compared with 12.6% in urban areas) and unemployment (5.8%, compared with 4.6% in urban areas).

According to the Tennessee Department of Education (2018a), over one-third of all school districts are described as rural, serving over 221,000 students (or 22.3% of the total student population). Students in such areas are taught by teachers that receive among the lowest national teacher salaries, and, on average, funding per student in these rural areas is lower than the national average (\$4,853, compared with \$6,067). In addition, according to the National Center for Education Statistics (2018), the average age for Tennessee teachers (43) is higher than the national average (42.5), with an average of 14 years of service being reported.

### **Research Questions**

Throughout the research process, I was guided by the following questions in my attempt to understand the significance of this phenomenon to the participants:

1. How do older teachers, technology coordinators, and administrators perceive and experience the presence or absence of technological support and its effect on older teachers' abilities to create and maintain a positive outlook for their professions and selves, and what is the significance to each person?
2. How do older teachers, technology coordinators, and administrators perceive and experience their roles in helping to ensure the successful implementation of technology in and for the classroom by older teachers, and what is the significance to each person?
3. How do older teachers, technology coordinators, and administrators perceive and experience the realization of their roles in helping to ensure the success of older teachers with technology in and for the classroom, and what is the significance to each person?

Because the goal of this study was to understand the individual lived experiences of the participants, phenomenological methods were used to explore the research questions (Cohen, Kahn, & Steeves, 2000). Since hermeneutic phenomenology, in particular, is predicated upon the idea that the research is interpretive, rather than purely descriptive, I sought to interact with the participants in a very organic and meaningful way (Finlay, 2012). This required three in-depth interviews and follow-up interactions with participants that allowed them to read, interpret, and reinterpret their own input (Anney, 2014). This element of hermeneutic phenomenological research is crucial. The conversation between the researcher and the participants does not conclude at the end of the interview. Instead, it is a continual cycle of interpretation and adjustment, with the participants being given the chance to clarify, change, or reimagine their experiences

(Anney, 2014). Thus, such research must rely on multiple interactions, and this research engendered from engagement with nine participants (three from each of the pools), keeping the group small, as suggested by Polkinghorne (1989), for a clearer and more personal interpretation of the phenomenon.

### **Significance of the Study**

This research is significant because it provides first-hand accounts of an area in education that directly affects multiple types of school employees. In particular, this hermeneutic phenomenological study unearthed the significance of experiences of those directly responsible for the implementation of technology in the classroom. Understanding their strengths, struggles, and insights is incredibly valuable to explicating an area of education that is in constant evolution. Given the perpetuation of the so-called “digital divide” and its continued impact on “equitable access to hardware, software, the Internet, and technological support within schools” (Ritzhaupt, et al., 2013, p. 293), those in the educational sphere must begin the process of understanding how they all provide a piece of the puzzle that results in a teacher's ability to perform this part of his or her job. However, without understanding of individual circumstances and individual interpretations of individual circumstances, we are left in the dark. To rely only on quantitative data does not reveal the inner turmoil, joys, and quandaries that permeate the human side of such a phenomenon. To quote Denzin and Lincoln (2005, p. 5), “Objective reality can never be captured [in qualitative research]. We know a thing only through its representations.” Thus, research such as this is essential to providing the proverbial *other side of the coin*, which “can never be captured.” The shared phenomenon between these teachers, administrators, and technology coordinators bestows a small glimpse into the

minds and interpretations of those directly on the frontlines of providing quality education in rural West Tennessee schools.

Additionally, interpretation through the social learning theory provides insight into the ways in which these participants gain, retain, and implement their previous learning throughout the process. This, in combination with hermeneutic phenomenological methods, hopefully unveils a clearer interpretation of the phenomenon as seen from each of the participants' points-of-view. Since the goal of such research is to give voice to each participant, trying to understand his or her interaction with learning is an essential part of the process. Given that these three groups had not been researched in tandem, the intersection of their shared phenomenon with the tenants of social learning theory shed some light on the driving forces behind their decisions, feelings, and experiences.

### **Epistemology**

This study was firmly rooted in the epistemology of postmodern theory. As hermeneutic phenomenological research is dependent on the cycle of continual interpretation, it rejects the notion of a single *answer*, instead striving to bring the lived experience of the phenomenon into focus (van Manen, 1990). This is well-aligned with the components of postmodern theory. Postmodernism, at its core, is a rejection of the certainty of objective truth (Brooks, 2013). It presents truth as both personal and lacking in broad application; thus, change and misalignment are inevitable (Merriam, 2002). Thus, hermeneutic phenomenology and postmodern theory are symbiotic in their views of experience. Both begin with the assumption that one's view is unique and determined by personal experience, and postmodernism's subjectivist slant helps to highlight the

intimate and necessary nature of the participants' views and experiences with the phenomenon.

### **Theoretical Framework**

To draw the connection between the learners and the environments in which they learn, social learning theory served as the backbone of understanding. Bandura (1971) describes this theory as one that provides for learning that does not require hands-on interaction. Instead, learners, when fully invested in both the examples provided and the providers, can use verbal coding and retention processes to learn new material, free of the dangers of trial and error (Bandura, 1971). This theory highlights the necessity of investment into the desired learning and understanding that one can learn the material. Only when these conditions are met can the learner find success and retain the learning for future use (Bandura, 1971).

### **Limitations of the Study**

As with all phenomenological research, one of the primary limitations to this research is the difficulty in generalizing the results across a broader spectrum of the given populations. As hermeneutic phenomenological research, as previously stated, is concerned with revealing an individual's interpretation of a phenomenon that is then interpreted by the researcher in a cycle that may see many reinterpretations before a *final* product is cemented, trying to take the results and predict the feelings and reactions of others, even in similar circumstances, is both immaterial and precarious. The nature of such research is extremely personal; thus, generalizing the findings within the larger educational sphere presents an issue. Instead, the purpose is understanding, not a definitive answer.

In addition, the limited number of participants adds to the finite applicability of this study. Considering that nine participants took part in this study (a small number by any measure), to take their interpretations of the phenomenon and apply them to a larger swath of the population, again, presents challenges; though, this is not the goal of such research. Thus, both the nature and the scope of the research serve as its primary limitations. However, they also provided me the opportunity to create intimate connections with the participants in order to glean as much about their lived experiences as possible to meet the objective of providing them with a voice to share their interpretations and significance of the phenomenon.

### **Delimitations of the Study**

Although many people are involved in helping to ensure the successful implementation of technology by teachers, this particular study only focused on three groups (teachers, technology coordinators, and administrators) in order to make the data manageable and keep the phenomenon at the center of their lived experiences. In addition, while all teachers are impacted by the push to use technology in and for the classroom (Ertmer & Ottenbreit-Leftwich, 2010), older learners are particularly vulnerable to the emotional and mental consequences of such expectations (Broady, et al., 2010; Marquie, et al., 2002). Thus, this study was delimited to older teachers and their experiences as the crux of the phenomenon.

### **Assumptions**

This study was predicated upon the idea that all participants experience the need or push either to use technology in or for the classroom themselves or have the expectation that such is a part of their missions in their respective positions within their

school systems. In addition, it had to be assumed that they would openly share their experiences with the phenomenon with honesty and depth, and that they would adequately be able to communicate the breadth of both their experiences with the phenomenon in question and their feelings related to the phenomenon.

### **Definitions of Terms**

**Essence.** Essence is defined as the central heart of a phenomenon. It brings an idea or feeling out of the darkness and into visibility (Harman, 2007). Specifically, the understanding of the essence of a phenomenon allows us “to grasp the nature and significance of [...] experience in a hitherto unseen way” (van Manen, 1990, p. 39).

**The “Digital divide.”** The “digital divide” is defined as the “[p]ersistent gaps” among subgroup dividers (such as race, age, education, gender, and geographic location) in relation to access to technology (Epstein, et al., 2011, p. 92).

**Older teacher.** Older teachers are defined as those with 20 or more years of experience in the classroom. This is based on the highest tiers of the pay scale for many rural schools in West Tennessee.

**Administration.** Administration is defined as any individual who is responsible for supervising the daily functions of a school (Strike, Haller & Soltis, 2005). For this study, individuals may serve as a primary or secondary supervisor (principal).

**Rural area.** A rural area is defined as an area that is not dependent upon an urban area of 49,999 or more. It is separate and sustained (United States Department of Agriculture, 2016).

**Technology coordinator.** A technology coordinator is defined as “all job titles... that are responsible for promoting technology integration within a school or school



district” (Sugar & Holloman, 2009, p. 66). This includes those who may fill multiple roles, such as school librarians, as long as technology and its implementation are essential parts of their duties.

**Social learning theory.** Social learning theory is defined by Bandura (1971) as the process by which people learn through observation and verbal coding. This theory alleges that learners can imbibe information without hands-on interactions if they are involved and committed to the learning process.

### **Chapter Summary**

This chapter summarized the gap in the literature that allowed for the examination of the research questions. With the increased importance of technology in the classroom, understanding the experiences and perspectives of older teachers, technology coordinators, and administrators in rural areas is crucial to advance excellence in education. An overview of social learning theory adds to the prismatic approach of this project and allowed for the participants to discuss their experiences with learning and teaching within the professional sphere.

## **Chapter 2**

### **Review of Literature**

The purpose of this chapter is to give an overview of the literature related to older teachers, administrators, and technology coordinators within the American school system. In particular, the literature is focused on their forming of relationships within the educational sphere. As the goal of this dissertation was to capture the shared phenomenon centered on the use of technology by older teachers, special attention is given to the expectation of how professionals relate to and communicate with each other. In addition, this chapter briefly touches on the nature of educating in a rural area, since that was the chosen context for this study, and there is a discussion of the role that technology plays in the professional evaluating of Tennessee teachers. Lastly, this chapter gives an in-depth look at both the so-called “digital-divide,” which defines the gaps in relation to the access and use of technology, and Bandura’s social learning theory, as it was the chosen theory by which the views of the participants were coded for analysis. This chapter concludes with a brief conclusion of the contents and reflections on my thoughts.

#### **Technology and Teachers in the Classroom**

The research into the technological expectations to which teachers must adhere is sketchy, to say the least. According to Bakir (2016, p. 26) programs that train prospective teachers “are constantly being challenged to prepare future teachers who can effectively integrate technology into their teaching.” Yet, results are mixed, as Bakir (2016, p. 26) goes on to claim that isolated technology classes do not provide preservice teachers “with the necessary skills and the abilities to integrate technology into their practice.” Hsu (2016) found a completely different set of problems. A study of new teachers uncovered

that they have high positive self-efficacy beliefs in relation to technology but often do not integrate it because of a want to focus on other elements of teaching, viewing technology as an “additional element,” favoring core skills in their struggles in their early years in the profession. More experienced teachers, on the other hand, are less likely to incorporate technology because of personal “beliefs about technology integration” and dubiousness as to its usefulness (Hsu, 2016, p. 38). Thus, technology integration faces a number of barriers rooted in issues related to both students and teachers, including “teachers’ lack of training and exposure to technology and teachers’ lack of time to implement technology-integrated lessons” (Hsu, 2016, p. 38-39). Therefore, time and training rank high as to reasons that teachers do not integrate technology.

This creates a myriad of problems because, as will be discussed later, the use of technology in Tennessee classrooms is a scored component of a teacher's overall effectiveness. Thus, a teacher's want and ability to implement technology in his or her classroom can directly impact his or her observations score, which affects salary and retention, which, in turn, can impact his or her sense of self. In a survey of over 1,000 teachers in the southeastern United States, O’Bannon and Thomas (2014, p. 18) found that teachers “age 50 and older were significantly less likely to own a smartphone.” In fact, only 64.5% of teachers at this age owned a smartphone, significantly fewer than the 85% of teachers who were 32 years old or younger. In addition, they found that older teachers were less likely to find such technology to be useful for students’ learning or even support its use in the classroom at all (O’Bannon & Thomas, 2014).

Additionally, Ertmer and Ottenbreit-Leftwich (2010) found that teachers need to have the confidence and know-how to implement technology effectively in the

classroom, but that they often fall prey to the pressure to adhere to the norms of the school. Indeed, technology itself is “less likely to be adopted if it deviate[s] too greatly from the existing values, beliefs, and practices of the teachers and administrators in the school” (Ertmer & Ottenbreit-Leftwich, 2010, p. 264). This intense insistence to stay within the status-quo can put pressure on teachers in a variety of ways. On the one hand, older teachers may feel pressured to institute technological advancements, even when they do not feel comfortable with them, just to fit in with the expectations of peers and administrators. On the other hand, veteran teachers can influence younger teachers against technology if they are the dominant force in a department or school. Whatever the case, teachers, in general, show hesitance in adopting new innovations into their curriculums and instruction (Ponticell, 2003). They are often uncomfortable with the constant change, and they have trouble adapting existing lessons to meet this ever-evolving portion of their jobs. At the root of all of this apprehension, however, is a lack of requisite knowledge of what has become seen as a basic teaching skill (Lawless & Pellegrino, 2007). Thus, teachers need better training and support for technology that helps them to identify and use “best practice” technology in their classrooms, including access to practice opportunities and “positive role models” (Ertmer & Ottenbreit-Leftwich, 2010, p. 268).

### **The Role of Administration**

The role of administration in a school building is one of extreme complexity. Administrators sit at the intersection of teachers, staff, students, district administration, parents, and the community; and it is their responsibility to serve each of these stakeholders to the best of their abilities, including providing appropriate feedback and

fair evaluations to teachers (Strike, et al., 2005). In one sense, they are the first line of communication between the many facets that create a school. In relation to teachers, in particular, they have many different duties that are their responsibilities. One of the most important, as noted by Fidan and Balci (2017), is the engendering of an environment that builds teacher confidence and power, thus enabling them to do their jobs to the maximum effect. To accomplish this, an administrator must be willing to surrender a certain amount of power. Creating greatness in teachers “requires empowering teachers and granting them more autonomy in their tasks” (Fidan & Balci, 2017, p. 16). To accomplish this, the researchers suggest that administrators form autonomous teacher teams that will serve as facilitators of information exchanges between the different parts of the school government. This allows teachers to take control of their own betterment, instead of depending upon and laying blame on administration alone. This delegation of power is noted by the researchers as difficult to execute and uncommon in education. However, they attest that it is one of the best ways to improve the school environment.

In addition, Fidan and Balci (2017) note that allowing teachers to come together to control a portion of their own development paves the way for heterogeneous involvement. Promoting this type of environment, in fact, is noted as an ethical consideration that all administrators must tackle (Strike, et al., 2005). This diversity, in turn, can provide opportunities for even greater amounts of innovation and creativity in the workplace. Thus, administrators, by allowing power to be delegated below them, can strengthen and bind their learning communities in ways that are not possible in a top-down managerial style, and they can ensure a proactive rather than reactive approach to their staffs. One of the ultimate goals of administrating in this way, the researchers note,

is the emergence of a new type of environment: an environment that challenges teachers to be innovative, creative, and involved in their own betterment. In this style of leadership, thus, the administrator is the leader of the school and its vision, but he or she is not the center of attention; that is shared and fragmented over all who have a vested interest in the success of the educational enterprise.

Furthermore, in an in-depth investigation of one school, Free (2017) discovered a number of positive and negative traits that were tied to the strengths and weaknesses of the school's administration. Echoing the sentiments of Fidan and Balci, Free (2017) found that environment was one of the most important aspects of maintaining a positive learning situation for both students and teachers. Indeed, the creation of a multiculturally sensitive environment that promotes free expression and equal opportunities among staff is the cornerstone of a good administration (Strike, et al., 2005). Participants in Free's (2017) study noted that the school environment was focused on helping students to be successful. In addition, they felt empowered to make classroom decisions that were best for their situations. This is of particular interest considering that their students were noted as being sometimes dangerous and often disruptive. Still, they felt as if administration had given them leeway to make changes and adjustments to their curriculum to best suit the students' needs. One participant noted, "We have the freedom to meet students where they are at and take them to the next level academically, behaviorally, and socially" (Free, 2017, p. 512-513).

However, Free (2017) also notes the cracks in the teachers' views of administration. In particular, teachers felt that administration did not deal equally with student behavior. In their opinions, the presence of more consistency would allow

students to make better choices by more clearly understanding the consequences of their actions. Thus, the role of the administrator is called into question when he or she cannot provide a stable learning environment that is predicated upon equality. This is not to say that an administrator should not have the flexibility to deal with an individual as an individual. However, as the teachers noted, an administrator sets the tone, and when a student or teacher does not know what to expect, he or she can have a difficult time in planning and acting accordingly. Free (2017) goes so far as to clarify that the healthy environment that had been described by the participants earlier was in relation to the emotional support that they felt like they were given, not physical safety. Indeed, one participant noted that she did not even believe that there were rules written down at all; they were so inconsistently enforced by administration.

Whether or not administration provides a nurturing environment, however, stretches beyond the physical and emotional support that teachers and students need and into the realm of resources needed to make this expectation a reality. In a look at three school districts in Canada, Brown and Jacobsen (2016) found that administrators are often ill-prepared to augment teacher knowledge of technology in the classroom. In particular, they discovered that administrators themselves are often untrained in technology and how to connect it with curriculum, which echoes a similar assertion about teachers by Hsu (2016). Thus, multiple sides of this triangle are often underprepared to strengthen student learning and teacher readiness for thorough technology integration in the classroom, and this fundamental disconnect has had a deleterious effect on students, who will need to rely on learned technological skills for future endeavors; in essence, the inability of administrators and teachers to obtain technological leadership skills

undermines a primary goal of education: to equip students for future learning and opportunities (Stallard & Cocker, 2014).

### **Information Technology in Schools**

The growth of information technologies in school has been both drastic and impactful on the jobs of all who work within the educational sphere. In addition, the explosion of technology clearly influences student achievement and highlights the problems of inequality that exist within education. One of the first lines of defense in the information technology battle is one that many people overlook: librarians. Gone are the days of filing books according to the Dewey Decimal System. Indeed, the role of the school librarian has expanded to include that of media and information specialist, and research on librarians as teachers of teachers is lacking. According to Wine (2016, p. 209) librarians are “expected to work cooperatively with teachers and administrators to ensure that these information skills [are] integrated into the school curriculum.” This means that many librarians have seen their jobs expand to that of a leadership role. Indeed, many are expected to participate in and lead professional development that instruct teachers on how to incorporate and use new instructional technologies in their pedagogy. Thus, the “effective integration of technology into lessons” is no longer just the concern of the classroom teacher and administration, as the school librarian is now expected to work toward “providing training on new technologies, making recommendations for purchases, and contributing to planning for division technology policies and processes” (Wine, 2016, p. 210).

More specifically, Wine (2016, p. 213) notes that librarians are “positioned uniquely to provide technology leadership through integration of technology and



learning” because they “work with all teachers and students.” Thus, they, like other information technology professionals, are expected to work in close collaboration with teachers to ensure the learning of all students and fair and equal access to technological resources. In general, this takes the form of four responsibilities: staying abreast of new technologies; being able to help in the maintenance of equipment and the recommendation of new products; evaluating the effectiveness of technologies in the educational realm; and serving as an example of leadership, as many members of administration do not have extensive backgrounds in technological advancements and must thus share responsibility with specialists (Wine, 2016).

The work of Sugar and Holloman (2009, p. 67) expands the discussion outward to any position that serves as technology coordinator. They echo Wine’s assertion that a technology coordinator is “expected to be a school leader.” The responsibilities of these individuals, generally, fall into one of four categories: instruction, technical expertise, planning and assessment, and leadership. Under the instruction umbrella, the technology coordinator is expected to “model best practices,” assist in “staff development,” and help ensure “effective technology integration.” To the technical expertise portion of the job, he or she, as asserted by Wine’s discussion of librarians, should be a part of “technology purchases and recommendations” and “technical and networking support.” For planning and assessment, it is essential that this individual help determine “technology plans and policies” and proper “assessment” techniques. Lastly, for the leadership role, one must assist with “supervision,” the establishment of a shared “vision,” and the facilitation of “collaboration” (Sugar & Holloman, 2009, p. 68).

Thus, technology coordinators “must be cognizant of the broad influence of their role and the leadership opportunities within their schools,” which means that they “should be equipped with the language of leadership and... aware of how their responsibilities are intensely interpersonal and vital” (Sugar & Holloman, 2009, p. 73). At any time, they can be called upon to provide “advice on when and how to incorporate appropriate technology into a lesson,” so they are of utmost importance to teachers, administration, and students (p. 67). As the role of technology has only increased in education, the role of these often invisible individuals takes on more and more weight, and an increased understanding of the technology coordinator’s role in the picture is potentially beneficial to all involved. Whether they be school librarians or district personnel, these essential members of the leadership team can serve to bring teachers and administration together in their understanding of technology’s role in the classroom.

### **Technology in the Tennessee Educator Evaluation System**

In the state of Tennessee, according to the Tennessee Department of Education (2017), teachers are evaluated using the Tennessee Educator Acceleration Model (TEAM) rubric. The outcome of this rubric accounts for 50 percent of a Tennessee teacher’s overall effectiveness score for the school year. Scored on a one-to-five scale, on which five is the highest effect and one is the lowest effect, the goal of this evaluation system is to identify effective and ineffective teachers for the purposes of training and retention. While conducting evaluations, administrators must consider the following areas of instruction: adherence to standards and objectives, the motivating of students to perform, the presenting of instructional content, the lesson structure and pacing, the activities and materials used, the use of proper questioning, the giving of academic

feedback, the effective grouping of students, the teacher's knowledge of content, the teacher's knowledge of students, the engendering of complex thinking in students, and the prompting and development of problem-solving skills. Additionally, teachers achieving in the upper echelons of the evaluation system (typically a five) are often awarded pay bonuses for their efforts. Because of these factors, the push to achieve high scores is strong.

The implementation of technology is directly stated on the TEAM rubric as a necessary part of receiving a score of five on the "Activities and Materials" portion. Specifically, the rubric states that, to receive a five, "[a]ctivities and materials include all of the following" and goes on to specify "multimedia and technology resources" as a required component. Any lesson that does not include this element automatically qualifies for a score at a lesser level.

The ability to implement and use technology and other materials to support the primary agenda of a lesson is also addressed in the Tennessee "TEAM Teacher Evaluator Handbook" (Tennessee Department of Education, 2018b, p. 37). The handbook asserts that, when evaluating teachers, materials and activities should be assessed on the grounds that they are used with skill: "if [activities and materials] use is not purposeful in supporting students in meeting the learning objective, then the purpose for their use may not be clear or appropriate." Thus, the state of Tennessee expects teachers to be able to both use technology and implement it with aptitude. Otherwise, they expect evaluators to consider reducing the "Activities and Materials" score for the evaluation, which, again, can impact the overall effectiveness score for the educator, which (in turn) can impact bonuses, tenure, and retention.

## **Education in Rural Areas**

One of the other issues at play for this research is the role of the rural setting. In general, Monk (2007) reports that teachers in such areas are generally happy because they have fewer problems with major disciplinary issues than teachers in more populated areas, and they tend to gather together in clusters that form close attachments. This sentiment is echoed in Burton and Johnson's (2010) case study of two rural teachers. They discovered that rural teachers are fond of the areas in which they teach because they are able to develop close ties with both their students and their communities. Thus, teaching and rural areas clearly has its benefits for teachers, especially those seeking the kinship of others. However, both sets of research also highlight a variety of problems that plague rural schools and rural teachers.

For instance, Monk (2007) asserts that rural areas tend to be more impoverished than their urban counterparts. Because of this, rural schools tend to offer lower pay to their staff and have fewer resources available for use in the classroom. In addition, he notes that teacher turnover at rural schools is often high, which may be a result of the low pay. Burton and Johnson (2010) highlight the isolation that teachers can feel in such areas. This shows the paradox that can exist when teaching in rural settings. Teachers may both find themselves attached to a very intimate group but also isolated from activities and opportunities that are enjoyed by people in larger areas.

This unique set of problems also leads to issues with the students. Coming from poverty and having high teacher turnover in their educational path leads many to avoid college, which only further perpetuates the cycle of poverty. In addition, the sparseness of the population in these areas is attractive to immigrant workers, which leads to a high

number of students with limited English proficiency. This, in turn, can complicate the jobs of teachers in such schools. Thus, many of the positives that accompany teaching in rural schools are offset by many of the costs that come to teachers both personally and professionally (Monk 2007).

The result of these various problems is that positions in rural schools can be difficult to fill (Burton & Johnson, 2010). Often, teaching positions in rural areas have to be filled by teachers that have lower qualifications than those in more populated urban centers. As a result, Monk (2007) suggests that educational policy should focus on improving teacher qualifications and ensuring that teachers in rural settings have access to the resources that they need to be successful in their jobs. While this cannot fix every problem inherent to this educational subsect, it would be a step toward equalizing the education of rural students with their urban counterparts.

### **The “Digital Divide”**

Capron and Johnson (2004) capture the confusion of education in the Information Age when they assert that most assumed that technological know-how would engender simply on the proliferation of the technology itself. That is not the reality of the situation, however. Indeed, most technological skill attainment is the result of practice and guidance (Manowaluilou, 2008). According to the United States Census (2014), nearly 84 percent of American households own computers, and over 74 percent have ready access to the Internet. While these numbers seem reasonably high, they can be deceptive. Indeed, a closer inspection of the numbers reveals a pattern of technological polarization based on a myriad of factors such as race, age, and socioeconomic status. Over 77 percent of Whites, for instance, report Internet access; this shadows the mere 61 percent of Black

Americans that report such access. Furthermore, nearly 95 percent of persons making over 150,000 dollars have access, nearly double that of people who make less than 25,000 dollars per year. Clearly, a blanket percentage does not capture the entire picture of what is happening in America in regards to access to technology. The gaps that exist between these markers are the cause of much debate and the topic of a plethora of policies, laws, and research; these chasms have collectively taken on the now-infamous title of the “digital divide.”

**Definition.** Simply put, the digital divide is both a socioeconomic and a demographic divide between individuals who use technology and those who do or cannot (Morrell, Mayhorn, & Bennett, 2002). More specifically, Epstein et al. (2011, p. 92) identify the “gaps between developed and developing nations” and the previously mentioned “socioeconomic, geographic, educational, racial, and gender lines” as the predominate markers of this divide, which has been a mainstay of policy making “since the emergence of the Internet.” These broadened definitions of the digital divide give us the distinct impression that it impacts nearly every section of American society, and this impression is not unfounded. Actually, by its very nature, such fission is difficult to encapsulate and even more troublesome in that numerous characteristics can and will influence individuals at any given time, which gives rise for the opportunity to investigate it even more deeply within any of the given subgroups and at their intersections as well.

For instance, an investigation of age as a factor of the digital divide is not as simple as it seems on the surface. Indeed, Van Volkom et al. (2014) found that simply investigating the prevalence of technology among age groups did not provide a complete picture of the issue. Instead, one has to also consider factors such as the variety of and

interest in using such technology. Even within a given mechanism, such as a computer, they found that simply being able to use the basic functions therein did not represent a broader understanding of the instrument itself. Furthermore, Epstein et al. (2011) found that most people cannot even agree on the implications of not having direct access to such technologies. Whatever the case, the digital divide represents a more complex problem than when it was first coined in 1995, and with the spread of technology, the definition of this term will only continue to evolve.

### **Older Learners and Technology**

It would surprise few to know that older learners and younger learners experience technology in different ways. Still, the reasons for these differences are not as simple as face value might suggest. For instance, Schaie (1994; as cited in Fisher, 1998, p. 28) found that age did not negatively affect cognition in reliable increments until the age of 74, “providing evidence that age-related decrements in some basic cognitive processes may not translate into decrements in everyday complex problem-solving performance.” This is reinforced by Wolfson et al. (2014, p. 28) with their assertion that “young-old” adults, those between 55 and 75 years of age, and “old-old” adults, those over 75, experience technology differently. In particular, it was found that “young-old adults made fewer performance errors, needed less assistance, and took less time for training.” Obviously, even some of the oldest adults are still capable of learning new technological skills. Instead of age alone, Fry (1992; as cited in Fisher, 1998, p. 29) found that “exogenous factors such as self-knowledge, motivation, and expectancies” impact the experiences and abilities of older adults. The effects of these extraneous factors impact older learners in a number of ways, but fundamentally, their mentalities are morphed

before they ever engage with technology. Timmermann (1998, p. 63) found that many older Americans feel that they are simply too old to learn about computers and other technologies, and that many experience “anxiety about new technology,” writing, “The fear of hitting the wrong key and then not being able to make corrections, or even breaking the computer, can be paralyzing for people of all ages, and particularly older adults.”

The question then is of existence and causality. Observing a beginners’ computer class, Ryan, Szechtman, and Bodkin (1992; as cited in Broady, et al., 2008, p. 474) found that older learners “were left feeling inadequate and incapable of using computers,” but it is also noted that the learners were experiencing a high level of anxiety and that tutors did not differentiate their instruction for these learners. Truly, the extent to which ability and attitude correlate is a crucial question when considering the technological abilities of such learners. This question intersects with Hawthorn’s (2007) assertion that the lack of experience with technology could be driving the attitudes of older learners. What is problematic for both researchers and instructors is that this creates a cycle, as one’s skill with technology can affect one’s likelihood of using it, and thus, one’s ability to practice and gain proficiency (Wang & Wang, 2010).

To address this issue then, research has to look beyond the number associated with age; instead, focus on external, contextual factors is needed. Wolfson et al. (2014) suggest that older learners need programs that help them achieve self-directed learning and encourage self-efficacy, which they claim can be engendered by

- (1) Fostering a culture where experimentation, flexibility, and learning are valued;
- (2) embedding customized learning experiences into individuals’ daily work; (3)



designing a system for tracking and rewarding life-long learning behavior; (4) establishing a knowledge database where information about individuals' areas of expertise can be captured; and (5) selecting individuals into the organizations with a proclivity for continuing learning. (p. 36)

The extent to which such programs would help older learners is not heavily researched, but a plan of action is required to help older learners achieve with technology. In essence, the question of older learners and technology has become two separate issues: practical application of skill, and psychological and societal factors that affect skill.

In a study of both markers, Marquie, et al. (2002, p. 279) researched the intersection of perceived self-worth and technological knowledge by assessing both through questionnaires given to 49 younger learners, with an average age of 22.6, and 42 older learners, with an average age of 68.6. The results of this study showed no statistical difference between the knowledge of the groups, but it did reveal that the older learners had much lower senses of self-worth in relation to technology. This, they project, "is one reason why elderly people have difficulty in mastering new computer technologies." They further elucidate that "if somebody believes he or she is not capable of performing a task, he or she will not use the appropriate strategies in order to succeed." Apparently, the use of technology and one's perception of one's skills are closely related, and this connection can have profound implications for these learners in and out of the classroom. Similarly, Cammack (2008), in a study of 86 students at a community college, found that age, because of a lack of self-worth, served as the greatest determiner of success, though the results of the actual technology-based assessment were not very different. What these studies reveal is that perception goes hand-in-hand with achievement. Therefore, both

researchers and institutions need to address how they are constructing environments that might serve to weaken older learners by fostering negativity about these skills.

To better address these issues, research needs to turn its eye to both why these differences exist and how they can be addressed. Some answers are simplistic but important. For instance, Chaffin and Harlow (2005) give pragmatic suggestions that involve larger monitors and screen magnifiers. Still, emotional and self-esteem issues are not so easily addressed and require that professionals take additional steps to address these problems. Tellingly, Reese (1994) found that older women, for role development, often turned to a mix of societal and goal-oriented learning. Thus, praise, pragmatic comparisons, and extra review can be useful to these older learners, and help them to start the long road toward self-efficacy (Chaffin & Harlow, 2005).

Necessarily, higher education and employers must be a part of the solution. Timmermann (1998, p. 67) decries the fact that “[f]ew older adults are significantly involved in distance education,” but solutions do exist. Broady et al. (2010, p. 481) suggest that institutions should take advantage of the fact that students of any age enjoy learning from peers, so “older people who are computer literate and have positive computer attitudes could be used as role models for older computer novices.” This is a sentiment that is echoed by Wolfson et al. (2014, p. 37) when they offer that instructors and supervisors should be positive and clear about the role of technology. In addition, they suggest reward-for-participation programs, and that organizations consider “implementing age bias policies” to aid older learners and build their confidence.

As for employment-based training, Sugrue and Rivera (2005; as cited in Githens, 2007, p. 333) found that “e-learning is used for 27% to 38% of all formal learning

programs in organizations” and that “[o]lder workers use workplace e-learning through (1) their current jobs (i.e., keeping the same job they had before ‘retirement age’), (2) in new jobs, and (3) as volunteers in nonprofit organizations.” However, older employees and learners are plagued by issues of difficult-to-navigate learning software and “usability issues,” such as small fonts, crowded screens, and inconsistent layouts that disrupt their abilities to demonstrate growth (Githens, 2007). Moreover, the growing number of older people in the workforce makes this a pressing issue that many employers are ignoring. Simply put, employers “need to provide [older employees] with training in using new technology” (Von Volkom et al., 2014, p. 572). This is not a topic of question but rather of necessity. Indeed, both employers and institutes of higher learning may not cast as much consideration to these seemingly annoying but easily overcome issues, but with both self-worth and biological issues, such as eye-sight, at play, older learners are often undone.

Collectively, the responsibilities of such institutions are enormous. If, as Li (2008) suggests, better technological skills can be correlated with better attitudes about online learning, the need for better attention to this issue is urgent. Increasing participation in online learning is not likely to see a huge decline, so the number of older learners involved in this type of program is also likely to increase. Indeed, Houle (1961; as cited in Findsen & Formosa, 2011, p. 120) found that all learners essentially fit into one of three categories: “Goal-oriented learners who use education as a means of achieving some other goal; activity-oriented learners who participate in education for the sake of the activity itself and the social interaction; learning-oriented learners who seek knowledge for its own sake.” Findsen and Formosa (2011) make it a point to write that

this idea applies to older learners as well, but that they face societal, personal, and economic problems that do not affect all subgroups.

In our postmodern culture, the struggles that older learners are having with technology can be phrased as a grappling for resources. Powell and Gilbert (2009) assert that both older people and postmodernism are facing uncertainty. In this time, they claim our society's fascination with youth and recreation has forced older people to reevaluate what it is to get old, especially in the face of technologies and medicines that are designed to prolong active life. The problem, of course, is that the evolution of what is new is constant, and as Duke (2011) mentions, defining the technological generation is not as simple as one might think. Indeed, age itself is in flux; thus, defining old and young is more difficult than it has ever been. Later, I will discuss the use of a postmodern lens for this dissertation, but it seems appropriate to mention Powell and Gilbert's ponderous idea about simply defining "old" in our time. It is not clear. What is clear, however, is that older learners are caught in a torrent of confusion and excitement that will sink some and float others.

Of course, the tragedy of this topic is that older students can produce "work considerably enriched by prior life experience and of a standard at least comparable to students fresh from high school" (Findsen & Formosa, 2011, p. 126). Overall, we underestimate the abilities of older learners, though many "could well be taught to use technology in much the same way as younger people are taught" if given the proper amount of time, guidance, and positivity (Broady et al., 2010, p. 483). Most important, however, is that older learners care about their educations. Wolfson et al. (2014, p. 37) found that they "seek more help during [technology based instruction] than do younger

adults,” and they assert that this is not just a lack of knowledge but rather a presence of interest and concern about absorbing the content.

In summation, technology offers some tremendous drawbacks for older learners in its current incarnation; however, the benefits are astounding. Githens (2007) asserts that these benefits take the form of cognitive, mental health, and social benefits; each of which helps to prolong a healthy existence. He goes on to detail how these technologies can aid in the extension of time at work, keeping of close contacts, and even political involvement. Indeed, while I have spent a great deal of time decrying the problems that older learners have with technology, this only serves to highlight the missed opportunities that can still greatly enrich the lives of this growing and important section of our overall population in the years to come.

### **Social Learning Theory**

To understand the processes by which learners understand their environments, I utilized Bandura’s (1971) social learning theory. What follows is an in-depth look at its components and assertions about how learners comprehend and internalize their learning based on both internal and external factors.

Bandura (1971, p. 2) claims that traditional learning theories “generally depict behavior as the product of directly experienced response consequences,” yet he insists that “virtually all learning phenomena resulting from direct experiences can occur on a vicarious basis through observation of other people’s behavior and its consequences for them.” This, he states, is essential because of the “potentially lethal consequences” that can follow trying to apply “trial-and-error” to certain learning experiences, such as driving, swimming, and the development of “complex occupational and social

competencies,” thus paving the way for social learning theory, which focuses on “response integration, in the role played by cognitive functions, and in the manner in which reinforcement influences observational learning” (p. 5).

For this type of learning, Bandura (1971) paints modeling desired behaviors as one of the cornerstones of knowledge transference. However, for the learner actually to glean this information, he or she must be ruled by four “interrelated subprocesses”:

**Attentional Processes.** Attentional processes are dependent on the understanding that the learner must be engaged in, focused on, and recognizing of the modeled learning. This can influence the choice of model because learners do not always focus on the model, focus on the right aspects of the model (distraction and misdirection), or accurately understand what they see being demonstrated. In addition, the power of the model is dependent both on the social environment and the individual reaction of the learners to the model, as “people with whom one regularly associates delimit the types of behavior that one will repeatedly observe and hence learn most thoroughly,” while the “functional value of the behaviors displayed by different models is highly influential in determining which models will be closely observed and which will be ignored.” Unfortunately this means that models “who lack pleasing characteristics tend to be ignored or rejected, even though they may excel in other ways” (Bandura, 1971, p. 6-7). The attentional processes, thus, highlight the importance of carefully selecting both the models and the method by which the material is delivered.

**Retention Processes.** As indicated by the title, the retention processes are focused on ensuring the lasting memory of the learning that is taught. In the theorist’s own words, “A person cannot be much influenced by observation of a model’s behavior if he has no

memory of it” (Bandura, 1971, p. 7). Thus, for a learner to be able to replicate a modeled behavior at a later time, he or she must be able to tap into the symbolic form of the response patterns to the stimulus. One of the markers of such memory is the imaginal process. This is when a learner becomes intrinsically connected with a piece of learning. The way that one might come to associate a name with a set of physical characteristics is an example of how this imaginal process works. Thus, through specific and detailed explanation and observation, a learner can come to associate an imagined set of details with a specific learned experience. The other method by which information can be implanted into the learner's memory is the verbal coding method. In fact, Bandura (1971) claims that this may be the most powerful tie to a learner's mind. During this cognitive process, the learner transforms visual information into verbal codes. He gives the example of how one might code a set of driving directions into a set of verbal cues (for example, left, right, left, right, straight, turn at the second stop sign). This allows the learners to “carry a great deal of information in an easily stored form” (Bandura, 1971, p. 7).

After the transformation of learning into such codes, the learner may then practice other methods by which the information is stored more permanently. For instance, if a learner codes information as he or she experiences and observes it, he or she may then practice as a way to reinforce what has been learned. Thus, the combination of coding and practice can create a more concrete grasp of the information than might be achieved strictly through observation, during which the observer may not even be completely engaged. However, it is important to note that practice is not defined as only the physical act of recreating a piece of learning. For various reasons, such as certain behaviors being

“prohibited” or the lacking of essential tools, it may be impossible to recreate such learning in physical space, so Bandura emphasizes that practice can be mental, and that such mental practice can serve just as well as physical practice. In fact, when the stimuli is absent, reliance on one’s internal symbolic representations and cognitive coding become the primary source of inspiration for recreation (Bandura, 1971).

**Motoric Reproduction Processes.** This portion of Bandura's theory is centered on the ability to recreate the learned behavior. Simply put, if one has not learned the material by coding it within one's mind and giving it adequate symbolic representation, one may be faulty in one's recreation of the learned behavior. The question is “whether or not [the learner] has acquired the component skills” through observation (Bandura, 1971, p. 8). In addition, reproduction of a skill can be hampered by one’s inability “to coordinate various actions in the required pattern and sequence because of physical limitations.” Therefore, if a learner is to recreate a learned behavior adequately, he or she must first be able to physically perform the task. While this may seem like a simple requirement, it captures the very nature of disability. Whether the problem be with the body or the mind, the learner must be in complete control of the situation to be able to reproduce the process from both coded and symbolic sources of information. Otherwise, the observed behavior and learning will not be able to be translated into a pragmatic and concrete experience (Bandura, 1971).

**Reinforcement and Motivational Processes.** The last of Bandura’s processes concerns the reaction to learned behaviors and how that can impact whether or not a learner practices them and becomes more efficient with them. Bandura conjectures that learning that is met with negative response or unfavorable reception will rarely be



activated. However, when learning is met with positive reinforcement “observational learning, which previously remained unexpressed, is promptly translated into action” (Bandura, 1971, p. 8). In addition, reinforcement “can affect the level of observational learning by controlling what people attend to and how actively they code and rehearse what they have seen” (Bandura, 1971, p. 8).

Thus, for a model to elicit a desired learned behavior, he or she must be precise in instruction, insistent of recreation, prepared to prompt and redirect any failed attempts or motion, and ready to “administer powerful rewards” (Bandura, 1971, p. 8). Otherwise, each of these pieces of the learning puzzle becomes part of why a desired learned behavior is not attained by the learner.

Beyond the scope of the four processes at play in the learning dynamic, Bandura (1971, p. 11) also discusses the regulatory processes that enable learning to be “regulated and maintained.” Each of these three processes is at play in the interaction between cognition, environment, and behavior, as the model and the learner intersect. These three (stimulus, reinforcement, and cognitive control) are viewed through multiple lenses to give a more complete view of each’s impact on the learning sphere.

**Stimulus Control.** In its most basic understanding, stimulus control is concerned with how people are able to react to probable consequences to stimuli. This is drawn from their environment, though this environment can be physical or psychological. One area of note is that people will often come to associate experiences with emotions as a way to warn themselves to probable outcomes of certain stimuli in their environment. Because of this, people may come to anticipate certain outcomes before they even occur. This can be problematic in the learning process. In particular, an individual's emotional state has been

shown to be contagious. Thus, if one enters a situation in a positive mood, that mood is likely to impact those around him or her. On the other hand, if one enters a situation in a negative mood, the mood of those around him or her are likely to mirror that individual's emotional state. Known as vicarious conditioning, this phenomenon of transference has a deep psychological effect on people as they navigate their environment. If the stimuli is strong enough, it can come to affect the very way that people engage with it outside of their own experiences. For example, in a laboratory experiment people were made to watch a person show signs of pain following a certain auditory tone. After repeated exposure to the stimuli, people came to associate the sound of the tone with the pain that was shown in the human stimulus (Bandura, 1971).

In addition, Bandura asserts that individuals may become their own source of emotional and physical stimulation. For instance, he accounts that people can create sickness within themselves by simply imagining a disgusting image. In the same manner, people may engender their own sexual arousal by simply imagining an erotic scene within their own minds. This type of self-created stimulus can have deep and lasting effects on individuals and learning circumstances. When they create and relive scenarios within their own minds, they often manifest them in their physical and lived environments. Thus, there is a transference of energy between the self-created reality and the lived reality. Indeed, Bandura asserts that the more intense the emotional reaction to a situation, the more likely that emotion is to linger even when the stimulus is removed. For instance, when a person feels a sense of threat to his or her physical being, he or she is likely to continue to relive the fear even when there is a guarantee of safety, even when “the physical threat [has been] completely removed” (Bandura, 1971, p. 15).

To further complicate matters, an individual may react differently depending on the environment in which the stimulus is presented. For instance, Bandura uses the example of children and how they will often act differently in the presence of their parents than in the presence of others. This interpersonal behavior complicates the understanding of how stimuli affect our behavior. To simplify the matter, it is evident that “[p]eople frequently regulate their behavior on the basis of more subtle social cues” (Bandura, 1971, p. 18). Thus, people will read those around them and adjust their behavior according to their reading of the individuals and their environment. Much like a child will adjust his behavior to his or her parent’s tone, people in general may adjust their reactions to specific stimuli based on their understanding of the reactions of those around them. This human stimuli reaches its apex, not when the reaction is known, but actually when it is uncertain. When the reaction of those in the environment is unclear, the observer and learner must be constantly adjusting his or her output based on his or her constant observation. Likewise, when a model is unpredictable and unknown, he or she has the ability to hold sway over observers in a strong way. However, if he or she should fail or if the shown behavior should prove unsatisfactory, the learner will disregard the material just as he or she would with any other model, and the model will lose his or her sway. Whatever the case, successful models are those to whom learners look to for competence and prestige. When a model is bereft of these qualifications, the quality of his or her material becomes irrelevant. Learners are dependent on stimulus as an important part of their experience. Therefore, they are able to read the environment, read the model, and read the stimulus to make conscious and unconscious decisions about both

their behavior, psychologically and physically, and their internalization of the material (Bandura, 1971).

**Reinforcement Control.** Bandura (1971, p. 20) begins his discussion of reinforcement control with the claim that “behavior is extensively controlled by its consequences.” However, the social learning theory broadens the definition of consequence. Traditional theories focus on consequences as being reactions to criteria set outside of the individual. However, social learning theory encapsulates consequences as both those as defined by traditional theories and those set by the individual within him or herself.

The reinforcing of behavior, however, is also a tricky area of study. Some research has suggested that overly rewarding a response can actually have negative consequences. In particular, those who are rewarded each time a successful demonstration of the behavior is observed are more likely to give up or become disheartened when a failure occurs. On the other hand, those who experience intermittent rewarding are more likely to weather failures and press on toward eventual success. This complication makes successfully modeling behavior a difficult proposition. Models have to balance the need to reinforce positive responses to the aforementioned stimuli with the understanding that reinforcement can be neither automatic nor ignored. Bandura (1971, p. 22) bases his support for intermittent rewards on the claim that “[i]n everyday life mixed schedules of reinforcement predominate,” with reinforcement of behaviors “continually changing.” To further complicate matters, in normal intercourse between people power dynamics are always changing, and when such changes inevitably occur the reinforcements must change as well. As individuals fluctuate in their power and influence

within a given environment, they take on different roles in the demonstrating or modeling of behavior and their reinforcing of expectations (Bandura, 1971).

Within this sphere, individuals often self-reinforce as well. When they are seeking a material gain, for instance, individuals may set goals for themselves in order to obtain more money through their jobs by improving their work performance. This interacts with the role of the model. When feedback given by a model interferes with or does not align with self-imposed reinforcement goals, the model provided may be discarded.

Furthermore, if the feedback and reinforcement given through a specific model does not align with an individual's self-perception, it may be discarded (Bandura, 1971).

Additionally, when a person's self-reinforcement is unbalanced, societal pressures and judgements will often be engendered against the individual. For instance, one who rewards "oneself for inadequate or undeserving performances" is likely to "evoke critical reaction from others" (Bandura, 1971, p. 35). Thus, models and learners sit in a delicate balance between the need for external reinforcement and intrinsic motivation. Of course, the problem is that these markers are not always in perfect alignment. One's intrinsic motivation may be contrary to a desired behavior that is being modeled. For instance, the pushing of good eating habits on an individual may be met with disdain as "excessive eating by obese people [is] immediately rewarding," with negative consequences being far-removed (Bandura, 1971, p. 33). This represents yet another obstacle that learners must bring into equilibrium before a behavior can be implanted with permanence into the mind.

Beyond the reach of self-reinforcement and direct-reinforcement is the important area of vicarious reinforcement. Vicarious reinforcement is that of observed

reinforcement. In other words, people observe the consequences that are given to others. When they see a punishment served on one for an unwanted behavior, people make their own judgments as to how such a punishment will affect them should they endure it. This has the obvious benefit of people's not having to endure a punishment themselves to understand it. Conversely, people do not have to experience a reward for themselves to crave it. Observing others experiencing a punishment or reinforcement can be a strong motivating factor for many. However, even this area of reinforcement is complicated. A reinforcement given to one person, as observed by others, may be deemed as inadequate by one person and desirable by another. Thus, vicarious reinforcement can reveal the individual differences of learners, as they navigate and judge the reinforcements offered to those around them. This type of indirect learning is essential in that it reveals self-value and self-determination of status within an environment. People use their peers in their environment to judge the adequacy of reinforcement based on both the behavior and the reinforcement itself in relation to the one receiving the reinforcement. This delicate equation can greatly affect the way that one experiences a learning situation, as he or she accepts or rejects a model based on the depth of the perceived value of the reinforcement (Bandura, 1971).

Reinforcement is a complicated area of the social learning theory. Even the model is open to its influence. In fact, a model who undergoes punishment may be devalued in the eyes of the learners, while a model who is the recipient of positive reinforcement may undergo a positive transformation in the eyes of those same individuals. This, like all other areas, has its exceptions. A model who is punished for upholding “basic rights and beliefs,” for instance, may actually gain prominence in the eyes of the learners (Bandura,

1971, p. 27). Also, models who misuse their powers of punishment and reward can greatly alter the value of those reinforcements in the eyes of the would-be learner.

Whatever the case may be, models and learners must consider the value of reinforcement.

When this value is negative, the value of the learning may become irrelevant. On the other hand, and adequate reward may serve to induce learning, though it may not ameliorate subpar modeling or unvalued behavior (Bandura, 1971).

**Cognitive Control.** The last of the regulatory processes that Bandura (1971) discusses is that of cognitive control. A discussion of these processes is necessary because not all of our reactions can be described by our external sources of implements. Rather, we must consider the importance of cognitive factors and their impact on our feelings and observations. Bandura (1971, p. 35) defines the cognitive processes as references to “imagery, to representations of activities and verbal and other symbols and to thought processes.”

Indeed, “[h]uman behavior is regulated to a large extent by anticipated consequences of perspective actions. Individuals may accurately assess the customary effects of given activities but fail to act in accordance with existing conditions of reinforcement because of false hope that their actions may eventually produce favorable outcomes.” These inaccurate assumptions can create rifts in the educational process. Often, the case is that “customary outcomes are reasonably good predictors of behavior because the consequences that people anticipate for their actions are accurately derived from, and therefore correspond correctly to, prevailing conditions of reinforcement” (Bandura, 1971, p. 36). However, this can go astray when an individual incorrectly interprets the reinforcement given to another or relies on incorrect interpretations of those

around him or her. This can lead that person to act against a desired behavior in the erroneous belief that the pursuance of a certain type of reaction will elicit the desired response. The coming together of expectation and reality is often a painful process in such situations, as the learners have to adjust what they had expected to the reality of what is wanted from the modeled behavior (Bandura, 1971).

The complication of this type of model is that the mind often traps elements of memory that influence future decision-making in relation to desired behaviors. For instance, a memory long-forgotten may be experienced because elements of it are coded into symbolic images in the mind. Additionally, verbally coded messages related to such incidents may far outlive the importance of the moment itself. Thus, the learner may come to associate certain patterns of behavior with emotions that may be created only through the process of visualization. On the other hand, behaviors may be interrupted through visualization, as well. For instance, one trying to perform a skill may execute a mistake while visualizing the next step. In other words, by taking one's mind off of the current task and instead forward projecting oneself, one can lose the current step in the process. This, combined with a highly symbolic nature of our minds, can create and recreate learning based on living and reliving experiences. As we assign meaning to words and events in our experiences, we are continually reassessing their importance and application within our environments (Bandura, 1971).

### **Chapter Summary**

This chapter sought to provide an overview of the literature pertinent to the intersection of older teachers, administration, and technology coordinators that was relevant to this research and the research questions. Furthermore, it is important to have



an understanding of social learning theory, which deeply investigates the connection between the learner and the environment in which he or she learns. This theory, in addition, looks at the educational tools (people, materials, etc.) as well their roles in the creation of learning, considering the complex processes that are continually at play during the interaction.

Considering that this study was phenomenological in nature, it is essential to understand the background literature on each type of potential participant. This served to reveal some of the sources of their knowledge and understandings of the questions at hand. With that in mind, this chapter, in its ultimate goal, sought to exhaust the paths by which each of these three types of participants arrived at the shared phenomenon. While the older teachers served as the vanishing point of this study, both the administration and the technology coordinators were integral parts of the canvas (as was the research context) and, therefore, are part of the same painting.

## **Chapter 3**

### **Methodology**

The purpose of this chapter is to describe the methodology and thought that was the driving force behind this hermeneutic phenomenological qualitative study. This begins with a statement of the research questions that were investigated. Following this is a brief overview of the research setting; subsequent is an exploration of both subjectivist epistemology and phenomenological research and how it connects with the research questions concerning the intersection of the expectation to use technology in the classroom, older teachers in rural areas, administrators, and technology coordinators. This is followed by a discussion of the research design that was used for the intake of data and its analysis. After this, a section describes the nine participants that were involved with the study. Subsequent sections describe the methods of data collection and analysis, and this is followed by discussions of the trustworthiness of the research, as well as potential biases and assumptions that may exist in both the research design and its results as a product of my own viewpoint and life experiences. Finally, the chapter is closed by a brief summary of the contents.

The research for this undertaking was driven by three distinct questions:

1. How do older teachers, technology coordinators, and administrators perceive and experience the presence or absence of technological support and its effect on older teachers' abilities to create and maintain a positive outlook for their professions and selves, and what is the significance to each person?
2. How do older teachers, technology coordinators, and administrators perceive and experience their roles in helping to ensure the successful implementation of

technology in and for the classroom by older teachers, and what is the significance to each person?

3. How do older teachers, technology coordinators, and administrators perceive and experience the realization of their roles in helping to ensure the success of older teachers with technology in and for the classroom, and what is the significance to each person?

### **Epistemology and Theoretical Framework**

**Epistemology.** Fundamentally, Crotty (1998) defines epistemology as a mindset in which one views the world and research. I have always leaned toward the subjectivist view, and work in adult education has only strengthened that decision. Crotty (1998, p. 151) defines this epistemology as a view in which truth is fabricated by the individual or society “and simply imposed upon reality.” In other words, those who use this mindset do not view truth as either universal or general. Instead, truth, in this instance, is deeply personal in both its engendering and execution. This was an essential element to my approach to the research questions and problem, and it informed my every decision; in essence, epistemology permeates every part of the research process, including the selection of the design, methods, and analysis. However, it does not provide the entire story. Indeed, the subjectivist epistemology was also informed by the tenets of postmodernism.

Merriam’s (2002) description of postmodernism is one that captures its heart. She accounts for its distrust of generalization and its rejection of accepted truths as either universal or unshakable. Indeed, postmodernists view society in terms of relationships of struggle over power, resources, and influence. At its core, postmodernism rejects the

“solace and pleasure” of modernism in favor of flux, incomprehension, and the belief that change is inevitable and “catastrophic”; it represents the “deconstruction [of Western] certainties” (Brooks, 2013, p. 7). What’s more, postmodernism’s view of truth as temporary, superficial, and apparent allows it to be malleable, and it allows the research to evolve constantly as information is gathered and assessed (Ward, 2010). Indeed, Cooper and White (2012, p. 88) summarize this framework as one that explains how “previously ‘solid’ ideas have now become more flexible and fluid.”

This understanding is essential because I approached the research questions and problem with the viewpoint that the classroom and workplace are places in which those involved struggle with themselves and each other, as well as their environments, for the opportunity to be successful, and while I did not assume that either the technology or the individuals are positive or negative influences on this outcome, I do acknowledge that it is my view that these struggles are a continual presence in the lives of all involved in relation to the phenomenon in question. As Cammack (2008) points out, older learners often feel isolated and inferior to their learning peers. However, such perceptions are contradicted by studies that show older learners are just as capable of learning, just requiring of different approaches and confidence (Marquie, et al., 2002). Therefore, whether it exists or not, older learners perceive an inequity when learning new skills, and postmodernism’s view of truth and experience helps to reconcile this gap between what is experienced personally and what is expected generally: intimate interpretation is that wedge. Unquestionably, postmodernism makes such research “more difficult to compartmentalize... into neat, mutually exclusive domains” (Cooper & White, 2012, p. 121); however, I, during research, viewed this as the fundamental principle for

understanding the phenomenon through the eyes of each participant: personal and difficult to generalize.

Ultimately, the decision to adhere to a subjectivist, postmodern philosophy was part of a quest to create a cohesive research picture. Postmodernism's approach toward truth as personal and non-generalizable reverberates hermeneutic phenomenology's foundation in the personal and withdrawn nature of experience and interpretation (Merriam, 2002; van Manen, 2014). Thus, combining a subjectivist, postmodern epistemology and a hermeneutic phenomenological design built on the concept of understanding as a concept that is based in esoteric truth, a vision of the experiencer. Yet, even this body must have a spine that connects the varying aspects and serves to encapsulate the breadth of the research. This is the theoretical framework.

Truly, the theoretical framework works in conjunction with the epistemology to provide a more complete picture of why a researcher makes the choices that he or she makes. Broadly, Saldaña (2011, p. 83) defines theoretical framework as “a statement with an accompanying narrative that explains how or why some things happen by proposing their most likely causes,” and for this study, I used social learning theory to frame my work.

**Theoretical framework.** Based on Saldaña's (2011) definition of theoretical framework, I chose social learning theory as the thread to bind my research together. Bandura (1971), in his theory, explores the importance of environment, interest, investment, and presentation in the teaching and learning of material. He conjectures that learning is predicated upon a learner's ability to learn material by mentally coding it and assigning it symbolic importance. Key to this theory, Bandura (1971) explores the impact

of the teacher (model) on the learning experience. A poorly received or misdirected model can lead to no or miscoding on the part of the learners, while the opposite can engender true understanding without having hands-on opportunities. Additionally, whether practice is given or not, learners will draw influence from their environments to inform how they should react to the learning presented to them. Thus, learners may find themselves closing or opening themselves to learning in both conscious and unconscious ways.

I used this theory as the connection between the experiences of the participants, looking for the impact of the models and the environment on the learners (the older teachers). In addition, I considered the components of Bandura's (1971) theory to explore the views that the participants had of themselves and others in the context of teaching, learnings, and evaluating technology. Thus, social learning theory served to guide my understanding of the complex relationships between the goals and the results of the learning involved.

### **Research Design**

This dissertation was built upon the ideas contained within phenomenological research, specifically hermeneutic phenomenology. In its simplest form, phenomenological research "seeks to understand another's experience" (Cohen, et al., 2000, p. 4), but this simple definition does not capture the deep and intrinsic nature of the research, which is designed to reflect the thoughts, feelings, and experiences of the participants. This decision was based on the idea that I wanted to map each participant's individual orbit in and around the issue of older teachers' use of technology in and for the classroom as pieces that create a singularity. This aligned well with the components of

phenomenological research, which conjectures that a person and his or her world are one and indivisible and is concerned with everyday events and interactions. For instance, Pietersma (2000), in an evaluation of Husserl's take on phenomenology, lays out the connectivity, writing:

A person's particular way of being intentionally directed upon an object is thus embedded in a context in which other ways of being directed upon it are open to him. Intentional acts do not occur in isolation or follow one another merely as a matter of fact. They are intrinsically related to one another, so that, in a sense, one mode of access invites and leads into another, which for its part fulfils it. Aware of this context of different modes of givenness, a subject can be aware of being presented with one and the same object. (p. 39)

It is this vision of singularity in which I was interested. I wanted to understand how the participants view their stations in relation to the implementation of technology by older teachers, which, of course, included insight into their lives and the choices that brought them to that exact moment and viewpoint. This first point of self-realization, termed the epoché, served to bring me and participants out of a state of obliviousness (in which we take the world and its many facets for granted) and engendered an awareness of both the phenomenon and our relation to it (van Manen, 1990). In addition, this type of research emphasizes coming back to data time and again, called reduction, to uncover as much meaning as possible, on the part of the researcher and the participants (Merriam, 2002). At this point in the research, awareness is accepted as normal and the phenomenon can be fractured into its constituent parts for consideration. Certainly, as discussed, we interacted with the phenomenon at multiple times and in multiple ways during the

process to uncover as much significance as possible. Ultimately, this research design values individual reaction and thought to gross overgeneralization, which aligns both with my ideals and why I approached this topic in the first place.

Specifically, this research sought to understand how older teachers, members of school administration, and technology coordinators view their roles in the shared phenomenon of implementation of technology in and for the classroom by older teachers. To accomplish this, I chose the path of hermeneutical phenomenology. The fundamental difference between the two schools of phenomenological thought (being transcendental and hermeneutic) is the role of the researcher. In transcendental phenomenology, the researcher attempts to “brackett” him or herself out by separating personal feelings and reactions from those of the participants, assuming that the researcher can create a rich, textual description of the phenomenon without interposing his or her own experiences and opinions. The goal of such research is a much clearer and absolute picture of the phenomenon, more aligned with an objectivist epistemology, than supposed by hermeneutic phenomenologists (Moustakas, 1994).

Conversely, in hermeneutic phenomenology, the researcher is charged with interpreting the “texts of life” and maintaining a strong relationship to the issue under consideration (van Manen, 1990). This expectation is echoed by Cohen (2011; as cited in Kafle, 2011) who views such research as focused on “uncovering rather than accuracy.” The goal of the researcher, then, is to create “a deep and rich account of the phenomenon through intuition,” accepting that bracketing is difficult in such research. Instead, hermeneutic phenomenologists explicitly state their assumptions and strive to create a picture of the phenomenon that is assumed to be one of many, with the objective of



shedding light on a splintered and esoteric entity: a shared phenomenon (Wilson & Hutchison, 1991). After all, phenomenological researchers strive to understand the world as we “*experience* it or become conscious of it - before we think, conceptualize, abstract, or theorize it” (van Manen, 2014, p. 65).

Indeed, Finlay (2012, p. 22) writes that hermeneutic phenomenologists, through their chosen lenses, get to “bring out the ways in which meanings occur in context,” in particular, the participants’ lives. Thus, I was able to layer my research and explore the words and thoughts of the participants in relation to their journeys and experiences.

Ultimately, both in design and analysis, the goal of this dissertation was to understand and relate what the participants are experiencing, giving them a voice, yet understanding that I could not divorce myself of my own experiences and assumptions. Furthermore, this type of design allowed me to view the research questions and problem through the eyes of each participant with the understanding that he or she was experiencing the phenomenon in a different way than that of the others, which was in keeping with the subjectivist epistemology that was being used to frame the research.

### **Research Participants**

For phenomenological research, Polkinghorne (1989; as cited in Creswell, 2007, p. 61) suggests the random selection of a small number of participants, with between 5 and 25, “who have all experienced the phenomenon” in question. Thus, this study used nine participants that are involved in the educational process in one of the aforementioned categories: teachers with 20+ years of experience in the classroom (the most common highest tier on local teacher pay scales), school administrators, and technology coordinators. Therefore, the goal was to obtain between two and five

participants from each category, with three from each group participating. The decision to choose staff from local schools was rooted in Rubin and Rubin's (2005) assertion that people are more willing to talk openly and truthfully if they know that the researcher is from and invested in their community. According to the United States Department of Education (2012), there are 139 school districts in Tennessee, and approximately one-third of students in those districts attend school in rural areas. This study sought to gain participants from those rural districts in West Tennessee that were within an hour's drive from my home. This limited the number of potential districts to 17. To protect the credibility of the study from uneven distribution of "unknown influences" and to ensure a wider breadth of voices, Shenton (2004) advocates for random sampling. Thus, the participants were chosen by random selection through emails sent out *en masse* through the central offices at seven accepting districts with instructions to contact me by phone if interested in participation (Appendix E). A total of 11 individuals contacted me from the first email with interest, of which eight followed through with participation. A second email was sent to elicit the participation of a third technology coordinator, and one was found. Each signed a consent form (Appendix F). Shenton (2004, p. 65) notes that this process can have the drawback of ensnaring "quiet, uncooperative or inarticulate individuals," but also that it is an essential element for the validity of a research project; no such problems were experienced during communication or data collection. A table at the beginning of "Chapter 4" (Table 4-1) gives an overview of each of the nine participants.

## **Data Collection**

For this dissertation, data was collected from a myriad of sources in order to create as complete a picture as possible to aid in the hermeneutic analysis of the information. Because hermeneutic analysis involves intense engagement with text, data for this research was collected by means that could be transcribed and annotated or were already in written format. In particular, this research made use of semi-structured interviews, participant reviews, and personal research notes and journal. In all respects, the identities of the participants were protected by storing the data in secure digital folders (under password protection) in secure locations and by the removal of any identifying markers, including names (which were replaced with pseudonyms), in all correspondence and data (Saldaña, 2011). These pseudonyms, in keeping with hermeneutic phenomenology, were chosen by the participants, due to the personal nature of both the questioning involved and the procedures inherent to phenomenology; thus, allowing them to rename themselves helped to maintain the connection of the participants to the texts that were developed through their personal insights and experiences (Kafle, 2011).

**Interviews.** Interviews are a large part of the backbone of qualitative research. They, in conjunction with other methods, help the researcher to “describe routine and problematic moments and meanings in individuals’ lives” (Denzin & Lincoln, 2005, p. 4), and they lead the researcher to a point of “understanding the lived experience of other people and the meaning they make of that experience” (Seidman, 2006, p. 9). Because of this, an interview must be approached with caution and preparation, as the interviewer’s feelings and thoughts “can greatly affect the quality of the exchange” (Rubin & Rubin,

2005, p. 79). In general, according to Gubrium and Holstein (2001), interviews can be structured, in which participants are asked the same questions and leave little room for variation; semi-structured, in which the participants are asked questions based on a guide but are able to move organically in the parameters of the topic; unstructured, in which the participants are asked questions not set by a guide and are treated as open-ended and uncontrolled; and informal, in which the participants are engaged as if in a conversation while the researcher takes casual notes.

The bulk of the data for this dissertation came from semi-structured phenomenological interviews that allowed the participants to express their ideas openly while staying within the parameters of my guide. For this type of interviewing, Seidman (2006, p. 17) suggests a series of three interviews, each lasting about 90 minutes; and this format was followed, though the length of individual interviews fluctuated between 53 and 117 minutes. The first interview focused on personal history that sought to “put the participant’s experience in context by asking him or her to tell as much as possible about him or herself in light of the topic up to the present time.” The purpose of this first interview was to understand how the participant came to be involved with the topic. Thus, I asked my participants to describe how they came to be involved in education as a profession and to explore the choices and opinions that led them to their current view of both their positions, technology in education, and education in general. This initial interview was followed by one that detailed their experiences. During this time, Seidman (2006, p. 18) advises: “do not ask for opinions but rather the details of their experience, upon which their opinions may be built”; simply, the goal of this second interview was to have the participants explain their experiences with technology and views of technology

in relation to their educational journeys and expectations. The last of this set of three interviews was the one in which I asked the participants to “reflect on the meaning of their experience,” looking for “intellectual and emotional connections between the participants’ work and life” (Seidman, 2006, p. 18). This final interview was directed toward understanding how the participants construct meaning about their senses of self and their occupational goals, exploring the significance to themselves as individuals; in essence, this interview focused on discussing the emotional core to the research questions and understanding how their experiences shape their realities as professionals.

Ultimately, the purpose of these interviews was to allow the participants to explain their circumstances and experiences as freely as possible. Indeed, Saldaña (2011, p. 42) reminds us that too much input, even in the form of utterances of confirmation, from the researcher can be “distracting for the participant.” Thus, the goal of this research was to “build upon and explore the participants’ responses” and allow the participant to be the primary engager by allowing him or her to “reconstruct his or her experience within the topic under study” (Seidman, 2006, p. 15). Lastly, as Seidman (2006, p. 21) suggests, I planned to execute these interviews, focusing on one participant at a time, within three days to one week of each other to allow the participant both a chance to relax and think about the previous sessions without “enough time to lose the connection between the two,” and I, of course, planned to “enter [each] interview with an attitude of courtesy and respect” to help my participants feel at ease (Saldaña, 2011, p. 39). This plan was executed as expected, except in the case of Sara. Due to a prior engagement, her first and second interviews were separated by 17 days, more than I would have liked, but

it did not seem to impact the quality of the data, as she continued to be open and engaged in interviews two and three.

*Interview protocol.* In general, phenomenological researchers have been reluctant, due to the personal and changing nature of the research, to prescribe exact methods of data collection, including the development of research questions (van Manen, 2014). However, van Manen (2014) provided the core principles that I used to categorize the interview questions that were asked to the three factions of participants:

1. “What is the nature, meaning, significance, uniqueness, or singularity of this... experience as we live through it or as it is given in our experience or consciousness?”
2. “How does this experience present itself as a distinguishable phenomenon or event?” (p. 39).

In addition, for a more formalized guide, I used McCracken’s (1988) extended dramatic conceit to align interview questions to expose specific portions of the phenomenon. He begins with an assertion that the research should be as “unobtrusive” as possible in order to let the participant tell his or her story (p. 35). To accomplish this, I began with his prescribed “grand tour” questions that are meant to build ease and gain basic biographical information pertinent to participant’s relation to the phenomenon. This was followed by specific questions that were designed to be both open-ended and directed toward addressing one of the following broad aspects of the phenomenon:

1. The key “actors”
2. The “central action”
3. The “dramatic structure”

4. The “important props”
5. The “necessary audience”
6. The “ascribed roles”
7. The “designated critics”
8. The “social significance”
9. The “cultural significance”
10. The “consequences of good and bad performances.” (p. 37)

In the tables, the interview number is denoted in parenthesis [(1), (2), or (3)]. Questions that addressed van Manen’s (2014) first question are denoted with \*, while those that addressed his second question are denoted with \*\*. Questions by participant type are available in the appendix. There, teachers (Appendix A), administrators (Appendix B), and technology coordinators (Appendix C) are also broken down by interview number.

Table 3-1 was designed based on McCracken's (1988) model to understand the participants' views of themselves and others in relation to the research context. Questions were designed to increase in depth from interview to interview to become more reflective about each participant’s role as a key "actor" in the phenomenon.

Table 3-1

*Questions Related to the Key "Actors"*

Teachers	Administrators	Technology Coordinators
Would you tell me about how you became interested in becoming a teacher and how	Would you tell me about how you became interested in education and how you	Would you tell me how you became interested in technology as a profession

<p>your career has progressed? (1)*</p> <p>Tell me about your job. What are your responsibilities? Tell me about your administrators and technology coordinators. What are their jobs? (2)*</p> <p>Do you feel comfortable going to your administrators for help with resources and technology? Your technology coordinators? Do they understand your job? Explain. (3)*</p>	<p>progressed to being an administrator? (1)*</p> <p>Tell me about your job. What are your responsibilities? Tell me about your teachers and technology coordinators. What are their jobs? (2)*</p> <p>Do older teachers feel comfortable coming to you if they are having trouble meeting your expectations? Do technology coordinators feel comfortable coming to discuss problems with you? Do they understand your job? Explain. (3)*</p>	<p>and how your career has progressed? (1)*</p> <p>Tell me about your job. What are your responsibilities? Tell me about your administrators and teachers. What are their jobs? (2)*</p> <p>Do older teachers feel comfortable coming to you for help in learning a new technology? Do administrators feel comfortable coming to you for help with technology (obtaining or teaching it)? Explain. (3)*</p>
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Table 3-2 was designed to understand participants' views of the "central action" of using technology by both themselves and others. Special attention was paid to the perceptions that participants have about their roles in ensuring the implementation of technology by older teachers. For older teachers, the questioning focused on how the "action" affects their senses of self.



Table 3-2

*Questions Related to the "Central Action"*

Teachers	Administrators	Technology Coordinators
<p>Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life? (1)*</p>	<p>Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life? (1)*</p>	<p>Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life? (1)*</p>
<p>Can you tell me about the last time you tried to use technology in your classroom and had great success / failure? (2)**</p>	<p>Would you describe a time when you observed an older teacher using technology and any triumphs or struggles that you saw? (2)*</p>	<p>Tell me about a time that an older teacher came to you needing help with technology and how you dealt with the situation. (2)**</p>
<p>When you try to use technology and it fails, how does that affect your view of yourself? What if it goes great? (3)*</p>	<p>If an older teacher is struggling, what is your responsibility to rectify the situation? (3)*</p>	<p>If you hear that older teachers are struggling with your resources, what is your role in helping and what shape does that take? (3)*</p>

Table 3-3 was designed to probe the issue of technology-content delivery. Given the changing nature of technology and the plethora of learning styles, it was imperative that participants share their experiences giving or receiving content or feedback.

Table 3-3

*Questions Related to the "Dramatic Structure"*

Teachers	Administrators	Technology Coordinators
<p>Would you briefly describe the changes that technology has brought to your personal / professional life? (1)**</p> <p>Tell me about a time when you were given a chance to follow up on learning a technology. A time when you were given feedback by an administrator for your use of technology. (2)*</p> <p>What things hinder or help you to be successful with technology as it changes?</p> <p>What role does administration play in helping you cope with this change? Technology coordinators? (3)**</p>	<p>Would you briefly describe the changes that technology has brought to your personal / professional life? (1)**</p> <p>Would you describe a PD that you have attended? How was the information presented? Was it differentiated? Useful? (2)*</p> <p>Describe the role of PD in the success of your teachers' using technology? Who is responsible for its successful implementation? Are teachers given a change for further training? If so, what does that look like? (3)*</p>	<p>Would you briefly describe the changes that technology has brought to your personal / professional life? (1)**</p> <p>Tell me about the most recent training that you gave teachers for technology. How did you deliver the material? (2)*</p> <p>When you are giving PDs, do teachers have an opportunity to follow up with you? Do they? How do you ensure learning by all? (3)*</p>

Table 3-4 was designed to capture the tools that are used either by teachers in the classroom or in the evaluation of their teaching. This was differentiated to capture the technology used by the teachers, the rubric used by administration in their evaluations, and the sessions used by technology coordinators to teach the tools evaluated. Special attention was paid to the perceived usefulness of the tools delivered for use in the classroom.

Table 3-4

*Questions Related to the “Important Props”*

Teachers	Administrators	Technology Coordinators
<p>Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life? (1) *</p>	<p>Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life? (1) *</p>	<p>Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life? (1) *</p>
<p>Describe a time that you used a piece of technology given to you by the school that you found useful. One that was not useful. Would you describe how you were</p>	<p>Would you describe how you use the evaluation rubric to help older teachers improve their teaching and the role that technology plays? (2)* How do you know if a teacher</p>	<p>Describe a time when you led what you considered to be a successful / unsuccessful PD. How do you judge the difference? (2)* Are all of the technologies</p>

<p>trained on each? (2)*</p> <p>On the whole, are the technological tools that are given to you useful? Are they well taught to you? What could improve these areas (if they need improvement)? Explain. (3)**</p>	<p>listens to your feedback in a constructive way? What are the consequences of the subsequent actions to an evaluation and how do you deal with such situations? (3)*</p>	<p>that you teach useful to all teachers? How do you know? How do you know that all teachers are successful with them? (3)**</p>
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Table 3-5 was designed to understand the process by which participants can petition for additional help and resources to expand the "audience" for the "production," thus ensuring a successful use of technology by older teachers. Specific attention was paid to the notion of responsibility and command, and an understanding of the perception of from where standards and guidelines are engendered. For teachers, this took the shape of understanding how it affects them to be judged by the "audience."

Table 3-5

*Questions Related to the "Necessary Audience"*

Teachers	Administrators	Technology Coordinators
<p>Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or</p>	<p>Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or</p>	<p>Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or</p>

<p>group of people and how it made you feel? (1)**</p> <p>Would you describe a time that you used technology during an evaluation? (2)*</p> <p>Reflecting on a time when you've used technology (maybe during an evaluation), how does it make you feel to be judged based on this marker? (3)*</p>	<p>group of people and how it made you feel? (1)**</p> <p>To whom do you go for help in assisting teachers with technology? Explain the chain of command. (2)*</p> <p>Who is responsible for judging your judgement of teachers' use of technology?</p> <p>How do you know that you are doing it properly? How do they address differentiation? (3)**</p>	<p>group of people and how it made you feel? (1)**</p> <p>To whom do you go for help in assisting teachers or administrators with technology? Explain the chain of command. (2)*</p> <p>Who is responsible for judging your selection of technology? How do you know that you are doing it properly? How do they address differentiation? (3)**</p>
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Table 3-6 was designed to capture perceptions across the spectrum as to who is responsible for assuring that older teachers are well-prepared to meet technological expectations in the classroom. The goal with such questions was to understand each participant's understanding of his or her place and how he or she perceives the responsibility of those around him or her.

Table 3-6

*Questions Related to the "Ascribed Roles"*

Teachers	Administrators	Technology Coordinators
<p>When you think about yourself, how would you rate your knowledge of technology and why? (1)*</p> <p>Do you know to whom you are supposed to go to get help/resources for technology? (2)*</p> <p>Can you tell me about a time that you sought help with piece of technology and if you received the support that you wanted? (3)**</p>	<p>When you think about yourself, how would you rate your knowledge of technology and why? (1)*</p> <p>Would you tell me about a time when you acted as an administrator in helping an older teacher be successful with technology? (2)**</p> <p>Whose job is it to provide teachers with the technology and training that they need to be successful? Would teachers know the answer to this question? How do the technology coordinators support you in this? (3)*</p>	<p>When you think about yourself, how would you rate your knowledge of technology and why? (1)*</p> <p>Describe a time when you assisted an older teacher in learning a new skill for use in the classroom. (2)**</p> <p>What is your role in ensuring that all teachers are ready to use technology in the classroom? How does administration support you in this? (3)*</p>

Table 3-7 was designed to establish how participants come to their understandings of how to judge effective technology use in the classroom. Special attention was paid to gleaning how each participant perceives the creation of standards and feedback. In addition, the idea of "responsibility" was explored in relation of each participant's understanding of both his or her own responsibility in ensuring the successful learning and use of technology by older teachers and the responsibility of others.

Table 3-7

*Questions Related to the "Designated Critics"*

Teachers	Administrators	Technology Coordinators
Thinking about that rating, against whom did you judge your knowledge and why? (1)**	Thinking about that rating, against whom did you judge your knowledge and why? (1)**	Thinking about that rating, against whom did you judge your knowledge and why? (1)**
Would do describe the typical feedback that you receive from your evaluations? (2)*	Walk me through a typical evaluation and how you judge a teacher's use of technology. (2)*	Tell me about a time that you received positive / negative feedback from an older teacher for a technology that you had delivered. (2)*
Where do judgements about your use of technology on the evaluation rubric come from and who is responsible for knowing that you are ready? (3)**	How do you decide if technology use by a teacher is good enough or not? Who taught you how to judge such things and how? (3)**	Who is responsible for deciding if the resources that you offer are valuable and differentiated by need? (3)**

Table 3-8 was designed to understand how participants see the value of technology as far as its ability to increase accessibility, connectivity, and amelioration. Special attention was paid to comprehending how participants view technology's ability to help education move toward or away from equity and connection.

Table 3-8

*Questions Related to the "Social Significance"*

Teachers	Administrators	Technology Coordinators
<p>Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not? (1)*</p> <p>Can you tell me about how you use technology to reach out to students, parents, and coworkers and your success / failures concerning this use? (2)**</p> <p>Would you explain how the push to use technology has changed the value of education? (3)*</p>	<p>Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not? (1)*</p> <p>Would you share an experience when an older teacher taught using a technology that you found valuable to the students' lives? (2)**</p> <p>How do you think expecting your teachers to use technology improves their teaching of content to</p>	<p>Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not? (1)*</p> <p>How do you select resources that will enable older teachers to be successful with interacting with others (coworkers, parents, students)? (2)*</p> <p>When you select a technological resource for teachers how do you expect it to improve the lives of the</p>



	improve the lives of students? (3)*	teachers and the students? (3)*
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Table 3-9 was designed to understand how participants view technology's ability to help create or deter a positive school culture. Again, special attention was paid to equity and connectivity as signs of positive culture.

Table 3-9

*Questions Related to the "Cultural Significance"*

Teachers	Administrators	Technology Coordinators
How would you describe technology's impact on our society? On education? (1)*	How would you describe technology's impact on our society? On education? (1)*	How would you describe technology's impact on our society? On education? (1)*
Would you describe a time that technology brought unity/friction among the staff, students, etc? (2)*	When you look at your school, what has technology done to bring people together or push them apart? (2)*	Does the introduction of technology bring people together in your school? (2)*
Would you describe how technology and levels of knowledge of it affects the culture of the school? (3)**	Would you describe your school as one of equity when it comes to technology and resources? Would you explain your answer? (3)**	Would you describe how technology and the push to use it has affected your job in relation to how you interact with teachers and administration? (3)*

Table 3-10 was designed to ascertain how participants perceive the consequences of being able to use technology in the classroom. Given the importance of evaluations, these questions sought to understand how participants view and deal with the pressure centered on putting on a "good performance" in the classroom, using technology to meet the guidelines of the evaluation.

Table 3-10

*Questions Related the "Consequences of Good or Bad Performances"*

Teachers	Administrators	Technology Coordinators
Can you tell me about a time when you were really proud / embarrassed by your technological skills? (1)**	Can you tell me about a time when you were really proud / embarrassed by your technological skills? (1)**	Can you tell me about a time when you were really proud / embarrassed by your technological skills? (1)**
Would you describe a time when you used technology well / poorly during a lesson and what were the outcomes? (2)**	Tell me about a time when you observed an older teacher using technology well / poorly? What affected what you saw? (2)**	Would you describe a time that a teacher spoke with you about having success / failure with one of your suggested resources? (2)**
Can you explain to me what would happen if you did or did not use technology well during an evaluation? (3)**	If you are doing an evaluation, explain what you need to see in the form of technology to receive a given	Can you explain what could happen to teachers if they do / do not have the technological tools and knowledge to use

	<p>score. How is this achieved?</p> <p>What are the possible outcomes for a good/bad score? (3)**</p>	<p>them in the classroom? (3)*</p>
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**Participant review.** Perhaps one of the most important mines of data was more of a reaffirming of the data, in that it helped to assure validity and credibility: participant review (member check). Essentially, participant review gives the participants the opportunity to “read any transcripts of dialogues in which they have participated” for accuracy and intention, being that participants may also be asked to verify “emerging theories and inferences” that the researcher forms during the dialogues (Shenton, 2004, p. 68). For hermeneutic phenomenological research, this is especially important because it allows for the constant testing of both data and interpretation and the continuous echoing of the participants’ voices throughout the process (Anney, 2014). Thus, participants were given an annotated copy of the previous transcripts at each subsequent interview, and they had a choice of having either a hand-delivered or emailed copy of the final transcript. Such review gives way to a changing picture of the phenomenon, as both researcher and participant interpret and discuss what has been seen and heard, the very heart of such phenomenological research. Indeed, participant reviews are another opportunity to add to the richness of the text by allowing for multiple layering by those involved, thus proving an important source of data for such research. Indeed, much of the insight that made its way into subsequent chapters came by way of the review of the transcripts rather than the cold-read of the transcripts themselves.

**Personal research notes and journal.** Leavy (2014) advises researchers to take diligent notes as a way to increase transparency. Thus, during the research process, I meticulously documented changes and new directions, though few, that affected the research. For this project, this took the form of additional contact with the participants (in the form of emails and phone calls), the alteration of my schedule with Sara, the varying lengths of the interviews themselves, and my personal thoughts and feelings as the research moved forward. Indeed, Saldaña (2011) advocates the taking of notes to help secure the researcher's immediate reactions to stimuli as they occur; otherwise, authentic feelings and observations are lost in memory and transcription, which often happen long after the initial contact, and again, they help to build credibility for the study. These notes, then, served as an important source for considering my impact and role as I conducted my work, especially when trying to determine and assess my relationship to both the participants and the research questions. This data was kept confidential and coded for safety, as were all forms of communication with or concerning any of the research participants during and after the study.

### **Data Analysis**

Just as important as the methods of data collection or the theoretical framework is the method in which I analyzed and am presenting the data. In keeping with the theoretical framework of the research and the personal viewpoint presented throughout, the most effective way to digest this information was through hermeneutic analysis of the data that the participants gave and the notes that I took during the research process. In particular, I used postmodern-hermeneutics to interpret the textual representation of the

data, with the firm understanding that truth and fact are anything but objective (Madison, 1990).

With hermeneutics, “[a]nalysis begins as parts of the text are understood in relation to the whole text and vice versa” (Cohen et al., 2000, p. 72). This comparative nature, as with a postmodern lens, allowed for nearly constant, fluid change and adjustment as the text revealed its themes and concepts to me during disaggregation. Furthermore, hermeneutics provided me the opportunity to look beyond expected and tried methods of relation and allowed the texts to create the phenomena, instead of the inverse (Ormiston & Shrift, 1990). By choosing this method of data analysis and relation, then, I hoped to create a steady stream between the subjectivist, postmodern, and hermeneutic lenses and paint a clear picture of the phenomena that I chose to investigate.

To accomplish this, I converted information into a text format rapidly to begin the process of sifting through it in order to understand the experiences and thoughts within the context of their individual settings. The data was then transferred to NVivo 11 and coded using both *invivo* methods, using the participants’ own words as the coding mechanism (Strauss, 1987), and the guidelines of McCracken and van Manen. This type of coding is especially appropriate for “studies that prioritize and honor the participant’s voice,” as this one did (Saldaña, 2009, p. 74). Afterward, these codes were reanalyzed, grouped, and “condensed” into categories after “Second Cycle coding” and “analytic memoing” of the data, which was used to engender “rich category, theme, and concept development” for consideration in the development of the working theory of the phenomenon (Saldaña, 2009, p. 76). The participants, of course, had ample opportunities to review this information for truth and accuracy, by way of letting them read, revisit,

clarify, and revise annotated and coded copies of transcripts of prior interviews and either a hand-delivered or emailed copy of the last interview, which gave us another opportunity to revisit the phenomenon for further insight and textual depth. Indeed, the goal of such data analysis was to capture their true thoughts and words as precisely as possible by letting each participant speak for him or herself throughout the process of collecting and analyzing the data. What is important with this type of analysis is that the mission was to understand and, ultimately, to interpret what was given by the participants.

This method of data analysis fit the ultimate goal of understanding each participant as a unique fragment in gaining insight into the phenomenon. Postmodern-hermeneutics, then, represents the quintessential idea that the parts can both represent the whole and stand independently and represent themselves. Furthermore, Madison (1990) concludes that interaction between part and whole will continually cycle, known as the Hermeneutic Circle, and researchers can find true meaning in these continual shifts and their interpretations in relation to both the part and the whole. This, certainly, was my reality as I experienced multiple encounters with each of the participants, both physically and digitally, and I found myself revisiting and deepening my understanding of the significance of the phenomenon in their lives. The truth of each experience underwent evolution with each reconsideration until it came time to write this document, still with no real answer, which was to be expected.

### **Trustworthiness**

Ensuring trustworthiness is a difficult task in qualitative research, one that requires a high degree of description and honesty on the parts of both the researcher and the participants. However, tactics were used to ensure that this research is as trustworthy

as possible in the face of existing bias and personal weaknesses on my part. Most importantly, this dissertation used both triangulation of data and frankness with the participants to ensure that both parties are fairly and accurately represented by the data that was gathered throughout the research process.

To begin with, it is important to note that I did a pilot study to understand the effects of technological expectations on rural teachers with 20 or more years of experience in the classroom. Done in the form of a focus group, this study showed that such teachers echo the sentiment that they feel capable of learning new technological skills, but that they do not feel equipped with the necessary time, support, or resources. The participants spoke very candidly about feeling left out during the learning process (usually described as professional development), but they also expressed that they saw the benefits of technology (ability to help students, communicate with parents, etc.) on a daily basis. This broad-spectrum response to the questioning made me curious about the perceptions of administrators and technology coordinators as well. In the end, this pilot study paved the way for the expansion of this project to include understanding the lived experiences of people in each of the three groups.

To achieve trustworthiness of data, I employed multiple types of data sets for triangulation, so that the results of one overlapped and bolstered the results of another. In addition to providing another angle for the research, having these multiple forms of data collection (interviews, member checking, and researcher journaling) accounted for the fact that, due to my personal tastes and biases, some data collection techniques are naturally stronger than others in a researcher's hands (Shenton, 2004). Thus, the comparison of multiple sets of data were necessary to ensure that results are sound and

that themes are, indeed, the result of the participants' experiences and thoughts instead of the my stylistic inclinations. Specifically, because of time limitations with working teachers and other school officials, my project relied on a "wide range of informants" so that "individual viewpoints and experiences can be verified against others" to create a "rich picture of the attitudes, needs or behaviour of those under scrutiny" (Shenton, 2004, p. 66). This assertion is echoed by Anney (2014, p. 277), who claims that effective triangulation "utilizes different informants to enhance the quality of the data from different sources": thus the decision to collect data from three distinct areas of the educational arena (teachers, administration, and technology coordinators).

In addition, I engaged in very open and honest conversations about participation with my research subjects. Each time that we spoke, I offered them an opportunity to retract their participation in the project, "so as to ensure that the data collection sessions involve only those who are genuinely willing to take part and prepared to offer data freely" (Shenton, 2004, p. 66). The goal, obviously, was not to pressure the participants into situations in which they felt that they must discuss anything that was not within their comfort zones, or not to talk at all, if that was their actual wish. Indeed, data obtained from a pressured or uncomfortable source is neither valid nor ethical. Thus, I took all steps necessary to assure their willing and comfortable participation, which hopefully helped also to ensure that the data that they provided was honest and relevant to the study. This was especially important as several participants expressed anxiety and dismay during the interviews, so I was always careful to show sensitivity and remind them that participation in answering any question (and the study as a whole) was completely in their control.



Lastly, at the interviews, as previously mentioned, I provided the participants with annotated transcripts for their review and approval; most chose digital copies. Saldaña (2011, p. 135) mentions that the researcher's involving the participants by "corroboration of data analysis with the participants themselves" serves as a key way to build and ensure credibility for the study. Participants, of course, were allowed to ask questions, make suggestions, and discuss the contents of the documents. These interactions served a dual purpose. First, they allowed for fact checking, so that the ideas of the participants are fairly and accurately portrayed in this dissertation; however, this also allowed for additional dialog and ideas for future interactions and helped to build much-needed trust between the participants and me. Indeed, this was one of the most important safeguards and rich sources of information in the process of gathering data during the research.

### **Research Bias and Assumptions**

Merriam (2002) mentions that phenomenological research often begins with the researcher's turning the lens on him or herself to expose existing biases. Thus, it would be a folly to assume that one could take him or herself completely out of the research equation. Rubin and Rubin (2005) note that we cannot help but insert ourselves into the interview process by the very action of writing and asking questions in our own ways and by asserting our beliefs by way of our inflections and expressions. Thus, by nature, we inject ourselves into our work and walk a path that was partially constructed before our births. Indeed, we are moved by our upbringings, our experiences, and our thoughts; they are a necessary and defining part of us. However, they also highlight the very reasons why research cannot be free of bias or assumptions, and I am certainly no exception to this phenomenon.

I entered this research as a ninth-year English and History teacher at a rural Tennessee high school, in which a large number of the students receive free or reduced lunches because of their economic status; I also participated in many food and clothing drives to help these students, many of whom lack basic necessities at home. In addition, I also worked with adult learners while teaching Developmental Writing at a local community college for three years. During this time, I watched older adults struggle with the technological aspect of returning to school, and I was disturbed by the low completion rate for those courses. Therefore, professionally, I had several motivating factors for choosing to embark on this particular research path; however, this is not the only reason that I have selected this topic.

As a child, I grew in a home that was so tattered and small that I had to share a bedroom with my two brothers that was so miniscule that we could, even as toddlers, jump from one bed to the other, and we often reminisce about our bathroom that was so small that adults had to sit sideways on the toilet. My father only worked sporadically, and my mother was a waitress. I can easily recall several times in my childhood when we went without electricity or running water; just as I can easily recall counting food stamps for our trips to the grocery store. However, my mother decided to go to college when she was in her mid-30s, and it was a decision that changed our lives. Still, she struggled with her coursework, and she, ranked near the bottom of her high school class, would read her papers to us time and again, in an effort to catch her own mistakes. Often, she had to retype entire papers because she had no computer and had to work on a word processor that gave her uncountable hours of grief. It took her six years, until she was 40, to graduate, but it changed our lives and set my view of the transformative power of

education. However, at the same time, this experience also imparted to me the struggles, including technology, that can drag a person toward despair, even as he or she is trying desperately to overcome adversity.

Therefore, I admit that I have an affinity for older adults who are struggling to improve themselves (in either education or profession), and I feel a need, which started in childhood, to assist and to give a voice to them in any possible way. Thus, I approached this research with the assumption that technology was a factor in their journeys, as it is omnipresent for us all; however, I am aware of my potential bias that technology can be as much of a roadblock as a helper, so I tried to keep this at bay during the actual collection of data. Indeed, I was ready for the possibility that my subjects would be completely satisfied with their technological experiences and how they have affected their individual educational journeys.

### **Chapter Summary**

In the end, this dissertation is a single look at a large and complex issue that involves a multitude of people. Central to the heart of phenomenological research is the idea that we can give a voice to our participants, and that is the driving force behind my having chosen both these methods and this methodology, while neither was an easy or under-thought decision. To this point, I wanted my questions, interviews, and other data to reflect the thoughts and experiences of the participants, rather than a strict and stringent method that would have assumed and projected a tendon between unique and personal experiences. Combining my subjectivist, postmodern view with social learning theory framing and phenomenological methodology, I attempted to isolate each participant and see him or her within a single sphere before triangulating the data with

that given by others. Ultimately, the goal of these methodological choices was to give each participant his or her deserved attention while finding those precious pigments that created an entire picture for the research community.

## Chapter 4

### Findings

This chapter reports the findings of my hermeneutic phenomenological study on the lived experiences of teachers, administrators, and technology coordinators, as far as their roles in ensuring the successful implementation of technology in the classroom by teachers with 20 or more years of experience. Using van Manen's (1990) method of thematic reflection, I found that four major themes emerged as pervasive in the experiences of the participants: (a) the need for connection and understanding, (b) the availability of resources and training, (c) the catalyst of pressure and expectation, and (d) the importance of time.

Each of these themes is broken down according to the insights provided by the participants. As much of their spirit and intent has been preserved as possible to capture the individual and paramount nature of their experiences. The table below gives an overview of the nine participants as far as their occupations within their school districts (denoted as either D1 or D2) and the levels at which they operate:

Table 4-1

*Description of the Participants*

Name	Occupation	Level
Bob	Administrator	High school (D1)
Caroline	Technology personnel	District (D2)
Claire	Teacher	High school (D1)
Hank	Administrator/Teacher	District/High school (D1)

Julia	Administrator	High school (D1)
Kristin	Teacher	High school (D1)
Megan	Teacher	Elementary (D2)
Mrs. Pink	Technology personnel	District (D1)
Sara	Technology personnel	High school (D1)

### **The Need for Connection and Understanding**

As participants discussed their places within their districts and began to ponder those of others, several points of consideration and frustration began to emerge. Chiefly, several reflected on whether others understand their basic and complex functions in regards to operating as or in service of teachers. Furthermore, participants, in their discourse on their connections within their environments, considered what makes themselves and others approachable enough to be sources of information and training. While listening to and considering their words, I grouped their thoughts into six major ideas: (a) all the hats and umbrellas [a self-exploration of their complex jobs within their districts], (b) they don't understand [consideration of how others view their roles], (c) I think she [a contemplation of the responsibilities of others], (d) approachability and unasked questions [an honest look at their comfort with communicating with others in searching for help], (e) the benefit of strong connections [a look at what can happen when positive connections are possible], and (f) my comfort and my ability [a self-reflection on one's abilities with technology].

**All the hats and umbrellas.** In a search to understand each person's place in the picture of this issue, it quickly became apparent to me that the participants saw their

positions within their school systems as vast and varied. “Oh, I wear many hats,” Sara, a high school technology support staff member, said with a laugh, “I’m the librarian - the library media specialist to be exact. I also do the [school] website. I’m also a permanent senior sponsor. I’m in charge of graduation, which takes up a lot of time, especially towards the end of the year. I also have to do stuff all year long with the class officers: senior t-shirts, class favorites, outstanding seniors. It’s something just constantly.” This is something that Julia, a high school administrator, reverberated about her position:

[My job] is more and more academic responsibilities. I also handle discipline as well. I also handle lots of little reports that we have to do for the State, such as school improvement, Civil Rights reports. I do all those; and of course testing, which is academic, tons of testing; trainings. I also do a lot of logistics, as far as master schedules for teachers and scheduling for students. It’s just a plethora of things.

Yet, while Sara and Julia expressed these responsibilities with a tinge of exacerbation, joined by teacher Kristin in her assertion that “there’s always something new to do” in her position as social studies department chair, technology coordinator Mrs. Pink presented her situation of having “a variety of things... to do” “under [her] umbrella” with an air of pride and cheer:

Right now, I am the literacy coach for ninth through twelfth grades for two high schools. I am responsible for maintaining literacy pages for the high school, and I was responsible for creating those in the first place. I do professional development sessions for teachers, mostly things related to literacy, but sometimes they are general content. Also, I am a resource gatherer for sure. I do

classroom observations and provide teachers with feedback based on literary practices and research and the TEAM rubric, which we use for evaluations.

Another responsibility is that I gather materials for our printable workbooks that we give our teachers to give to their students. I also help with testing sometimes.

I want to be useful to teachers.

Mrs. Pink was not the only one that found an element to relish in an expansive position; Hank's view of his myriad titles closely mirrored that sense of looking at a full plate as a positive:

Currently, I'm the junior high head softball coach, the head high school softball coach, the assistant high school boys basketball coach. I'm also the assistant principal in charge of athletics. So, I'm basically the athletic director. I also have responsibilities for doing teacher evaluations. I'm also in charge of clubs. I'm in charge of physicals and that stuff involved with sports. I also teach two math classes each day: calculus, all year round, and statistics and dual-credit precalculus.

All this he stated in a very matter-of-fact, confident tone, noting that his own son "assists with everything and plays [sports]" at the school, as did his older children before they graduated. He even joked that he and his wife are "lucky" that his wife's mother is a widow with few responsibilities so that the children can go to her house and "do their thing" on the weekend. Despite the fact that he leaves the school most nights around nine in the evening and claims, "we don't have [work] hours anymore," he feels that he and his family "have found a balance" because they are all so involved with the school. "I'm definitely a busy person," he stated, "and I like it that way."



**They don't understand.** Despite Hank's assertion that he enjoys his busy schedule and Mrs. Pink's good-natured laugh at describing her list of tasks as, "a lot," most of the participants expressed that their broad job responsibilities or specialized positions engender some degree of disconnection or confusion in their relationships with their colleagues, or, as Sara put it with a smirk: "I think they all understand my position, but I think some understand differently."

Claire, a special education teacher, reflected that those in charge of trainings and resources "don't really understand me enough to give me what I need," while admitting both that they have "never had a conversation about it" and that she feels her "perception of people is often wrong." However, Kristin also feels that she her position might be misunderstood. "They might have a basic idea of teaching," she said, "but I am a department head, so I have other things that I have to do. I'm not so sure that they understand that so much."

Some took this disconnect with more stride. A self-described "jack of all and master of none," as far as his responsibilities as head principal, Bob mused that the ever-changing nature of education and the volatility of the school environment make his "job change all the time," which he described, while smiling, as a barrier to an outsider's understanding the world from his seat: "They're not in this room dealing with a lot of the stuff that I have to deal with." He then clarified, "I think a lot of teachers here know what I deal with. Some don't." As an example of this, he provided an anecdote:

In fact, there is one teacher here who was thinking about becoming a principal, and after spending one day in this office with me, she said she wanted no part of

it... probably because somebody was getting handcuffed. The police were here, and somebody was getting taken away.

Even technology coordinator Caroline, who simply defined her job responsibilities as “I oversee all the tech for the district,” expressed that she feels that most do not understand her station in her district: “I would not say that many people have a real understanding of my job and what I do,” but reflected that “I don’t really have an understanding of their jobs either.” Yet, she claimed that this did not have to hinder progress completely:

We may only have a basic understanding of what each other does, but we all have a common goal and a common theme.... We take our expertise from each level and work together to get it done. I understand that we don’t always understand each other, so [other educational professionals in the district] can’t always serve and understand my purposes; but it’s something we all work toward as a district.

Megan, a longtime teacher, echoed this optimism: “[Administration] might think they understand my small world. They don’t. Easy as that. Neither of them ever taught kindergarten, but they care. And, my friends [colleagues] are on the level with me, and that is everything when you’re looking at a long day or week.”

**I think she.** Feelings of misunderstanding, however, did not only extend to the participants’ views of themselves; rather, it was clear that many were dubious as to the role of those around them. When discussing the importance of finding and dispensing resources, for instance, it became apparent to me that several of the participants were unsure of what other points of contact do within their districts.

Interestingly, many of the participants, when asked what their perceptions of other people's job were, either laughed or scoffed. Claire, for instance, smirked at the idea that technology personnel are part of her support team for obtaining success in the classroom. "I'm not saying that they find me any resources," she stated at one point, "I'm saying that they're probably supposed to," adding that she does get infrequent emails with links to websites. This type of attitude permeated these parts of most of the interviews and expanded across the three groups of participants.

When asked about the district technology coordinator and her role in providing for teachers, Hank reflected on her being responsible for "the broad picture for the whole school district," narrowing on her perceived role in securing "very big softwares for things like district testing, gradebooks, and communications." When asked the same question, Bob paused and considered: "I think she is responsible for making sure that all the schools here have technology that is in working order. She makes sure it's up-to-date." Yet, he admitted that the average teacher in his district might not be so sure: "They know she's here for technology in general and for the school board. That's probably about it," noting that most are probably more familiar with the librarian, who he said is responsible for providing resources and tech support to teachers, as well as running the library. "I'd say she has a set list of responsibilities and knows them," he said, "and she is effective," reserving the opinion that she could make better use of her time to help teachers: "I said she has the time, not uses [it optimally]." Claire seemed to have a similar opinion of her school's librarian. After listing out her perceived responsibilities in the library and in finding resources, she added, "It seems like she has too much free time on

her hands. I try not to be judgmental, but that's a bit frustrating that she has so much time," reflecting, "While I'm working with kids, she could find more resources."

Kristin expressed a similarly bitter tone about her technology leadership. "They've got all day to work on these things and look at these new programs and things," adding, "because they don't have students. They have extra time, or at least more time than I do. They don't have things to grade."

Megan, speaking of her district technology coordinator, said, "I think he's the one that's supposed to buy our hardware and, like, make sure that people aren't doing inappropriate stuff with the school equipment; but I'm not completely sure." This lack of surety was also expressed by Claire about her district's technology coordinator. "I see her do inventory. I think she helps replace technology and researches and presents new stuff to us. That's about all that I know. Oh, she leads PDs [professional developments] some."

**Approachability and unasked questions.** With the uncertainty that swirls around positions and responsibilities being fairly obvious for most participants, they turned their attentions to their experiences with interacting with individuals and how they saw themselves in that continuum.

Bob said, "I hope that I'm approachable. I think that I am. I want people to come to me because if they think there's something out there they can use to make their life easier in the classroom, I want them to be comfortable enough to come to me for that." About his district's technology coordinator, he stated that he feels "absolutely comfortable approaching her and asking her for resources," expressing the same sentiment about the school's librarian and literacy coach.

Sara mirrored this hope. “I think I put people at ease. I never got the feeling that it was a hit to somebody’s ego to ask me a question or ask for help.” This, she claimed, makes her an approachable person, though she conceded, “Maybe the people that do feel that way don’t ask for help.”

However, the others were not always so quick to define colleagues as approachable in all instances. Claire, referring to her district’s technology supervisor, said that she experiences the sense of “I can’t deal with that right now,” “that’s not part of my job,” and “that’s not important” when communicating with her, and Kristin expressed doubt about speaking to her principals. “I look at them as having another role in the school [than giving help and resources].” She claimed that their assistant principal, in particular, makes her uncomfortable because she feels that she might receive a reprimand for not knowing the answer. “She’d be more likely to say, ‘Oh yeah, I sent that in an email,’” even if the email were sent “a long time ago.”

Julia, in her consideration of herself and others, gave a very polarizing view of approachability. “I think I’m approachable depending on the question,” she considered. “Approachable as in new [a new question]? Yes. Approachable as in we just went over this; we just went through this, and I sent you screenshots and 10 steps and you still missed it? No,” she continued, admitting, “I don’t have much tolerance for that” and that she does express those feeling to her colleagues. When prompted if she thinks that affects her approachability, she reflected, “I think people see me as the bad guy... which is fine because I don’t think people always want to hear that you didn’t do this correctly.” She considers this a part of her job that she cannot ignore, to inform people of when they have committed “repeated offenses” in not paying attention. She laughed, “They’re probably

like, ‘She’s tired of seeing me,’ and that’s true.” Additionally, in her consideration of the approachability of others, Julia created categories. “I feel comfortable asking the principal and others for help,” she started, “but not the superintendent.” When asked why, she reflected that, in her opinion, “He’s the highest of the high; plus, we’re just more comfortable with certain personalities,” a theme that many participants reiterated during their interviews.

**The benefit of strong connections.** Megan’s connection between the disconnect she feels between her administrative colleagues and her teaching colleagues was only one of many that were mentioned. In particular, the need for commiseration was palpable, especially in light of a strong cloud of isolation and misunderstanding that some feel hang over their positions. Mrs. Pink reflected that she had to “find people who were strong, like [her school librarian] to help” as she and her fellow literacy coaches felt their way through creating their position. She called this her way “to adapt.” Sara, deepening the idea, conveyed her experience in a work situation in which she felt that her colleagues did not support her:

I feel very supported here, and it gives me confidence because I’ve been in a situation where I wasn’t supported by administration, and it makes it difficult.

When you don’t have support, it’s hard to get things done because you can’t get the go-ahead to do certain things, or the administration piles on way more than you can handle.

She laughed that that type of treatment “makes you want to leave and not come back.”

This bond with administration was something that Hank described in his role as an administrator himself, describing the head principal as “a kind of mentor” to him.

Often, he claimed, he seeks his advice for help with the parts of his job with which he is least comfortable, something also mentioned by Julia. This, they claimed, allows them to have more surety in their job performance. However, Hank also experiences this in his role as a teacher. “We help each other so much,” he recalled. “We share stuff with each other and are always looking for things to make our lives easier [in the math department].” Considering the enormity of Hank’s position as both a math teacher and assistant principal, he remarked that he finds such connections “very important” to maintaining a balance in his work life, a sentiment that Claire echoed in consideration of her special education department, reflecting on how they help each other with paperwork and finding new activities to help students with disabilities learn new material.

**My comfort and my ability.** An essential part of understanding the experiences of the participants was first understanding how they see themselves in relation to their abilities to use technology and utilize it to help others and do their jobs. This quickly turned to discussions of comfort, with some vastly different answers emerging from the different groups.

Bob approached his comfort with a bit of humor. He mused, “I’m pretty comfortable with technology. I don’t have any social [media], but I use it in my personal life. Mostly I use it as far as looking up something, finding something, stuff like that.” He added that he does not consider himself an advanced user of technology but that he also does not have any problem “asking somebody who is advanced” for guidance.

The other administrators, Hank and Julia, both noted more technology use and comfort than Bob. Julia noted that her responsibilities with testing and testing software make it an integral part of her job and have greatly enhanced her comfort with advanced

software. Hank, on the other hand, noted that he enjoys using it in his classroom, but admitted that he lives in a world that incorporated both “hover cams” and “chalkboards” in the same room. “I go from low-tech to high-tech and everything in between,” he laughed.

Not surprisingly, the technology personnel consider their abilities as a source of pride. “I’m about a nine on a ten-scale,” Sara chuckled, “I feel very confident using technology. It may not be as much as what some people do, but I do know that I know more than most people. That is a good feeling.” Yet, she also reflected about what she sees as a major shortcoming for her: “Some [issues] that happen are not from the administration; they’re from my lack of the ability to say, ‘No,’” lamenting the fact that, in her experience, this inability “does sometimes impact my ability to help,” sometimes making her feel “like a failure” due to her missing an opportunity to help someone because “I picked up something extra that I didn’t have to do in the first place.” She could only assume that administration lets her stretch herself so thin “because they know I’m capable of doing it.”

Even a district technology coordinator, Caroline, gave a more nuanced answer than expected: “As far as comfort, on a ten-scale, I’m on up there at a nine or ten,” she began, describing her love of using software for photography and other hobbies, but she too noted a point of weakness: “I’m not an ‘inside of the computer expert,’” instead preferring “what the computer can do.” Still, she described technology is a source of pride, insisting “it does set me apart, but your occupation should.”



The teachers, on the other hand, gave answers that were often bitter-sweet. Claire, who said that she uses more technology at home (in the form of social media and streaming services) than at work, expressed her opinion on her abilities:

I can learn. I just need time. It would be good if [trainers and administrators] realized that we [older teachers] do have that experiences, but that we may need some help with technology. They may not realize that, and that might be part of what needs to happen is that they need to have awareness that we do need help.

Because of this lack of understanding, she expressed that during trainings she does not usually feel comfortable asking questions. She compared it to a classroom with “faster learners and slow learners.” “The slow learners don’t want to admit to the whole class that they don’t get it. They just want you to move ahead, and I’ll either ask you questions at the end, or they’ll sit there and fail,” she said, finishing, “And that’s what I feel like.”

**Summary.** Throughout these conversations, participants continually questioned, many with good humor, the impact of having so many functions to serve in their jobs. The trade-off for working in a rural area, they seemed to think that having such small staffs made pinpointing a particular list of responsibilities nearly impossible to do; the result, of course, is that many felt even more uncertainty when considering the positions of others. Education is, at its heart, about relationships, and that is certainly as true between professionals as it is for teachers and students, and the uncertainty felt by many of the participants seems to put strain on some of these professional relationships. Thus, when considering ways to find help and training, a lack of clarity and connection propels some, like Claire, to shrink from perusing the resources and training that they need.

## **The Availability of Resources and Training**

The look at available resources and training begins with intentions. Caroline summarized to overall opinion of most of the technology personnel eloquently: “Obviously, when you introduce a piece of software, the goal is for it to fly successfully,” but she also captured the gap that many feel exists between intention and reality: “However, that’s not always the case.” This complicated view of the issue mirrors the divide between what some of the participants see as adequate availability and what others see as severely lacking. Thus, as the participants discussed their experiences with professional developments and other trainings, as well as the search for available resources, whether giving or receiving, several themes started to emerge from their reflections: (a) just sitting there [a consideration of the experience of learning through professional development], (b) define “adequate” [reflection on the quality of trainings], (c) one and done [contemplation of the availability of follow-up trainings and help], (d) emails and work orders [a brief look at the lived reality of follow-up], (e) what I need, and what I do [thoughts on the disconnect between want and reality in the classroom], (f) whom do I see? [a look at the certainty and uncertainty of whom to see for training and resources], and (g) used and unused avenues [thoughts on why people and resources are and are not utilized].

**Just sitting there.** The experience of sitting through the trainings that are supposed to teach teachers how to use technologies in the classroom seemed to materialize in a very clear set of themes, with the predominate ones being activity and speed. Kristin described some of her professional developments in this way: “We sit down at a computer, and they tell us where to go, and we look at different things. The

only thing is sometimes it is going so fast that you really don't have time to understand everything that is going on." She expanded this idea by saying that she seeks out additional trainings during her summer breaks so that she will have extra opportunities to learn. When asked if those are helpful, she laughed. "They will be showing us what to do on the board," she started, "but they are not really checking to make sure that we are keeping up," noting that while the presenters are presenting the teachers are "trying to do it [practice], just to see it." She painted such experiences as "hard for me," explaining that she spent most of the time writing down instructions: "Click on the left tab, go to this, scroll down to this, and go over to the right. At least I can look back at my list of instructions and figure it out."

Similarly, Claire expressed her experiences with a laugh. "They stand up there," she started, "and they show a PowerPoint with pictures of what your screen is going to look like. Then they hand you a handout." Here, she paused and added, "Sometimes we go to a computer, or we are told to bring a computer; but it generally never works the same as what they're thinking. There's always a glitch." Humorously, Hank presented professional developments in the same way: "I think that three out of four times our professional development content is delivered as 'Hey, watch this. Watch me click this. Oh, that didn't work, but it's going to work when you get it. I promise.' That happens a lot," reflecting that "maybe that one out of four times, it's 'Everybody get on a computer and follow me.'" When asked if he feels this was effective, he laughed and said that teachers should be given time to learn and use the technology on their own, being "above-average intelligence" individuals who should be trusted to come up with their own questions.

However, Bob experienced such trainings very differently. “The trainings that teachers get are very similar to the ones we get as administration,” which he described as starting “very simplistic” and offering chances for clarity:

They kind of walk us through it, and then they would basically add on from that point. They would teach us something different, stop; teach something different, stop. At that point, they would want us to practice and work with it.... We could ask as many questions as we needed.

Mrs. Pink, considering the trainings that she gives, reflected, “I try to gather things that I think would be good and try to give them that initial exposure,” continuing, “I always try to provide them with the pros and cons, tutorials, videos, things like that.” Interestingly, she claimed to provide up to 10 new resources in a single training, but said that this “smattering of information” was a positive: “You may like one. So and so may like another.” The point, she reflected, is for everyone to find one or two things from the collection that could be used in the classroom, which, she said, she makes clear during her trainings. Others, like Hank, were very questioning of presenting too much information during these training sessions.

From the viewpoint of another technology coordinator, trainings can often become very boring for those who are learning in large groups. Caroline compared mass trainings to conferences, saying that many just sit in front of the computer and spend time checking their social medias. “They’re bored out of their minds,” she said, “and you just hope that the others are not hitting the wall.” To combat this she says that she circulates and repeats directions when she notices that people are struggling to stay on pace. “I feel like I can read frustration body language pretty easily,” she said; so she finds those who

look uncomfortable to give more directed instruction. Also, she said that she holds three trainings that go into different levels of depth for more directed technologies, helping the learner to move toward proficiency at a steady pace.

**Define “adequate.”** Julia, being a former math teacher, always seemed to be probing me to narrow my questions. “Define adequate,” she light-heartedly demanded of me when I asked her if she found her and other trainings for teachers to be so. “I think we need more professional development,” she began, “but I think that we had more than adequate training to setup the online gradebook and PowerSchool.” When asked how she knew these were so, she turned the conversation to the evolution of her training style:

Adequate in the sense that I walked people through steps, and when somebody walks you through it and you are sitting there with your laptop and doing step-by-step together, in my opinion, there’s no reason to mess that up; and that’s why teachers did it with me together this time [the current school year]. Because in previous years, people were continuing to make the same mistakes when I was sending out instructions [email] with screenshots. So, I changed things to save me time.

However, not all trainings were met with so much defense of their validity. While Caroline and Mrs. Pink conveyed their best efforts to be clear and helpful during their trainings, Sara described most professional developments as inadequate, noting that the ones done by companies are “more like a commercials than a real training on how to use the program.” This is something that Hank also noted, describing some professional developments as being done by a “company who’s selling a product.” Whether done by such a person or by a technology coordinator, he reflected that teachers often have a

series of questions: “One, how is this going to help me? And two, how much time is it going to take up? And maybe sometimes three, is this going to be gone in a year?”

This cynical view was also shared by both Kristin and Megan. Megan, for her part, described most professional development as “boring and confusing,” noting that she often leaves such trainings with no better of an idea of how to use a given resource. “How’s that good?” she asked, adding “I don’t think most people [teachers] really get into it because we see so much that just goes away.” Kristin, when asked about the adequacy of her training gave me a hardy laugh.

**One and done.** Among the three groups, there emerged two camps: one (the larger) that feels that most trainings are encapsulated in a one-time activity (most at the beginning of the school year), while a second does feel that follow-ups are available. Of course, some see a mix of the two and expanded on the impact of each style.

Kristin reflected that most of her trainings, other than those she sought herself, are relegated to “once a year,” and when asked to describe some experiences with follow-up trainings, she responded that “as far as I can remember” there have not been any. Both Megan, who described her most recent trainings as “faraway things,” and Claire agreed with this. “My impression is that I get zero opportunities to follow up on PDs,” Claire said. She expanded on the importance of this possibility by saying “I think it is a big deal that we don’t get that. That usually means that whatever they are trying to teach, I don’t use it.” Megan took a similar opinion: “If I want to use one [of the resources], I’m going to have to go back and figure it out.” Additionally, Sara considered a training for a new student-tracking program: “It was very short and not very comprehensive.”

Additionally, Caroline admitted that this is one of the areas of her job that she is working to change. “We are actually in the process of revamping professional development as a district,” she stated, “but right now, topic-based trainings are not differentiated. We go as deep as we can in 60 minutes.” She claimed that individualizing training in such circumstances is not possible, so they have to try to find “that middle-of-the-road ground” and “hope that they [teachers] sat next to somebody who can help them stay on pace.” She said that they want to start having more follow-up, though she admits “I don’t really know what that will look like,” conjecturing “I think you just go in and form a relationship with that person, and you know [what he or she needs]. A lot of my job is building relationships with teachers.”

Even Bob, despite his satisfactory opinion of the trainings, mentioned the variance in the availability of additional learning opportunities: “For some of the more important programs, we did get follow-ups. It depends on how important the district thinks the program is.” However, he also expressed his opinion that a “follow-up could just be questions, the opportunity to ask, ‘Hey, I didn’t get this, can you go back over it with me real quick?’” and that he would and has asked his district to provide follow-up training for his teachers if he felt it necessary.

Mrs. Pink considers giving follow-ups to be one of the most important parts of her position as literacy coach, reflecting on her former position as a classroom teachers:

I always do follow-ups when I go in and see teachers or when I provide them with resources because that’s what I appreciated when I was in the classroom. If somebody came in and saw my class, observed me teaching, or gave me something, I really wanted that feedback or whatever it was.

However, Mrs. Pink's mission to revisit teachers after initial contact was not the experience of all participants, many focusing on the front-loaded nature of training. For instance, when asked to elaborate about her trainings for teachers on programs, Julia clarified that most of them happen "in August," and this quickly became a reoccurring idea in interviews about the perceived "one and done" nature of trainings.

Kristin noted that most of her trainings are shown to her "two days before school starts back," explaining that, when trainings are conducted during that timeline, "I'm not going to have time to play with it," which she claims that she needs. Megan similarly expressed that, in her experience, most professional developments are "crammed in a few days right before the kids show up." The teachers, therefore, feel that resource trainings are often ill-timed and, as Claire worded it, "front-loaded." "That's the time when you're trying to get your room setup and get ready for the year," she began, "so it's really hard to utilize that technology right then and get it in place."

Caroline, for her part as a technology coordinator, noted this as another area that her district is working to improve. She, however, defended the current "front-loaded" nature of training as unavoidable. "Right now, it's either that or cut into planning. Teachers don't like that," she said. Interestingly, she suggested that her push to extend trainings into the school year was based on a survey of teachers' wants, perhaps suggesting a bridge and understanding between technology personnel and teachers in her district. To this end, she mentioned that her district now has a team to change professional developments in the future; she reflected, "I think that we knew there was an issue because we knew it was front-loaded based on the calendar, but we didn't realize how it was affecting teachers that it is so front-loaded." This, she said, was expressed to



her in surveys that teachers completed. “They really do want more professional development scattered through the year,” she said. “They hear, ‘Hey, try plickers. Try whatever it is,’ and then they don’t get anything else for the whole rest of the year. We’re trying to get better with extending that training.”

**Emails and work orders.** After almost all participants mentioned the front-loaded nature of professional development in their districts, the questions naturally flowed into, “What happens to you after the heavy trainings in August?” However, unlike their general consensus about the beginning of their respective school years, they varied in their experiences and perceptions here. One side of the table seemed reserved for the teachers, who felt that resources, help, and training became robotic or nonexistent. Claire sighed, “A lot of the time, the answer is ‘Put in a work order’ if you need help”; yet she reflected that she “can understand why that’s the answer,” as she sees that the technology professionals “need to have a system of organization so that that [technology professional] is not bombarded by 50 different people.” Similar sentiments were expressed by Megan:

The general answer is to use the school’s online helpdesk. So, you have to find the time to go online and reset your password that you never remember. Then, you have to fill out this complicated form - no matter how little your problem is. Then, you have to wait until whoever’s not busy shows up. It ain’t exactly a fun thing or that “open door” that you asked about.

The result of this is that Megan and Kristin echoed Claire’s claim: “I generally try to ask a colleague before I ask a technology person,” noting that the work order path was less than effective.

Yet, Bob, in his consideration of the school librarian, stated, “She mostly reaches out to teachers through emails,” claiming, “I think that’s an effective way to communicate,” yet admitting, “I know not everybody reads and takes their emails as seriously as they should.” In the end, he concluded that she is “adequate in the way she reaches out and provides resources for people.” Hank also expressed this idea that email can be an adequate way to communicate with teachers. When speaking about his district’s curriculum supervisor, he said, “I would say the curriculum supervisor gives quite a bit of opportunities to follow up, and that’s helpful.... Most of them are done by email,” clarifying that he also checks with teachers to ascertain whether resources have been useful and if there have been pitfalls.

Technology coordinators expressed a knowledge of knowing how much has to be done without face-to-face communication. “I write a lot of emails,” Sara said. “I try my best to see people, and it helps that I’m here in the building; but there’s so much going on.” Mrs. Pink similarly discussed how much she relies on this communication because of her role being split among multiple schools, describing her email as “thorough,” as she would like them to be if sent to her.

**What I need, and what I do.** In the search to understand the connections and disconnections between what the three groups experience in relation to resources and training, the need for simplicity and personal attention quickly surfaced. In his dual role as administrator and teacher, Hank ruminated on his position in the math department:

We’re math Geeks. We get math. We can take a piece of chalk and teach a math problem, but being able to incorporate technology or go out and find that technology, decide which one is more effective or most effective, that’s

different. . . . We would rather the school come in and say, “Hey, we’ve got this. It’s been tested. It’s proven.” Let’s go with that.

In addition, he noted that he does not need to “walk into a professional development and be blasted with five or six sites to look at later,” insisting, “I need one effective website that I can use in my classroom. I don’t need 10 that are so-so.” Claire took aim at the way that resources are taught, claiming that she needs help “on an individual level.” When resources are not delivered in a way that makes her feel comfortable with them, she said that she does not use them: “It’s bad, and I know they spent a lot of money on [a resource], but at some point, I’ve got to do my job.”

Beyond this, Sara dug even deeper to the heart of the issue: “Sometimes people don’t get it in the beginning, and sometimes people don’t even really understand why we have [a technology].” Megan sees this as true in her own classroom: “We get so much thrown at us, but I’ll be honest, I don’t know what half the crap is for. It all kind of runs together when you’re sitting down to do something.”

Furthermore, even technology coordinators expressed frustration about not getting what they need to do their jobs. One particularly insightful reflection came from Caroline who turned her eye on teachers. “We send out surveys and don’t get many replies,” she said. The surveys, she explained, ask teachers how trainings can be improved and what they would like to see in the future, which is how she discovered that teachers want more trainings throughout the year. “It’s so frustrating,” she laughed, “just tell me what you want!” However, she also reflected that she understands why some teachers do not do the surveys or might lie about the quality of the trainings: “They don’t trust that it’s anonymous. You’d be shocked at how many cover their computer webcams with tape

because they think I'm watching.... Their afraid that their words will get into the wrong hands.”

Another common call was for more differentiation during trainings: “I would not say that I see a lot of differentiation in training, but I would like to see that,” Bob said, as many teachers “want to be able to do more and learn more.” This is something that teachers noted too. “Everybody is given instruction in exactly the same way,” Claire said, adding that the trainings are “not very well differentiated.” Kristin agreed with this: “They present it all one way, and you either catch on or you don't; or they tell you can look at it later.” She also specified that speed during training is an issue, explaining that issues might occur on the participant's end (such as a computer or program glitch, or getting lost during program navigation), but that “they don't always wait on you.”

Furthermore, Kristin for her part, said that the reality of her district makes using technology difficult in her classroom:

I feel like our school district wants to put a focus on using technology. They like it. So, they buy programs for us and show them to us, but we don't always have the computers for the students to use; so what we have goes to waste. We need more computer labs so that we can actually use these technologies, but they are not always available to use, so it's kind of like, “What's the point?” How can they judge me? How can they use that against me if I don't have what they expect me to have?

This lack of practical resources with which to use materials also frustrates Claire. “I've been begging and begging and asking” for intervention resources, she started, “and, as far as I know, nobody's looking for them. I've asked the district coordinator [of

technology], I've asked other teachers, too." She mused that she finally got a set of five iPads for her special education students "after three years of asking for them," though she added, "but they don't always have the apps that I need." She then explained the lengthy process that she has to go through to get an app for her students, starting with putting in a work order, which results in an investigation because the apps are not free. This is followed by what she described as a prolonged wait to have someone from the tech department to come and install the app. The result of knowing this vexing chain is that "it doesn't get done. It's too much of a hassle."

**Whom do I see?** During the interviews, it became clear that many of the participants are not always certain whom to see should a problem arise or should they require more training. However, the difference often came down to the chair in which one sits, with teachers often feeling less certain.

Sara expressed that she sees herself as a point of contact for teachers in need: "I'm the lead tech here, and I do some coaching if somebody doesn't know how to do something in their classroom. I can show them," adding that she finds resources and fixes minor computer problems, only referring them to the IT department if she cannot mend the issue herself. Sara said that she experiences contact with teachers "for all kinds of things." She went on to give examples of a teacher asking for help to increase the font size on her phone and one older teacher that she said needs her help quite often:

She's been around for quite some time, and she really struggles with her laptop, and a lot of times it's the simple things; but I guess they're not such simple things to her. Even right now I have an email from her because she needs help again, so she'll bring her laptop, and I'll show her. Sometimes I even write down the steps.

She also feels that her supervision is fairly well-established: “It’s mainly the principals and the supervisor of instruction,” all of whom she described as “mostly supportive.”

When asked if he knows where to send his teachers for help, Bob emphasized, “the district [technology coordinator] is responsible for training, either her or one of her designees is.” He clarified, “If a teacher doesn’t know how to use a technology and they come to me, I’m going to send them to [the district technology coordinator],” and he added that if he wants to learn something to teach his teachers he would go and see her first. In addition, he expressed that the school librarian and curriculum supervisor are responsible for finding resources, as are the teachers themselves, stating that it is his responsibility “to make sure it happens.” In his experience, he sees his district as having, “a pretty clear line of command,” and expressed his confidence to fill gaps quickly and efficiently: “I don’t know everything, but as long as I know something, I can go from there and find whatever it is that I need to be able to help whoever I need to help fast,” noting that he feels that his teachers are also aware of this easy link to finding answers and resources.

However, the teachers were not always as confident in this path. “I don’t really know who I have to go and see,” Megan started when asked to whom she would go to learn a new technology, “I would guess it would be the librarian. That sounds right.” Both Kristin and Claire expressed similar doubt. However, Claire took that opportunity to repeat her issue that, no matter who it is, she feels that she will be asked to “fill out a form just to get whoever to come show me how to do a split screen or to show me how to do a Word document or Google Drive.”

**Used and unused avenues.** According to the participants, clarity or the lack of it is sometimes the deciding factor in whether to seek help or use a resource. However, teachers, technology personnel, and administrators often took differing views as to why doors are used or unused.

Mrs. Pink and Caroline offered positive views of their interactions with teachers, both feeling that teachers interact with them regularly. “A fair amount of teachers do come back and ask for more trainings on the technologies and resources that I provide from them,” Mrs. Pink stated, and Caroline reiterated the notion that she feels that teachers are comfortable seeking her help. “They do [come to me],” she said, “and they know that I’m here to help.”

However, a more complicated view came from Sara. She reinforced the notion that teachers come to see her often to help them with their problems with technology, but also considered the questions that are not asked: “You know there’s that feeling that if I have to show them a new way to do something that means they’ll have to do it that new way,” pondering if that keeps some away from her office. Additionally, she considered the impact of the programs themselves and the push to use them: “People react differently to different programs,” she started. “Like SchoolStatus, some people are just like, ‘Oh my God, here’s something else that I have to deal with,’” claiming that some of that opinion, “comes from a time when there was almost no technology.” Thus, she claimed to have only had one question about the program for the entire year.

Bob reflected this problem when he noted, “I would not say that people use the resources we are provided by the district,” clarifying that some teachers use them but that most do not use them “to the extent that it would benefit them” and that people do not

approach him for such advice because “most people in this school are probably more advanced than I am.”

For Caroline, whether a technology gets used or not comes down for the ability for teachers to “buy in.” She explained why she feels a recently obtained piece of expensive software goes unused by teachers:

I get maybe 12 [people in the whole district] sign in per month. It was supposed to be good for teachers because we’re putting all the available data in one place, instead of having to go to four or five different places; but it took us about a year to get the data right with the company, and because teachers were logging in here and there and either seeing no data or incorrect data, I think you lost interest quickly. So, buy-in is 50 percent of the product. It was incredibly frustrating.

Hank considered this exact issue, as far as why teachers do not buy into certain technologies. Reflecting on the effects of having been through training for so many resources that did not work out, he said,

We looked at a lot of software that never developed. We sat through a lot of training for things that in a year were not there anymore. It turns into the boy that cried wolf because the next time we’re shown a resource it’s like, “Here we go again”.... I think teachers are flexible. We’ve built that into our profession, but you hear about these great things that are going to change your life, but you've heard that so many times in the past, too.

In the end, the entirety of the resource question, for teachers, came down to practicality and familiarity. Megan enthusiastically said that she sees her school librarian “all the time,” noting that he is “an old friend” and “great at finding neat stuff to do with



the kids.” This positive view was not shared by all teachers, however. “I have been to very few in-services in 30 years that were helpful,” Claire stated. “Nothing is ever what you really need, and if you need it, the chances are not good that you’re going to be able to actually get it into a lesson.” Indeed, while all three of the teachers remarked that they feel comfortable with at least one of their technology coordinators, neither Kristin nor Claire described any of the positive feelings that Megan revealed, only revealing that they find them approachable.

**Summary.** The clear divides that exist between the experiences of the administrators, the teachers, and the technology personnel are striking. During their discussions, it became clear that most administrators and technology personnel feel that they have the best intentions in regard to helping teachers, but the teachers do not always feel the commiseration that might be expected. In addition, many highlighted inadequacies of trainings and how they affect teachers in their jobs. Whatever the case, most participants seemed to think that changes are needed for resources and trainings to reach their full potentials, while ambiguity serves as another reason for disconnection, yet again.

### **The Catalyst of Pressure and Expectation**

As the participants discussed their experiences, the discussion of technology and older teachers seemed always to become a discussion of the pressures that they feel in their jobs. In addition, the ambiguity that is pervasive in their understanding of positions and responsibilities also appeared in their discussions of what technology is supposed to be seen in the classroom, with interpretations varying greatly. As a result, I have grouped their thoughts and feelings into four sections: (a) what’s my job? [a look at the

uncertainty of the responsibilities and expectations that come with certain job titles], (b) the push to use [reflections on how pressured teachers feel to use and administrators feel to see technology in the classroom], (c) opinions of success and failure [considerations on why certain technologies launch or do not launch in the classroom], and (d) the cost of failure [ruminations on the monetary and educational loss that occurs when technologies go unused or misunderstood].

**What's my job?** During the course of the interviews, I noticed a recurring source of frustration from many is the blurriness of the outlines of their jobs. Mrs. Pink stated it bluntly: "I have no authority to empower teachers with resources and technology, but I do see it as a part of my job." She further clarified that her job has expanded every year since its inception because she and the other literacy coaches in her district had to create the responsibilities from scratch with only a vague outline:

When we first took these positions we did not have anyone train us on how to train other people. We were basically given four different books on coaching, which we read over that first summer. It was basically a variety of ideas on how coaching is best done, and then together, in a lot of meetings, we came up with a basic outline of what we thought was best.... [We] tried to come to a consensus on what our role is as coaches.... A lot of what we did was self-training and self-directed. Like I said, nobody really trained me or any of the other coaches on how to provide resources, technology, things like that.

Others felt this need to expand their own positions. Megan, who described herself as the lead in her kindergarten division, said that she took the reins when she saw that her division needed extra tutoring for students: "Nobody told me to do it. We needed it, so I

did it. I just got lucky that my [fellow teachers] are so supportive and were ready to ante up with their time.” Similarly, Caroline reflected that she is the first person to fill her position in her district: “There was a man here who did the special education, all the curriculum, and the technology. When he retired, that job was split into three different jobs.” At that point, Caroline said that she tried to take control of what this new position would be: “I want to be a resource for teachers. I want to be the person who gets them what they need,” noting that her proudest achievement is bringing resource equity across the district, saying “I don’t care what your income base is or where you live. You are a part of our school district and deserve equality.”

However, Julia expressed a sense of responsibilities raining on her. “It does cause me stress,” she said, “because [my job] is in constant flux.” She clarified, “I pick up responsibilities all the times in the sense that if something comes through that door and the secretary doesn’t know how to handle it, it’s directed to either the principal or myself; so there’s no way to predict what is going to happen.” However, she also turned her thoughts to her superiors:

They are constantly adding to my job. They don’t really drop responsibilities....

So I think the expectation here is “do more.” I think this expectation is the tone of the district and that the stress goes from the supervisors all the way down to the teaching assistants. The tone is keep doing what you’re doing but without extra resources.... Keep doing it well and do more.

However, she also admitted that that is also her personality, being “type A” and “a perfectionist,” to do more.

**The push to use.** “Technology is so complicated,” Caroline summarized at one point. Thus, it is not surprising that the disconnect between different types of professionals once again reared its head in the discussion of the expectation to use taught and promoted technologies in the classroom. However, there were even differences within the groups. Both Kristin and Megan expressed a pressure to use technologies that were presented during professional developments. Kristin said that she experiences this squeeze in relation to time: “I do feel pressure [to use taught resources] and especially if it’s in the beginning of the year.” She connected this to her discussion of front-loaded professional developments: “It’s really thrown at you hard after the PDs, when all the new stuff is plopped in your lap. They want to see it used.” She even reflected that this pressure makes her question if she even wants follow-up trainings: “I don’t know [that I want them]. I might feel that if I’m having a follow-up, I’m then expected to use it.” However, Claire did not feel similarly at all. She laughed when asked the question and expressed her perspective:

I know it’s on the [TEAM] rubric, but I don’t really feel too much pressure at this stage in my life. If I were a new teacher, I would be nervous. It doesn’t really bother me. Well, we all care about our [observation] scores, so I can’t say that that doesn’t bother me; but so far nobody has ever put down on my observation that I need to use technology as a point of weakness.

However, she reflected that “[administration] should hold me more accountable,” and that though she feels that the issue of poor use of technology is not being discussed in her district, “it should be.”

Administrators gave a different account of what they expect to see in the classroom. Bob was fairly direct about his expectations for teachers:

I do expect to see teachers use technology. In an observation, I expect to see some technology being used. That technology, whether it's video or whether it's written stuff, I want to see that (number one) it keeps the students engaged; and I want to see (number two) that it's got rigor. I also want to see that students can follow it, understand it. I also expect that it touches several [learning] standards and is related to learning. It can't just be random technology. It's got to be related to learning in some way.

However, when pressed if he expects to see a particular technology used, he simply proclaimed, "Not at all." This is a feeling that Julia expressed as well: "I don't really feel pressure because technology is part of a bullet list, and I can look at the bigger picture and see if a good teacher is teaching." "Besides," she expanded, "I don't need to see a specific technology to give credit for the technology part of the rubric. The category of multimedia and technology is so broad that so many things could fit under it." Instead, she pointedly reiterated a point of Bob's: "[Technology] is going to reveal what you know about your students and how you're trying to connect with them and create real learning to help them."

However, Kristin expressed doubt as to what would count for technology use in her classroom. "I use my computer and my overhead a lot, but I feel like that almost doesn't count as technology because it's almost, well, normal," even laughing and calling it "today's chalk and chalkboard." Instead, she feels that observers, especially during an evaluation, "want to see the kids have their hands on technology, may be researching

something.” Claire took this a step further and spoke about a time when technology failed her during an evaluation:

I don't really know what she [the evaluator] was looking for. I tried to use the Smart Board, but the batteries were down in the markers. I didn't know they were down because I haven't used them in a long time; but she didn't say anything. So, I had them [the students] grab the iPads, and we did Quizlet instead. That's not technology. Taking a test on the computer is not really technology. Technology is creating and inventing and communicating with people in other parts of the world.

Thus, the administrators and the teachers seem to have different ideas about what is acceptable during an evaluation. Hank, from his special position, brought both together, admitting that part of his job as an administrator feels like filling in a checklist during evaluations, which he clearly expressed is “not my favorite part of my job.” “The checklist answer, which this is not my answer,” he began, “is did they use the projector? Did they use the internet? Did they use some resource off the internet?” He stated that if the answer is yes, “That's when you look [at the rubric] and say, ‘Oh, they used technology twice in class,’ check.” Yet, he admitted that this does not reflect his own class when he is functioning as a teacher. He firmly stated, “I teach for 10 to 15 minutes, and the kids go to work. That is effective to me. So, if I had to evaluate myself, I'd probably give myself an average score.” However, the disconnect between the goals of the checklist and the lesson was not lost on him: “At the end of the day, I had 80% of my class pass a [state test for college credit] that had a 12% pass rate [across the state]. It was effective.”

The extent to which teachers feel or don't feel pressure to use technology and the types that they feel they are expected to use, thus, somewhat vary among themselves and do not necessarily reflect what is expected on behalf of the administrators. Julia summed her experience on her side of the desk: "The rubric says incorporate, not master technology. It's more of an embedded thing in the rubric than a defining thing"; while Megan reflected from her side, "You'd better have something. Every little thing counts because they watch everything you do and write down everything you say."

The intersection of expectation, cost, and awareness was beautifully summed up by Claire when she said, "These programs cost a lot of money, and we have to sit through those endless PDs, but I don't feel the pressure to use them."

**Opinions of success and failure.** "I understand that some of these technologies are complicated. Some of [the teachers] are going to have to work to learn them," Caroline stated about some of the resources that she presents to teachers. This opinion really set the tone for many perspectives of why they feel the programs were successes and failures. In the discussion, many of them saw the promise and some saw the shortcoming of what was happening around them.

Claire questioned why so much goes unutilized by her district: "Kids are just sitting there and doing what they're told, just like they've always done," but she noted that it doesn't have to be that way: "Other schools around us are making it happen. One is doing that TV-science-teaching thing. We have that stuff here, but we don't utilize it!" When asked why she feels that was so, she claimed, "It's about order," explaining that the technology coordinator, in her opinion, is responsible for teaching her so that she can

teach the students the technology. “But they’re not lining up all together,” she claimed, “so that makes me feel that I’m not doing as well as I could.”

Caroline, a technology coordinator, mentioned how a chain of command can also impact success or failure. “If an administrators is not a heavy tech user and hits that wall of frustration fast,” she stated, “they’re not going to be willing and open to that technology integration beyond then,” noting that administrators “kind of guard their teachers.” “When they hit the wall that fast, they feel like, ‘Well, my teachers are going to hit the wall that fast too,’” she conjectured. She later explained that, in her experience, schools with principals that are more open to technology are more likely to “buy-in” to the programs and resources that she obtains for her district. In addition, she reflected that learning a resource during a training is like going “to an inspirational speech of some kind. You get excited, but a few days later you’re back into your routine, and that excitement fades.”

Sara feels that not adjusting to new “requirements” with technology could cause problems for teachers:

When I first started, most teachers didn’t have a computer in their classroom, or if they had a computer, they didn’t know how to use it. Now it’s an integral part of everyday lessons. You pretty much have to have a projector, computer. When I first started, it just wasn’t so.... If a teacher didn’t know how to use it or were using it incorrectly, it could be detrimental [to their job].

Bob expressed that he feels some older teachers fail to meet his expectations because “some of them just don’t want to learn new things.” When asked why he thinks that they react this way, he smirked, “Some want to do whatever they can and get off



[work],” adding that he does not feel it is an issue of comfort. In his experience, some teachers want new learning, while other resist it: “Some don’t use [tech] because they don’t remember or understand how to use it. Some want to do it the same old way they’ve been doing it, and some are like, ‘Hey, this is making my life easier, I’m going to use it.’”

Mrs. Pink and Sara, likewise, focused on the issue of change, albeit in a softer manner, noting that some people may forego seeking help because they are, as Sara put it, “afraid of change” and having to recreate methods that they’ve used for so many years, even musing that her own father would not use the online gradebook because he did not trust it; so, they, like he, “block it out” because they “already have it in their minds that they can’t do... or understand [a technology].” Mrs. Pink simply conjectured that “people coming to the end of their careers” are at a disadvantage and often fail with technology because they did not grow up using it, insisting “They’re not as comfortable using [technologies], so I see them in their classrooms using much more lecture.”

**The cost of failure.** During the course of the interviews, most participants turned their thought to what is lost if technologies are not used in the classroom. While this sometimes took the form of discussing actual dollars and cents, some participants focused on more emotional tolls.

Sara considered, “Why are we paying such big fees for things that people don’t use? And if they can see that people are not using it, why are they not pushing it more, or why do they not offer more training?” However, the cost of failed technology or training impacts her personally. She reflected that poorly explained programs make her job more

difficult “because people don’t have to come and ask me questions about things that were explained well in first place.”

Several of the participants noted that failures also hit them on an emotional level. Kristin expressed, “I don’t know who to say whose fault it is. Maybe it’s mine,” when asked who was to blame when new technologies are unused, expounding “I guess I need to find more time to learn. I just don’t know where it would come from.” Caroline, speaking about the inability to get teachers to use technologies that she finds or supports, noted,

You feel like you failed as a technology coordinator because you introduce this piece of software and you wholeheartedly feel that this is going to be beneficial for the group of educators in your district, then you watch it flatline in your face.

That’s hard. That’s real hard.

Additionally, Caroline remarked that some programs cost upward of \$25,000. “I can take \$25,000 and dump it anywhere else,” she said, continuing that “professional development is a constant evaluation of what’s working, what’s not, what needs to change” based on the “current expectations for our teachers and our administrators.”

Perhaps most sobering is how several noted the impact on student learning. In frustration, Claire stated, “Of course, the students suffer the most. They miss a chance to create and be in love with what they’re learning. Think how much a kid’s face would change in class if they didn’t have to do the same worksheet day after day after day.”

**Summary.** Whether or not every teacher feels the pressure to use technology in the classroom, as Kristin and Megan do while Claire does not, the cost of missed opportunities and the frustration of lacking resources and training weighs on all.

Additionally, the lack of consensus on what is expected to be seen in the classroom proved to be a point of great consideration among the groups. Technology personnel often expressed a need to feel that they are meeting the needs of teachers in the classroom, while some administrators, like Julia, related their personal stress. Again, the ambiguity of their and others' positions, as well as expectations, came into play and impacted the ability of many to help teachers reach their fullest capabilities with technology in the classroom.

### **The Impact of Time**

While the smallest tributary for this river, the theme of time was, nevertheless, one of the most torrent. Participants, harkening back to their various “hats” and “umbrellas” that come as a result of their rural setting, are often overburdened in their positions. The result is that time becomes one of their most precious and scarce resources. While reflecting, I divided their feelings and thoughts into three categories: (a) too much to do [a consideration of how being overburdened impacts the ability to help and learn], (b) so much out there [a look at the time spent sifting through available technological resources], and (c) time well-used and learning saved [a brief reflection on how technology can impact student learning].

**Too much to do.** Many reflected that their various jobs and responsibilities impacted their abilities to be there for themselves or others. For instance, the teachers felt that their responsibilities just do not leave enough time to search for or learn new technologies. Claire lamented what she sees as the impact of lost time and tried to trace its source:

I think that most teachers just don't have time to make it happen. That goes back to administration; well, really the State. I don't like the pressure [State] tests put on everyone. I think that that has taken the creativity out of learning. It's taken up the time to innovate. The creativity and excitement isn't there; it's so blah.

She noted that her district gives her programs that might be helpful if she knew how to use them, but, singling out one example, she matter-of-factly stated, "I have not touched it because I have not had time," elaborating that she has copious amounts of paperwork to complete for special education. "It's very frustrating," she explained, "to have these things, but I can't really find a way to make them work or find the time to find out more about them." She gave a recent example from one of her experiences during a professional development: "We all got free websites. It was supposed to be exciting; it could have helped communicate with parents and kids," she reflected, "but we only messed with it one day, got maybe the first page done." When asked what happened with the resource after that, she elaborated, "So many people never did anything else with it after that. We didn't have the time."

This is a sentiment that both Megan and Kristin echoed. Megan claimed that she would "love to find new games and fun things to do, but where's the time going to come from? I have a family. I don't have time to figure things out for them to not even work in class, which always seems to happen." Kristin started staunchly, "Time is everything to me." She then explained that when she tries to find resources or when she is given one by her district, "just taking the time to sit down and play with it and learn everything" can end in frustration because she feels like she loses more time when things do not work or she cannot figure out how to operate the program:

After all, how much of my own time am I expected to put into learn [a new program] when I'm trying to do lesson plans or update lesson plans or do grading or learn for a new class that I'm having to teach and still having to have some sort of life outside of school?

Laughing, she finished her idea: "Besides, like I said, we don't have the equipment. We can have all the programs in the world, but if we don't have a way to use them in class," she mused, "what's the point of taking the time to learn them?"

In her role as librarian and head tech, Sara reflected that her ever-expanding titles "definitely impact my ability to help others." She followed this reflection with a recent example from work life:

In fact, just last week, an English teacher needed my help to present some content to her class, but I couldn't because I was giving some certification exams on the computer because there was a fixed window of time for those exams. I couldn't help the English teacher. It made me feel really bad because she needed help, but I just didn't have time. I didn't have time to help a teacher because I was helping another teacher because he wasn't allowed to give the test. I wanted those students to get the certification because it would help them in life. I'm stretched thin.

Sara also considered that she is not the only one that misses opportunities because of time, speaking about an expensive software purchased by her district: "Teachers already have their online grading that they have to do. They have their lesson plans they have to do, and they have to deal with all this testing." Therefore, she said, such programs "fall to the bottom of your list."

Bob, from his administrator's seat, considered why teachers might not utilize and find resources: "I think they don't seek them out because it's a time issue," continuing that they do not meet with their district's technology coordinator because "they don't have time to go over there and learn how to use [technology]."

The fear of lost time and need for more was omnipresent throughout the interviews. Even the teachers who had even expressed a want for follow-up training sessions shuddered at the thought that such trainings would be executed during their planning times. Claire noted that her district's literacy coach had offered some trainings in which she was interested, but they were during her planning. "There just wasn't enough time to get there and do my job that I have to do," she reflected. Megan was blunter: "I have almost no planning in the first place. It's like my baby; don't mess with it."

The mass of input can be brought together by Sara's simply assertion that "there are times when I get everything done for the most part, but I guess there are times when I don't."

**So much out there.** In addition, several participants noted the exhausting and overwhelming prospect of having to take the time to learn new technologies and find resources. Hank stated, "I think the hardest problem with technology is finding something." He continued, "If you have a problem you're trying to solve, you have to do so much researching to try to find the software that's most useful. There's just so much out there, and I think that's been the problem in the math department," also noting that as an administrator he wants to get a smaller number of good resources into the hands of "our teachers": "What they need is one proven website that works. The process of how to

find that, I think that's what we need to be focusing on right now." This is a feeling that Julia also reflected from the administrator's point of view: "I honestly feel more stressed about finding the time to keep up technology because it's evolving all the time."

Mrs. Pink, in a reflection of how teachers may become overwhelmed looking for their own resources, said, "I spend a fair amount of time gathering information and resources [for teachers]. There's so much to go through, so I try to look at what's out there because I know that I have more time to do that than the average classroom teacher."

This was a sentiment that Caroline echoed from her experiences: "We have so much that we are constantly considering, and it is difficult to tell what will be good for teachers and what won't; so I spend a lot of time doing research and praying," admitting that it is "really frustrating" when a product that she has promoted fails to sync with teachers. In her position as district technology coordinator, she also mentioned that she has the added burden of having to field resources for all grades at all schools: "It's hard to please everyone, and there are so many to please. You better believe that it takes up my time. I even find myself checking Pinterest at night for ideas," she laughed, though somberly admitting that the stress of her job sometimes makes its way into her relationship with her husband and children.

**Time well-used and learning saved.** However, not all experiences with time were reflections on the loss or lack of it. Some reflected on the ability of technology to save time and make the most of class time.

For instance, the teachers discussed how advances in technology have or could impact student learning. Claire, for her part, contemplated the ability of technology to elevate student learning:

Just think if our English classes skyped with English classes in other places. We could do that. When kids have ownership and they can somehow love what they are doing, it makes all the difference. Technology can make that happen. It's the thing! You know, when I taught gifted, we did green screens; we did animations. We loved it because [the students] were so interested in doing it, so a lot of the motivation came from the kids.

Megan reflected on the reality of this type of learning: "My kids are able to do so much more than when I got started," she considered. "They can be so interactive without me. That part of the job has really expanded." When pressed for an example, she said that her kindergartens now do research as a part of their regular routine. "We never did that," she said. "Library time was more of a break time back [when I started teaching], but now there's so much that they can do; and they know more than we do [about technology]," she laughed.

In the end, as Hank considered, it all comes down to what is best for the students. "If a marker and white board can get the concept into their head," he said, "use that, but if seeing it [displayed digitally] helps the kids, take the extra minute to go to the computer and do it."

**Summary.** As with many professions, time is an issue for educators. Each participant expressed his or her opinion on how a full schedule becomes even tighter under the strain of having to meet the expectations of others. Whether it is finding the



time to meet the needs of teachers, as Caroline experiences, or having the time to learn a new program just purchased by the district, as is the case with Kristin, time looms ever-present. Unfortunately, the time-constraints of one tends to be a loss for another. While many administrators and technology personnel expressed their feelings of pride about having open doors and welcoming personalities, they just as often expressed the fullness of their schedules: something not lost on teachers. That, combined with the lack of time on the part of teachers and the overwhelming sea of available resources through which to sift, often results in unasked questions and unused resources.

### **Chapter Summary**

This chapter was an exploration of the themes that were disaggregated in the experiences and views of the nine participants. Throughout, they were candid in sharing the significance of this phenomenon and its impact on their abilities to carry out their responsibilities at work. Additionally, they were kind enough to share personal feelings concerning how this pressure both enriches and diminishes their views of themselves. Over the course of this chapter, I attempted to preserve the depth and richness of their words and feelings and pair their thoughts within common themes.

## **Chapter 5**

### **Discussion**

This chapter is designed to connect the lived experiences of the participants with the search to address the quandaries of the research questions and related literature. In the first part of this chapter, I address each research question individually to try to do justice to the participants' experiences and make the connections mentioned before. Following this, I discuss the possibilities for future research and practice based on the understandings drawn from the literature and expressions of the participants. The chapter ends with a ponderance of my own experiences during the research process, the limitations of such research, and a brief summation of the contents.

#### **Consideration of the Research Questions**

A consideration of each of the three driving research questions is offered in this section of the chapter. Throughout, I make connections between the thoughts and experiences of the participants and the existing literature on adult learning, educational professionals, and the theoretical backbone of the study. The questions under consideration for this hermeneutic phenomenological study were as follows:

1. How do older teachers, technology coordinators, and administrators perceive and experience the presence or absence of technological support and its effect on older teachers' abilities to create and maintain a positive outlook for their professions and selves, and what is the significance to each person?
2. How do older teachers, technology coordinators, and administrators perceive and experience their roles in helping to ensure the successful implementation of

technology in and for the classroom by older teachers, and what is the significance to each person?

3. How do older teachers, technology coordinators, and administrators perceive and experience the realization of their roles in helping to ensure the success of older teachers with technology in and for the classroom, and what is the significance to each person?

During the course of this section, participants' themes are often grouped *en masse* for the sake of brevity, but care has been taken to preserve the weight and importance of their experiences.

**Consideration of research question 1:** How do older teachers, technology coordinators, and administrators perceive and experience the presence or absence of technological support and its effect on older teachers' abilities to create and maintain a positive outlook for their professions and selves, and what is the significance to each person? The data from this study supports the notion that technological support is available for teachers of all ages, but the quality of and access to that training and support is of less certainty. All nine of the participants discussed their experiences regarding such support, and each had his or her own view of the adequacy of such offerings. Therefore, the significance of training and resources was often seen as a matter of perspective, dependent on the level of pressure that one felt and the presence or absence of frustration when living the experience of trying to access or provide technological knowledge.

To begin with, the experiences of the teachers often mirrored the data that suggests that teaching technological skills in isolated, singular instances does not provide professionals with enough training for them to incorporate technology into their

curriculum adequately (Bakir, 2016). Indeed, all the participants except for Bob mentioned the “one-and-done” nature of most of the trainings as at least mildly detrimental. Some, such as Megan and Claire, claimed that the lack of multiple opportunities to learn and practice often ensured that such available resources would go unused. Given that older teachers are already less likely to see technology as necessary to teach students (O’Bannon & Thomas, 2014), the inability of the participants to access necessary training stands as a major roadblock for implementation in their experiences as teachers. Yet, somewhat contrary to the views of O’Bannon and Thomas (2014), all three teachers expressed an optimistic view of technology’s ability to improve teaching and learning, instead focusing on the frustration of being expected to put on a show for administration without the training to become proficient with programs or the time to learn them. Even the technology coordinators noted the oasis-like quality of training, existing between expansive deserts free of follow-ups and additional learning opportunities, with Caroline mentioning that she is working towards addressing this as a major part of reforming her job. With principals split between those who see such training as adequate (Bob) and those who do not (Julia and Hank), teachers are often left with gaps in their knowledge of administrators’ expectations. Indeed, with the principals expressing their relatively low expectations for seeing technology in the classroom, claiming that it need only induce learning to count, while teachers (Megan and Kristin) experience a perceived disproportionate level of stress to use such technology during class, and especially during scored observations, the view that technology could engender student learning often gives way to seeing it as another burden to the execution of their jobs and, in the case of Kristin, a mere source of distraction and entertainment for the

students due to a lack of direction, mirroring the findings of Hsu (2016). Additionally, this difference exposes a disconnect between teachers and administrators that seems to stem from poor communication. Thus, to some teachers, technology, because of a perceived lack of support, becomes a source of stress and anxiety, rather than a source of inspiration and possibility.

Beyond the existence of trainings and resources, the literature also suggests the importance of the intangible necessity for emotional and professional support for teacher success. In particular, Fidan and Balci (2017) speak extensively about the role of administrators in setting the tone for teacher empowerment and confidence in their buildings, and while the administrative participants expressed their feelings that they help to create such an inclusive environment, the teachers were less certain. Indeed, Bob asserted his surety of his approachability and his ability to assist teachers in finding that materials and training that they require, and Julia was honest in her frustrations in having to reteach materials to teachers that she felt had had ample opportunities to learn. Both administrators, along with Hank, expressed a suspicion that part of older teachers' inability to learn new technology was rooted in stubbornness or an unwillingness to change, as suggested by Hsu (2016), and deflected notions of personal responsibility. However, the teachers themselves were vocal about the perceived lack of approachability when it comes to certain members of their administrations, with both Kristin and Claire mentioning that there are certain principals that they do not feel comfortable approaching with problems and needs. They, instead, noted their willingness to learn and their openness to opportunities but also their lack of confidence because of scarcity of learning and practice opportunities. These two, lack of opportunities and unease at seeking

administrative assistance, creates a gap between what they say they are willing to do and what is done. As Ertmer and Ottenbreit-Leftwich (2010) assert, teachers need confidence to use technology in the classroom, but such confidence is built through support and practice. While administrators see their doors as open and their support in finding training and resources as adequate, teachers are not always experiencing the same level of faith or sense of connection.

However, administrators were not the only participants to convey the perception that they feel they offer welcome support to teachers. All three technology coordinators expressed their being open and approachable to teachers in need. Wine's (2016) assertion that technology coordinators are expected to be school leaders in charge of training and technological instruction, among other duties, certainly rings true to what Mrs. Pink, Caroline, and Sara experience in their daily lives. Indeed, Sara specifically noted the vast amount of control that she has over purchasing and finding resources for teachers in her school, while Caroline's control expanded throughout her district. Furthermore, as mentioned by Sugar and Holloman (2009), all three women see themselves as in partial charge of ensuring the proper flow of materials and training into the hands of teachers. However, each also noted the reality of doing that with expansive responsibilities and unclear expectations is not always ideal. Particularly telling was Sara's experience of having to choose teachers to help at the expense of others and Caroline's admitted lack of knowledge about what her teachers want in her district. Indeed, her discussion about the expansion of her district's professional development program was predicated on the realization that teachers in her district do not feel as if they are being fully serviced by the status quo. However, Free (2017) writes that all this confusion is the result of a top-down

issue, and Caroline spoke of her frustrations in dealing with some members of administration and how they stand in the way of her implementing what she sees as essential changes and policies. Whatever the case, this only serves to deepen the divide and disconnection that teachers also experience. While all three teachers feel relatively comfortable with their schools' technology coordinators, each expressed more uncertainty with district-level employees, such as Caroline and Mrs. Pink. Indeed, the teachers had trouble defining their roles within the districts, and they were unsure as to whether they would be receptive or available for training or help if needed, as experienced by Claire and Megan. This, combined with the rushed nature of many trainings and the commercial-like quality of others done by companies (Hank and Caroline), creates an experience for teachers that is less than ideal for learning and confidence. With the quality of training having a great impact on teachers' use of technology (Bakir, 2016), the experiences of technology coordinators and teachers come into conflict. While technology coordinators express the best of intentions, like administrators, and they experience their own frustrations and uncertainties, teachers are left to wonder who, beyond their school librarians, is responsible for helping them to achieve success in the classroom. The significance of this intersection is that no particular party expresses great confidence in the system as it exists in their experiences or a great sense of connection with individuals further up the district scale, and even the more confident Bob admits to the gaps that exist between the potential for great technological support and training and the reality for both the trainers and the trainees.

Additionally, this study stands at the intersection of the availability of resources and the issues of teaching for a rural school district. As part of the "digital-divide" is

defined by the lack of equitable access to technology (Ritzhaupt, et al., 2013; Selwyn, 2004), the experiences of several of the participants (Caroline, Kristin, Julia, and Claire) reflect how tight budgets impact their abilities to execute their jobs successfully. Since districts often have to operate without many of the amenities of urban areas (Eberhart, 2004), they are forced to rely on outdated and scarce resource while they await supportive infrastructure (Selwyn, 2004). From Caroline's seat as a technology coordinator, she experiences how a lack of funding, combined with what she sees as misused funding, impacts her ability to provide her teachers with the resources that they need. Additionally, Julia specifically referenced how funds could be allocated for more support and staff, even mentioning how she has expressed this to those in positions of more authority than she. The result of this trickles down to the teachers in the form of absent or lacking training and materials. For Claire, this came in the form of waiting for her iPads and other materials for an exorbitant amount of time, while also experiencing the feelings of loss for not being able to push learning for her students into more interesting and arresting waters. Kristin's issue was a simple but detrimental lack of computers with which to execute what she perceives as an expectation to use technology in the classroom. In her experience, her district's lack of resources does not excuse her from the expectation that she will use technology in her lessons. Thus, the significance of a lack of resources is that it causes her a great deal of stress because of her inability to meet the expectations put on her from those in positions of power.

Overall, the experiences of the participants only further muddled the existing literature on the view of older adults using technology. However, Saettler's (2004) view that communication often breaks down between those who train and those responsible for



training resonated with many of the participants. Although administrators and technology coordinators expressed mixed views as to the adequacy of existing trainings, they offered decidedly softer views than those of the teachers and were much quicker to defend any training that they themselves were responsible for giving. For each, the significance of the experience of training reflected on his or her job quality, so the justification of decisions was an important part of finding meaning for them. Mrs. Pink, for instance, was proud of selecting up to 10 programs to present in a single training, and she described such a strategy as being beneficial. Furthermore, both Julia and Caroline noted potential flaws in the ways that they present content but also emphasized the inescapability of circumstances and their ability to adapt and change to meet the needs of trainees.

Whatever the case, each of these individuals repeated a mantra that he or she is available to help teachers achieve to the highest level. However, smiles and open doors do not seem to suffice in the experience of teachers. Indeed, they described the majority of their trainings as inadequate, boring, and confusing. Some even noted a distrust of the material, as it is seen as being likely to have been removed by the districts by the following year (Kristin and Hank). Therefore, the question of having access to technological support is not as simple as answering if trainings exist. The teachers admit that much, though they are sparse, but the quality is not to the level that they feel confident, as suggested by Ertmer and Ottenbreit-Leftwich (2010); however, what really complicates the issue is that the three teachers in this study each expressed views contrary to those found in current research (Cammack, 2008; Marquie, et al., 2002; Szechtman, et al., 2008) that suggest that older adults have low self-esteem in relation to technology. Each of these teachers sees herself as capable of learning new technology, and each noted

that she uses technology in her daily life in and out of school. Therefore, the attitude suggested by previous literature is not wholly responsible for the experiences of these teachers. Instead, they turn their attention toward the deficiencies in their trainings and the lack of structure and personal connection in the chain to find help.

**Consideration of research question 2:** How do older teachers, technology coordinators, and administrators perceive and experience their roles in helping to ensure the successful implementation of technology in and for the classroom by older teachers, and what is the significance to each person? To understand the significance of these experiences to the participants, it is essential to explore how each person views his or her role in providing the necessary resources to teachers for the classroom. With a growing number of older workers in the workforce needing adequate training with technology (Von Volkom et al., 2014), and, indeed, with the very definition of *older* in flux (Duke, 2011), clear definitions and paths are needed to help ensure that teachers can access what they need for success. Yet, this was not always the reality experienced by the participants. Indeed, very little seems to be solidified in the positions of those involved; however, they often expressed a willingness to push through this uncertainty to attempt to perform their jobs in the best way possible.

The question of roles in the research ran in two directions, and each provided its own spring of uncertainty. All nine of the participants expressed that others probably do not understand their positions well, and all admitted to a certain amount of ignorance as to the jobs of others in their districts. Several (Bob, Julia, Caroline, Mrs. Pink, Megan, and Claire) pointed to the volatility of working with so many young people as a reason for the difficulty in defining the roles of themselves and others. Bob described this

elasticity as a necessary part of being able to respond to the needs of any given situation, a notion supported by research (Fidan & Balci, 2017). However, this also left the majority of the participants feeling misunderstood in their roles and unsure as to exactly who they should approach for help. In addition, these circumstances lead to the constant fluctuation and expansion that impacts the well-being of many participants. Julia, for instance, noted how she feels that her district is consistently adding more responsibility to her position without additional supports, and Sara commented on her numerous jobs as a source of frustration and the feeling that she does not do her job to the best of her ability. Additionally, some, such as Mrs. Pink and Caroline, could not clearly define their roles within their districts at all, as they were newer and self-directed. Instead, they both discussed having a network of support made of others in similar positions inside (in Mrs. Pink's case) or outside (in Caroline's case) the districts. Yet, this uncertainty is not unfounded. Sugar and Holloman (2009) found that such roles often encompass expansive responsibilities to both staff and the community, and it is often left to the leaders to discover ways to cope with their pressures of that reality.

Thus, when asked specifically about their roles in ensuring the success of older teachers in classroom, most admitted that they have never given consideration to this specific demographic in this light. That is not to say that they do not help older teachers. Indeed, all three of the technology coordinators and Julia both gave descriptive accounts of helping older teachers with computers, programs, and tasks that show care and talent as trainers; however, they all admitted that they are acting without specific training on how to best meet the needs of this group. Instead, they spoke about their jobs in more general terms. Caroline, for instance, said that her job is to provide support of the entire

district, and Sara spoke of her obligation to the entire school. After speaking to each person, it became evident that the scope and haziness of the job titles meant that specific obligations to specific groups was not part of the equation. While older learners need differentiation and flexibility in their learning (Hawthorn, 2007; Wolfson et. al., 2014), the current state of their districts just does not allow for such measures to be taken.

This lack of clarity sometimes leads teachers to take responsibility on themselves. This type of motivation is not ideal for older adults, who require clarity and self-knowledge to achieve optimal learning conditions (Fisher, 1998). Megan and Claire, for instance, noted that they do research of resources on their own time, though Kristin expressed exacerbation at the idea. She remarked on the amount of time that she spends grading and making lessons, questioning how much more she should devote to finding technology that will impress her administration instead of to her family and social life. This lack of clarity was echoed by Hank. He claimed that he and his fellow “math nerds” are neither trained nor equipped to locate technological resources for the classroom. Instead, he ruminated that he wishes that the district would provide teachers with both a small number of tested resources and the time to practice with and learn them. To teach math, he said, is his job, a sentiment shared by all the teachers. The problem with this type of mental and emotional exertion is that it can color older adults’ views of technology before they ever get the chance to use it (Timmermann, 1998), and when older adults have negative views of technology or themselves in relation to it, this often creates a cycle of failure in which the teachers attempt to learn, fail, then take that failure as evidence of what they had already suspected about their abilities from the beginning (Von Volkom et al., 2014).

In the end, defining an individual's role in the ever-changing sphere of education is not easy task. When asked if they experienced any formal training in how to communicate with or help adults according to age, sex, or any other characteristic, not a single administrator or technology coordinator answered in the affirmative. Furthermore, none could point out an individual whose job it is to train employees on such communication. It is no one's role in their experiences. Instead, Bob, Caroline, Julia, Sara, and Hank all pointed to common sense and (in the case of Caroline and Sara) the importance of building relationships as the building blocks of such discourse. While research does support the importance of leaders constructing such bonds (Free, 2017; Sugar & Holloman, 2009; Wine, 2016), this still leaves a void in the educational realm. When teachers need help with resources, they are supposed to be able to go to administration and technology coordinators, but no one seems to be assigned the task of helping administration and technology coordinators to better address the needs of their staff. Indeed, while the participants said that they would appreciate that type of training, not one thought it to be a realistic expectation that it would be added to his or her district.

**Consideration of research question 3:** How do older teachers, technology coordinators, and administrators perceive and experience the realization of their roles in helping to ensure the success of older teachers with technology in and for the classroom, and what is the significance to each person? When discussing the actual experiences of trying to provide or find resources for teachers in the classroom, many aspects of the reality of working in a school came into play. As mentioned earlier, rural schools are often expected to meet the needs of the areas that they serve with fewer resources (Monk, 2007); therefore, many, like the participants of this study, find themselves, in words of

Julia, having to do more with less. This, of course, impacts the nature of training and resources because it affects the amount of time, money, and personnel that are available to accomplish the job. Throughout their discussions, the participants each voiced unique views of the lived experience of trying to fulfill needs of themselves and others, even having to expand the parameters of what their jobs were meant to be.

Perhaps the most significant experience shared by all of the participants is that of trying to service the needs all involved in roles that they feel are in constant flux. Fidan and Balci (2017) suggest that a certain amount of chaos is natural to the job of an administrator in a school because of the nature of running an organization with so many unpredictable parts. The experiences of Bob, Julia, and Hank certainly seem to fit this model, with Julia mentioning that she can never predict what her day will bring or what person or problem will come through her door at a given time. With Sugar and Holloman's (2009) assertion that technology coordinators are expected to be leaders in their schools and districts, the role of leadership can be termed broadly, and the need for adaptive and proactive leadership is paramount (Fidan & Balci, 2017). Several of the participants reflected on experiences that fit in with this expectation. Both Caroline and Mrs. Pink discussed their having to create elements of their jobs as part of their natural evolution to meet the needs of teachers, and even Megan took control within her kindergarten level to implement changes for her grade to help students and teachers. In each of these instances, the participants felt that they had support in the form of a network (Caroline and Mrs. Pink) or colleagues (Megan), something that was sadly lacking in many reflections of the phenomenon. Moreover, this same adaptation brings trouble into the lives of many of the participants. Julia and Hank mentioned that their job

titles are continually expanding, and Sara discussed how her myriad responsibilities impacts her ability to complete to the best of her ability all tasks assigned to her. Her self-described inability to refuse additional responsibilities certainly impacts the amount of anxiety that she feels toward her job, as it does for many of the participants; though they continue to express an appreciation and love for what they do. These positive feelings for the workplace are common among educational professionals in rural settings (Burton & Johnson, 2010), but the stress felt at the top impacts all under their care.

The result of this stretching is that teachers are often left, in their opinions, without the adequate support that they need. Wolfson et al. (2014) suggest that older adults need self-directed learning that promotes positive self-image. This is an idea that Hank pondered when he spoke of how teachers are intelligent and naturally inquisitive and, therefore, should be given the time to investigate and practice with new programs and resources. However, the reality of trying to provide that environment is not so easy for some. Caroline described her having to rush through trainings with large groups of people, hoping that participants are sitting near those who can help. This, she said, is a result of two things: having to teach a particular, required resource to so many people (making differentiation difficult) and a lack of time. With so many responsibilities in finding, purchasing, and implementing technologies in and for schools (Wine, 2006), technology coordinators often expressed that they do not always have the time to follow up with teachers the way that they would like to do so. In addition, they each noted, as former teachers themselves, wanting to respect the planning time of the teachers under their care. To them, in many instances, digital communication becomes the solution to bridge the gap. However, teachers are less than impressed. Claire summarized this

problem when she discussed that she often experiences that her attempts to get help are often met with requests that she fill out work orders. Additionally, all three teachers noted email as being a primary form of communication, and while some school leaders expressed this as an acceptable means of helping teachers, teachers themselves said that this often leaves them seeking the help of fellow teachers before reaching out to principals and technology coordinators, again highlighting the disconnect between the groups of participants. Indeed, while Mrs. Pink, Caroline, and Sara each expressed that they feel like their digital communications and trainings are crafted in the spirit of helping, they are seen by teachers to be lacking in the pragmatic and practice-based discourse that older adults need (Chaffin & Harlow, 2005).

However, the feelings of frustration also flow from administrators and technology coordinators toward the teachers. Indeed, research suggests that instructing older adults can be a source of anxiety for the instructors themselves (Wolfson et al., 2014), as they require special pacing and apparatus to address “usability issues” to increase their chances of success (Githens, 2007). Problematically, many school leaders are not properly trained to help any teacher implement resources in the classroom (Brown & Jacobsen, 2017), a sentiment expressed by all six of the technology coordinators and administrators. In their attempt to execute their roles in helping, many of the participants noted that teachers were not always responsive to calls and attempts to bolster their skills. Both Julia and Caroline spoke of this in depth, and both expressed dismay at how they perceived that many teachers ignore their advice or trainings. Caroline, in particular, pointed to surveys that asked for feedback on improving professional development and how they went unfinished. However, she admitted that this might be related to a fear of



retaliation or of appearing uninformed. Julia, on the other hand, considered whether her expressing frustrations to teachers about their perceived lack of attention to training and instruction might impact if they seek help from her and others. This is in line with research that suggests that anxiety about one's own performance can inhibit the seeking of help (Hawthorn, 2007; Timmermann, 1998; Von Volkom, et al., 2014), and that a fundamental mistrust of administration can poison a school's environment of growth and connectivity (Free, 2017). Therefore, school leadership can be left to guess rather than know what is best for struggling teachers.

The multiple avenues of complexity that surround the relationships between these three groups of individuals are almost dizzying. At various times, administrators expressed uncertainty and dissatisfaction with technology coordinators (as Bob did when he insinuated that his librarian does not use her time as wisely as she could), teachers (as Hank did when he suggested that teachers often ignores change for their own comfort), and even other administrators (as Julia did when she stated that her lead principal's lack of organization makes her doing her job difficult). Yet, they were just as quick to praise performances from each category as well. Thus, many of the participants seemed to be experiencing high and low pressure systems, in which they understood the quality of those around them, while also feeling that those same individuals do not always meet their expectations. In the realm of technology coordinators and teachers, the same is true. Caroline praised administrators, calling them helpful and supportive in some instances; however, she also noted that principals who are unsure about the use of technologies often permeate their teachers with the same mistrust, making her job of teaching and supporting them very difficult. This is a clear demonstration of what Free (2017)

discussed when he spoke of administrators' responsibilities to create productive and fair learning environments. A key component, Free (2017) writes, is an administrator's ability to keep his or her personal passions at bay. Caroline, despite her complimentary view of most of the administration in her district, could not help but see the partiality that some exercise in relation to the adoption and rejection of certain types of technology. Ertmer and Ottenbreit-Leftwich (2010) conjecture that this type of rejection is often predicated upon an administrator's seeing a resource as outside of accepted norms of the organization, but whatever the case, Caroline discussed how this type of attitude made the reality of helping to teach in those schools incredibly difficult. Many of the administrators in this study, however, said that they were happy to step back and allow their technology coordinators to make decisions, even when some (such as Bob) admitted that technology is not their strongest area. This ability to release and delegate responsibility, according to Fidan and Balci (2017), is what creates good leadership and creates opportunities for personal growth among those entrusted with the tasks.

However, discussions of the reality of helping teachers, no matter one's position, cannot be complete without a look at the importance of time. All nine of the participants highlighted overextended or misused time as a source of anxiety in their roles. Teachers, for their parts, mentioned having to find resources on their own time to fit their own needs, as previously noted (Clair, Megan, and Hank), technology coordinators spoke of researching new resources for teachers as a major part of their time appropriation (Sara, Mrs. Pink, and Caroline). Caroline and Mrs. Pink even discussed using personal time at home for researching materials for teachers. On the other hand, most administrators (such as Bob) mentioned that they do not see such research as a part of their jobs, which they

see as overcrowded as they are. Regardless, all of the participants ranked time as an important factor in their personal and professional lives. Ertmer and Ottenbreit-Leftwich (2010) write of how teachers are reluctant to adopt new technologies into their lessons because of the fear that they will be replaced in the foreseeable future and require only further revisions, and this study certainly supports those assertions. Hank, Julia, Claire, Caroline and Kristin all spoke of the question of whether a given resource would stay relevant beyond a single school year, and, given the amount of time required to teach and learn such a resource, this stands as a major source of frustration for them, never mind the short training windows that lead to flash trainings that are difficult for older learners. Indeed, without proper leadership and guidance, the sheer amount of material can be overwhelming to most users (Sugar & Holloman, 2009). Thus, without a clear line of communication between those who buy, teach, and use resources, the clearest outcome is confusion and dissatisfaction: rushed technology coordinators, who may or may not be supported by administration, teaching material to teachers who may or may not understand the purpose of the resource in the first place (Sara). Often the result is that many feel the experience is a waste of time, full of boredom and confusion; and administrators are left to feel the frustration of unused, expensive resources. Considering the entire picture, engendering a situation in which technology coordinators have the time and resources to implement the inquiry and peer-based learning strategies that benefit older learners (Broady, 2010) is difficult. Each person is responsible for so many duties, and all participants expressed some level of ignorance about the roles of those around them; therefore, streamlining and improving the learning process is difficult, so the result

is that teachers, such as Claire, describe receiving occasional emails with resources that are often not individualized enough to be helpful.

### **Consideration of Social Learning Theory**

Part of the consideration of this research is the way that environment impacts the learners' abilities to absorb what the instructors are so desperately trying to impart. Termed social learning theory by Bandura (1971), this theory tries to draw important connections between the physical, mental, and emotional stimuli that can affect the learning experience. Throughout the research process, it became evident that many aspects of Bandura's (1971) theory came into play when trying to teach and learn technological resources.

To begin with, Bandura (1971) emphasizes the idea that learners must be able to focus on and understand the concept trying to be conveyed in the learning environment for true retention to happen. Unfortunately, this was not always the experience expressed by the participants. As Sara said, learners during such trainings do not always understand why they are learning what they are learning. Both Kristin and Claire shared examples of resources that they felt did not fit into their jobs in any clear way, and Caroline remarked that some trainings, especially those conducted by the selling companies, felt more like commercials than true learning experiences. This, combined with the rushed nature of much of the professional development described, does not give participants a good chance to connect with the importance of the learning itself. Indeed, the stress expressed by the teachers was palpable, as they all noted that the front-loaded nature of the trainings left them overwhelmed and unsupported for the rest of the year. As a result, learners may not view the model (the individual responsible for transmitting the learning) with much

confidence or put much stock in the material; unable to connect with either, learners may unintentionally or intentionally block learning because of an inability to stay attentive to what is being delivered in the environment (Bandura, 1971).

Additionally, Bandura (1971) asserts that learning occurs when learners are able to code information verbally in their own minds. This often takes the form of assigning symbolic meaning to instructions and elements of the learning, but this can only happen when learners understand material enough to create their own mental maps of the processes that create success. Otherwise, they may mentally code an incorrect pattern (misinterpret the model) or shut out learning completely (Bandura, 1971). Here, the experiences of the participants and trainers and the frustrations that they felt intersect. Mrs. Pink and Caroline both focused attention on how little time they were given to train teachers, with some trainings being limited to 30 or fewer minutes. This, while formulated by administration with the intent to protect planning time for teachers, creates an environment that is not conducive to the creation of strong coding. Hank and Claire both described trainings in which the models were unable to replicate the desired outcome with the resource, so learners were not only rushed through training, but left with no real idea of what the correct outcome resembles. In addition, Kristin, among others, noted that she was often left behind during trainings while trying to replicate the previous step shown (if shown at all) and often resorted to trying to write down instruction for later reference. Caroline and Sara, too, remarked on having to move ahead in trainings, even when learners were not at the same step. Caroline, as discussed before, sadly mentioned that she just had to hope that struggling learners were sitting near others that could help them. Clearly, this learning environment, combined with the lack of

follow-ups noted, would make coding of correct learning extremely difficult, as learners would be unable to create the strong connection with the material that makes replication possible (Bandura, 1971). Thus, teachers often get back to their classrooms or homes and find themselves unable to recreate the picture of the resource that was sold to them, leaving them in frustration and divorced from the material.

In the end, the push to learn new material is always a balance between the reward for doing so and the punishment for not (Bandura, 1971). Unfortunately for most of the well-meaning technology coordinators and administrators, many questioned the benefit of learning new technology resources. Hank, Julia, Caroline, Kristin, Megan, and Claire all pondered the ephemeral nature of many programs in their districts. In Hank's mind learning a resource always comes with the risk that it will be gone within a year, a sentiment echoed by many. In addition, Kristin, Megan, and Claire all remarked that their districts do not always have the resources to meet their ambitions with technology anyway. Thus, even if they felt the push to learn for the benefit of themselves and their students, their ambitions may not be rewarded with the ability to bring that wish to fruition. Furthermore, Claire claimed that she does not feel the pressure from administration to use taught technologies in her classroom, and Megan and Kristin, while expressing they do feel that push from administration, have only allowed that pressure to fuel their frustration toward the process of professional development. Bandura (1971) claims that this type of reaction is natural, as learners will often read the feelings of those around them to inform their own experiences. Even Caroline admits that these emotions are often limited to boredom and frustration; thus, according to Bandura (1971), the learners will teach each other to mistrust the process once that attitude takes hold. Any

benefits, unfortunately, are often overwhelmed by the negativity that is engendered by the nature of the experiences described in the environments.

Therefore, in consideration of social learning theory, the significance of the participants' experiences creates its own fog around the learning process. As technology coordinators are often rushed in their trainings and administrators, in their push to protect other time commitments, limit the amount of time that they allow for such professional developments, teachers are often left to distrust and misunderstand the models. They often do not see the learning as beneficial because it is either not well-communicated or thought to be temporary or unhelpful, and the lamentable lack of resources, because of the circumstances in rural school districts mentioned, leaves many thinking some resources impractical. Thus, Bandura's (1971) theory of the trust, clarity, and understanding that must exist for learners to truly code and imbibe learning reveals the gaps between the intent and the reality of such education. The administrators and technology coordinators express their want to respect and help teachers, but, considering the infectious nature of negative attitudes in learning situations (Bandura, 1971), their methods often do not allow teachers to reward them for their valiant efforts.

### **Self-Reflection on the Research Findings**

An important aspect of hermeneutic phenomenology is the reflection process of the researcher, as we cannot completely divorce ourselves of our views and feelings (van Manen, 1990). As the goal of such research is not an answer, but rather an understanding of the meaning that experiences hold for us (van Manen, 1990), turning the lens upon ourselves is a paramount part of the process. Only when one considers one's own experiences can one commiserate with data, if so cold a word suffices, and begin the far-

reaching yet intimate task of grappling for an “answer,” which only moves further away with each consideration.

As such, I must admit that as a school teacher myself of 10 years in a rural school, I have felt the frustrations that many of the participants expressed during their interviews. Honestly, I was concerned that this would color my questionings: make me overly sympathetic to the teachers and overly critical of the administrators and technology coordinators. This fear was only deepened by my experiences teaching older adults at a local community college. I watched them struggle with computers and programs with little or no help, and I witnessed the impact that it made on their views of themselves and of education in general. Thus, I entered this study with a heavy sense that I would be overly biased in favor of my fellow teachers, fellow warriors in the battle against boring and pointless professional developments.

However, starting with my very first interview, which happened to be with a technology coordinator (Mrs. Pink), I felt an immediate shift in my perspective. Not only was she a former teacher herself (as were all my participants, I would find out), but her confusion as to her own responsibilities and her courage in creating her own path deeply affected me. This trend only continued as the process of interviewing drew on. Caroline, a district technology coordinator and high-level employee, I assumed would be confident and knowledgeable in all aspects of her job. Surely it was she that was to blame for such trainings. Yet again, I found a woman who was marching onward in spite of no such clarity. She, like Mrs. Pink, was trekking new ground in her district.

Indeed, by the time that I finished interviewing the administrators, who I found to be fighting the quicksand of constantly evolving job responsibilities, I realized that my



point of view was so isolated and so unfair. For years I had conjectured that I knew what it must be like to be a principal and be able to make all the rules and call all the *shots*, and I had honestly envied our school librarian for his *cozy* job. All of this, I now realize, is the result of my own experiences blinding me to what happens in their worlds when I round a corner. It is that simple, melancholy fact of human existence: we have so much trouble understanding that of which we have no part. To us, our world and our problems are singular in their existence.

Thus, as I reflect on this study, which is the culmination of my years of academic work and a reflection on a job and world that I love and thought I understood, I feel more mystified than ever. “Who is to blame for the problems in a teacher’s life?” is a question that I have pondered many times over the years, but I sadly cannot say that I ever turned that pitying eye on administrators, technology coordinators, or any other academic workers. However, hearing the experiences of these nine individuals, I have to reconsider how I approach that which I assume I know and admit that I might not be nearly as informed as I believe or as unbiased as I would like.

All of this is to say that I read this research with my eyes. I am a teacher. I suppose I always will be. If I have shown favoritism toward them and their experiences in this research, I cannot say that that would be completely shocking; however, I can now say that it is completely unwarranted. Each participant experienced his or her own triumphs or tragedies, and not a single one of them expressed a want to capitulate to the easy path or the accepted norm. They all worry that they are failing themselves or others, and they all want what is best for their colleagues and students. I choose to believe them - all of them. Perhaps I am gullible, but I do not think so. If anything, I feel that I failed

them by making assumptions about their lives, which are so complex and so demanding, and I can only hope that I can impart a little of their anxiety and much of their courage, from which we can learn.

### **Implications for Future Research and Practice**

There are many avenues of consideration for future research into this area of adult education and, if due attention is given, much that can inform current and potential practice in the field. Especially given the amount of uncertainty expressed by most of the participants, a push for clarification and a call for attention to gaps in knowledge and current training methods could prove beneficial to the improvement of training and supporting classroom teachers in the field, which begins with correctly training and supporting technology coordinators and administrators, a prospect that will likely prove difficult in such situations due to the lack of resources and funding common in rural areas (Monk, 2007).

To begin with, administrators expressed a lack of training as to how to differentiate feedback on evaluations and observations, other than self-termed common sense. Thus, administrators could greatly benefit from having a source of education themselves on how to meet the varied needs older adults. Considering that administrators' weaknesses and strengths often trickle down to affect the tone and effectiveness of their schools' overall environments (Free, 2017), attention focused on their communication and feedback skills could only serve to improve schools overall. Additionally, such ameliorations of relationships could only serve to help administrators empower teachers and engender greater confidence among the staff (Fidan and Balci, 2017). Therefore, there exists a gap in the existing research as to how administrators

could best vary their approaches to providing feedback, instruction, and resources to teachers. Given the wide scope of teachers within a school setting, this will prove, undoubtedly, to be a difficult task, but the dissatisfaction with such expressed by teachers highlights the importance of tackling this area, regardless of this hardship.

In this same vein, technology coordinators expressed the same uncertainty as to how to meet the needs of myriad learners, even though this is a huge part of their positions (Wine, 2016). This represents a massive opportunity to research how to improve this part of their jobs. In addition, one aspect that seems to cry for exploration is the lack of clarity that many expressed as to what exactly their jobs entail in the first place and to what extent teachers and administrators should be involved in the processes by which resources are vetted and obtained. While this variance is a part of existing literature, as is the importance of their communication skills in relation to their intercourse with teachers (Sugar & Holloman, 2009), the actual impact on the teachers, students, and emotional wellbeing of the technology coordinators themselves is open for consideration. What is not in question is the importance of this topic. Research suggests that better technological skills can improve a learner's overall attitude toward such learning (Li, 2008), so older teachers need opportunities to communicate their doubts and needs to those who they feel understand their plights and successes (Chaffin & Harlow, 2005). Therefore, understanding this potential conversation from the point of view of those who would be providing the feedback and training is essential.

What is more is that teachers themselves need to be better educated on their own needs. While this may sound presumptuous, many expressed that their anxiety, fear of looking ignorant, or dissatisfaction with the status quo often prevented them from seeking

the necessary resources and training that they felt could improve their practices. Of course, this cascades down to affect the students under their care. Thus, if they cling to their reasons without hope of alleviation, the very goal of their employment (along with that of administrators and technology coordinators, who are tasked with maintaining a safe educational space and providing adequate resources, respectively) comes into question. Given that research already suggests that technology training for all teachers is lacking (Bakir, 2016; Brown & Jacobsen, 2016; Ertmer & Ottenbreit-Leftwich, 2010), a look at their navigating the waters for finding help and resources would be beneficial to all. Most of the participants in this study said that they only had a vague idea of where to seek such help, so, as with the administrators and technology coordinators, clarity seems to be a main point of contention.

Thus, the points of focus in this study, as with many studies, open more doors to future research than they close. Indeed, considering the importance of education to the health of our society and world at large, we should pay close attention to the experiences of our teachers, administrators, and technology coordinators. Clearly, their experiences expose the lack of communication and understanding that would serve to improve their circumstances. If we want to help them to serve our society, we should look at ways to improve their understanding of the relationships that they share, assisting them to see their own biases, assumptions, and shared visions. Much is not understood as to how they experience their positions, and this one study certainly cannot bring that into focus, but trying to find the significance of their lived experiences and how it influences their views of themselves and others is a paramount piece of a colossal puzzle.

## **Chapter Summary**

This chapter attempted to draw connections between the experiences of the participants, the significance of those experiences, and existing research to create a picture of older teachers, technology coordinators, and administrators in relation to their attempts to help older teachers access and implement technological resources in and for the classroom. While the purpose of hermeneutic phenomenology is to share and explore the significance of lived experiences and not necessarily to answer questions (van Manen, 1990), consideration was given to the three research questions that drove the exploration of the topic. Additionally, I sought to draw connection between the descriptions and Bandura's (1971) social learning theory. Overall, in this chapter I tried to portray the delicate balance between the frustrations that were clearly present in the experiences of the participants and the hope, courage and good humor that radiated from their vivid recollections. The chapter ends with consideration for future research and practice in the field, as well as a personal reflection on my experiences and feelings while imbibing the data and creating this project.

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## Appendix A

### Questions for Teachers

#### Interview 1

1. Would you tell me about how you became interested in becoming a teacher and how your career has progressed?
2. Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life?
3. Would you briefly describe the changes that technology has brought to your personal / professional life?
4. Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life?
5. Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or group of people and how it made you feel?
6. When you think about yourself, how would you rate your knowledge of technology and why?
7. Thinking about that rating, against whom did you judge your knowledge and why?
8. Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not?
9. How would you describe technology's impact on our society? On education?
10. Can you tell me about a time when you were really proud / embarrassed by your technological skills?



## Interview 2

1. Tell me about your job. What are your responsibilities? Tell me about your administrators and technology coordinators. What are their jobs?
2. Can you tell me about the last time you tried to use technology in your classroom and had great success / failure?
3. Tell me about a time when you were given a chance to follow up on learning a technology. A time when you were given feedback by an administrator for your use of technology.
4. Describe a time that you used a piece of technology given to you by the school that you found useful. One that was not useful. Would you describe how you were trained on each?
5. Would you describe a time that you used technology during an evaluation?
6. Do you know to whom you are supposed to go to get help/resources for technology?
7. Would do describe the typical feedback that you receive from your evaluations?
8. Can you tell me about how you use technology to reach out to students, parents, and coworkers and your success / failures concerning this use?
9. Would you describe a time that technology brought unity/friction among the staff, students, etc?
10. Would you describe a time when you used technology well / poorly during a lesson and what were the outcomes?

### Interview 3

1. Do you feel comfortable going to your administrators for help with resources and technology? Your technology coordinators? Do they understand your job?  
Explain.
2. When you try to use technology and it fails, how does that affect your view of yourself? What if it goes great?
3. What things hinder or help you to be successful with technology as it changes?  
What role does administration play in helping you cope with this change?  
Technology coordinators?
4. On the whole, are the technological tools that are given to you useful? Are they well taught to you? What could improve these areas (if they need improvement)?  
Explain.
5. Reflecting on a time when you've used technology (maybe during an evaluation), how does it make you feel to be judged based on this marker?
6. Can you tell me about a time that you sought help with piece of technology and if you received the support that you wanted?
7. Where do judgements about your use of technology on the evaluation rubric come from and who is responsible for knowing that you are ready?
8. Would you explain how the push to use technology has changed the value of education?
9. Would you describe how technology and levels of knowledge of it affects the culture of the school?

10. Can you explain to me what would happen if you did or did not use technology well during an evaluation?

## **Appendix B**

### **Questions for Administration**

#### Interview 1

1. Would you tell me about how you became interested in education and how you progressed to being an administrator?
2. Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life?
3. Would you briefly describe the changes that technology has brought to your personal / professional life?
4. Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life?
5. Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or group of people and how it made you feel?
6. When you think about yourself, how would you rate your knowledge of technology and why?
7. Thinking about that rating, against whom did you judge your knowledge and why?
8. Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not?
9. How would you describe technology's impact on our society? On education?
10. Can you tell me about a time when you were really proud / embarrassed by your technological skills?

## Interview 2

1. Tell me about your job. What are your responsibilities? Tell me about your teachers and technology coordinators. What are their jobs?
2. Would you describe a time when you observed an older teacher using technology and any triumphs or struggles that you saw?
3. Would you describe a PD that you have attended? How was the information presented? Was it differentiated? Useful?
4. Would you describe how you use the evaluation rubric to help older teachers improve their teaching and the role that technology plays?
5. To whom do you go for help in assisting teachers with technology? Explain the chain of command.
6. Would you tell me about a time when you acted as an administrator in helping an older teacher be successful with technology?
7. Walk me through a typical evaluation and how you judge a teacher's use of technology.
8. Would you share an experience when an older teacher taught using a technology that you found valuable to the students' lives?
9. When you look at your school, what has technology done to bring people together or push them apart?
10. Tell me about a time when you observed an older teacher using technology well / poorly? What affected what you saw?

### Interview 3

1. Do older teachers feel comfortable coming to you if they are having trouble meeting your expectations? Do technology coordinators feel comfortable coming to discuss problems with you? Do they understand your job? Explain.
2. If an older teacher is struggling, what is your responsibility to rectify the situation?
3. Describe the role of PD in the success of your teachers' using technology? Who is responsible for its successful implementation? Are teachers given a chance for further training? If so, what does that look like?
4. How do you know if a teacher listens to your feedback in a constructive way? What are the consequences of the subsequent actions to an evaluation and how do you deal with such situations?
5. Who is responsible for judging your judgement of teachers' use of technology? How do you know that you are doing it properly? How do they address differentiation?
6. Whose job is it to provide teachers with the technology and training that they need to be successful? Would teachers know the answer to this question? How do the technology coordinators support you in this?
7. How do you decide if technology use by a teacher is good enough or not? Who taught you how to judge such things and how?
8. How do you think expecting your teachers to use technology improves their teaching of content to improve the lives of students?

9. Would you describe your school as one of equity when it comes to technology and resources? Would you explain your answer?
10. If you are doing an evaluation, explain what you need to see in the form of technology to receive a given score. How is this achieved? What are the possible outcomes for a good/bad score?

## Appendix C

### Questions for Technology Coordinators

#### Interview 1

1. Would you tell me how you became interested in technology as a profession and how your career has progressed?
2. Can you tell me about a time when you felt successful / unsuccessful using technology in your personal / professional life?
3. Would you briefly describe the changes that technology has brought to your personal / professional life?
4. Can you tell me about a time that you felt really accomplished / defeated trying to use a specific piece of technology for your personal / professional life?
5. Can you tell me about a time that you had to use a piece of technology to help / inform / entertain another person or group of people and how it made you feel?
6. When you think about yourself, how would you rate your knowledge of technology and why?
7. Thinking about that rating, against whom did you judge your knowledge and why?
8. Do you use technology to communicate your ideas and contact others? If so/not, would you briefly explain how and why/why not?
9. How would you describe technology's impact on our society? On education?
10. Can you tell me about a time when you were really proud / embarrassed by your technological skills?



## Interview 2

1. Tell me about your job. What are your responsibilities? Tell me about your administrators and teachers. What are their jobs?
2. Tell me about a time that an older teacher came to you needing help with technology and how you dealt with the situation.
3. Tell me about the most recent training that you gave teachers for technology. How did you deliver the material?
4. Describe a time when you led what you considered to be a successful / unsuccessful PD. How do you judge the difference?
5. To whom do you go for help in assisting teachers or administrators with technology? Explain the chain of command.
6. Describe a time when you assisted an older teacher in learning a new skill for use in the classroom.
7. Tell me about a time that you received positive / negative feedback from an older teacher for a technology that you had delivered.
8. How do you select resources that will enable older teachers to be successful with interacting with others (coworkers, parents, students)?
9. Does the introduction of technology bring people together in your school?
10. Would you describe a time that a teacher spoke with you about having success / failure with one of your suggested resources?

### Interview 3

1. Do older teachers feel comfortable coming to you for help in learning a new technology? Do administrators feel comfortable coming to you for help with technology (obtaining or teaching it)? Explain.
2. If you hear that older teachers are struggling with your resources, what is your role in helping and what shape does that take?
3. When you are giving PDs, do teachers have an opportunity to follow up with you? Do they? How do you ensure learning by all?
4. Are all of the technologies that you teach useful to all teachers? How do you know? How do you know that all teachers are successful with them?
5. Who is responsible for judging your selection of technology for teachers? How do you know that you are doing it properly? How do they address differentiation?
6. What is your role in ensuring that all teachers are ready to use technology in the classroom? How does administration support you in this?
7. Who is responsible for deciding if the resources that you offer teachers are valuable and differentiated by need?
8. When you select a technological resource for teachers how do you expect it to improve the lives of the teachers and the students?
9. Would you describe how technology and the push to use it has affected your job in relation to how you interact with teachers and administration?
10. Can you explain what could happen to teachers if they do / do not have the technological tools and knowledge to use them in the classroom?

## Appendix D

### IRB Approval Letter

Institutional Review Board <irb@memphis.edu>

Apr 6, 2018,  
1:47 PM

to Donnie, Wendy



Institutional Review Board  
Office of Sponsored Programs  
University of Memphis  
315 Admin Bldg  
Memphis, TN 38152-3370

PI: Donnie Bailey  
Co-Investigator:  
Advisor and/or Co-PI: Wendy Griswold  
Department: Leadership, Users loaded with unmatched Organization affiliation.  
Study Title: The Changing screen: The Effects of technology and technological expectations on high school teachers with 30+ years of experience  
IRB ID: PRO-FY2017-440  
Submission Type: Renewal  
Level of Review: Expedited

IRB Meeting Date:  
Decision: Approved  
Approval Date: April 6, 2018  
Expiration Date: April 6, 2019

Research Notes:  
Findings:

The IRB has reviewed the renewal request.

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent

form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.

2. When the project is finished or terminated, a completion form must be completed and sent to the board.

3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Expedited or Full Board level.

4. Exempt approval are considered to have no expiration date and no further review is necessary unless the protocol needs modification.

Thank you,

James P. Whelan, Ph.D.

Institutional Review Board Chair

The University of Memphis.

*Note: Review outcomes will be communicated to the email address on file. This email should be considered an official communication from the UM IRB.*

## Appendix E

### Recruitment Email

#### Technology and Experienced School Teachers Study

Be a part of an important educational research study!

I am seeking school teachers with 20 or more years of experience, technology coordinators, and administrators to participate in interviews to discuss your thoughts about the use of technology in the classroom and how it affects you as either the person having to use it (teacher), teach it (technology coordinator), or evaluate it (administrator). There will be three interviews, and each will last for around 90 minutes. The focus of the study is your perception of your part in helping to ensure the success of older teachers in their use of technology.

The purpose of this research study is to understand how technology and expectations to use technology in classrooms is affecting you on both a personal and professional level. This is your opportunity to share your experiences and help further our knowledge of technology and education at the same time.

Any **school teacher with 20 or more years** of experience (regardless of content area), **technology coordinator, or administrator** is district is eligible to participate.

Please call Donnie Bailey at (731) 501-9613 for more information.

Sincerely,

Donnie Lee Bailey  
Doctoral Candidate  
The University of Memphis

## **Appendix F**

### **Informed Consent Form**

#### Consent to Participate in a Research Study

The Changing screen: The Effects of technology and technological expectations on school teachers with 20+ years of experience

#### WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about understanding the effects of technology and technological expectations on school teachers with 20 or more years of experience. You are being invited to take part in this research study because you have either been teaching for 20 or more years; are a technology coordinator responsible for teaching such necessary technology; or are an administrator responsible for evaluating the use of resources (including technology) and could greatly add to our understanding of how technology and technological expectations affect you and your job. If you volunteer to take part in this study, you will be one of about 6-15 people to do so.

#### WHO IS DOING THE STUDY?

The person in charge of this study is Donnie Bailey of University of Memphis Department of Higher and Adult Education. He is being guided in this research by Dr. Wendy Griswold. There may be other people on the research team assisting at different times during the study.

Donnie Bailey, primary researcher, can be reached at (731) 501-9613 or [dbailey1@memphis.edu](mailto:dbailey1@memphis.edu)

Dr. Wendy Griswold, guiding faculty advisor, can be reached at (901) 678-5439 or [wgrswold@memphis.edu](mailto:wgrswold@memphis.edu)

#### WHAT IS THE PURPOSE OF THIS STUDY?

By doing this study, we hope to learn how having to learn, teach, or evaluate new technology is affecting your professional life as well as your sense of well-being and view of your own continuing education as a professional. The goal is to give you a chance to voice your experiences with technology and expectations that you will use, teach, or evaluate technology in your practice, and share their effects on the personal and professional parts of your life.

### **ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?**

You should not consider participation in this study if you do not want to discuss aspects of your personal or professional life with a researcher; or if you do not wish for these thoughts (even devoid of identifying information) to be used in any type of media, print or otherwise.

### **WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?**

The research procedures will be conducted at your local school, unless other plans are necessary. You will need to come to school library three times during the study. Each visit will take about 90 minutes to one hour. This represent the totality of your time investment for this research.

### **WHAT WILL YOU BE ASKED TO DO?**

This is a fairly simple research study. You need only come to the interview at the appointed time and date at your school library (or another place of your choosing) and be prepared to discuss your experiences with technology and how it affects your personal and professional life. You will not need any special objects nor be prepared to engage in any extensive trials. You need only bring your experiences and be ready to discuss them with me; and be prepared for this conversation to be recorded on an audio recorder for later reference by the researcher.

### **WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?**

Though unlikely, you may find some questions we ask you to be upsetting or stressful. If so, we can tell you about some people who may be able to help you with these feelings. In addition to the risks listed above, you may experience a previously unknown risk.

### **WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?**

You will not get any personal benefit from taking part in this study, other than the ability to voice your experiences and share your story as a teacher, technology coordinator, or administrator.

### **DO YOU HAVE TO TAKE PART IN THE STUDY?**

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you

choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

**IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?**

If you do not want to be in the study, there are no other choices except not to take part in the study.

**WHAT WILL IT COST YOU TO PARTICIPATE?**

There are no costs associated with taking part in the study.

**WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?**

You will not receive any rewards or payment for taking part in the study.

**WHO WILL SEE THE INFORMATION THAT YOU GIVE?**

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. We will be storing our recorded meeting on a password-protected computer in a password-protected file. Resulting transcriptions of this conversation will also be stored on a password-protected computer in its own password-protected file, and these transcriptions will be devoid of any identifying information [age, gender, sex].. All recordings and transcriptions will be destroyed within a maximum of 12 weeks. In addition, these consent forms will be stored in a locked file cabinet for three years, as required by law. No one will have access to this information except under the circumstances exemplified in this form

We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. For instance, if you share information that involves the abuse of a child or information that suggests that you are a danger to yourself or others. In such cases, the law may require us to show your information to a court or other legal authorities.



**CAN YOUR TAKING PART IN THE STUDY END EARLY?**

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

We may need to withdraw you from the study. This may occur if you are not able to follow the directions we give you, or if we find that your being in the study is more risk than benefit to you.

**WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?**

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Donnie Bailey at (731) 501-9613. If you have any questions about your rights as a volunteer in this research, contact the Institutional Review Board staff at the University of Memphis at 901-678-2705. We will give you a signed copy of this consent form to take with you.

**By signing this, you are indicating that you agree to the above and are eighteen (18) years of age or older.**

\_\_\_\_\_  
Signature of person agreeing to take part in the study

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed name of person agreeing to take part in the study

\_\_\_\_\_  
Name of [authorized] person obtaining informed consent

\_\_\_\_\_  
Date