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Changing Perceptions About Professional Development: An Action Research Study Using Andragogy for Educators’ Professional Development

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Concordia University–Portland

College of Education

Doctorate of Education Program

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Changing Perceptions About Professional Development:

An Action Research Study Using Andragogy for Educators’ Professional Development

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Concordia University–Portland
College of Education

Dissertation submitted to the Faculty of the College of Education
in partial fulfillment of the requirements for the degree of
Doctor of Education in
Transformational Leadership

Brandy Kamm, Ed.D., Faculty Chair Dissertation Committee
Chris Jenkins, Ed.D., Content Specialist
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Concordia University–Portland

2019
Abstract

Traditional professional development for teachers provides time to gain knowledge about classroom content, skills to effectively teach, and the possibility to improve student learning. The problem is teachers’ dissatisfaction with the design of professional development. Research indicates that teachers participate in professional development, but it is ineffective, irrelevant, and makes teachers feel undervalued as professionals. The purpose of this study is to improve teachers’ perceptions about traditional professional development. This study is based on seminal research by Malcolm Knowles’ andragogy, an adult learning framework. This study is driven by three research questions to determine how the andragogy framework improves teachers’ perceptions and which components either help or detract from improving those perceptions. The methodology is qualitative action research implementing andragogy into professional development. The instrumentation was one open-ended questionnaire. The sample are teachers employed at a southern urban school district in the United States. The findings from the research illustrate how teachers’ perceptions of traditional professional development improved due to the andragogy framework. There are four key findings: (a) teacher satisfaction; (b) teacher agency; (c) relevant and meaningful experiences; and (d) process contributions. The findings were positively significant and suggest teachers want more responsibility and agency to control their learning based on their needs or the needs of the classroom. By employing andragogy into traditional professional development, teachers’ perceptions improved creating meaningful experiences. This study advances the understanding of teachers as adult learners.

Keywords: traditional professional development, andragogy, teacher’s perceptions, action research, teacher agency.
Dedication

This dissertation would not have been possible without the direct support of a few individuals. The dissertation is dedicated to my kind, quick-witted, and easygoing son who was the best and most understanding child throughout this time. Also, to my husband, an admirable and natural-born leader, who encouraged me to continue my dreams to pursue my doctorate. His successes influence my pursuit for greater knowledge. To my devoted and generous father who has always been my longstanding supporter in my life. Last, I could not have had the resilience or motivation to complete this work without the memory of my diligent mother and intelligent brother as a driving force in my life. Their memory is a constant inspiration to better myself, pursue my dreams, and be kind to all. This is for them.
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Chapter 1: Introduction

Introduction to the Problem

In all organizations, the training of employees leads to better work outcomes. In education, traditional teacher professional development was established as the way for teachers to improve their skills; however, it results in inconsistent successes and inconclusive results (Bayar, 2014). Teacher professional development gained momentum recently due to a higher concern for student achievement and human capital (i.e., the value of employees based on their contributing knowledge and skill sets) as Hargreaves and Fullan (2012) described. It is a concern affecting established school systems and educational researchers alike. Numerous studies, dating back to 1957, attempted to identify effective professional development (Smylie, 2014). A landmark study by Garret, Porter, Desimone, Birman, and Yoon (2001) attempted to pinpoint the best characteristics to improve teaching and learning. For some researchers, traditional educator professional development needs renovating (Hill, Beisiegel, & Jacob, 2013) while others suggest eliminating or replacing it with other informal types of professional development (Kennedy, 2016). Traditional professional development is time set aside for teachers to improve their knowledge or skills about teaching, learning, and content. Traditional professional development design includes: (a) the content taught; (b) teaching and learning design such as lecture, self-directed, or hands-on; (c) classroom activities that teachers learn about; and (d) the length of time.

Traditional professional development is stagnant in its design and implementation. Researchers continued to stress the importance and purpose of traditional professional development but changed the focus to how it affects student learning outcomes (Darling-Hammond, Hyler, & Jacob, 2017). Others, however, cited the importance of shifting inquiry
toward understanding how teachers learn and the contribution a teacher may provide in such a setting (Siko & Hess, 2014). Patton, Parker, and Tannehill (2015) underscored researchers’ focus on teacher participation to determine their interests in professional development. Throughout this research and inquiry, teachers’ perceptions consistently portrayed a different reality. Teachers who participated in traditional professional development indicated unsatisfactory views of these programs. Teachers often denounced traditional professional development while requesting more input and responsibility (Bill and Melinda Gates Foundation, 2014; Smylie, 2014). Resounding statements such as “I hate it when they treat us like we’re students” (Clements, 2016, para. 5) or “that’s an hour of my life I’m never getting back” (Clements, 2016, para. 4) reflect common sentiments about traditional professional development. Moreover, other researchers recounted similar opinions: training is time-consuming or misuses time, unrealistic or irresponsible, and useless (Smylie, 2014)

**Background, Context, History, and Conceptual Framework for the Problem**

Professional development began in the early 19th century with the introduction of a common school structure in the 1830s. The new structure required a teacher preparation program through summer teacher institutes (Labaree, 2008; PBS, n.d.). Guskey (1986) described perceptions during this time about staff development as being “characterized primarily by disorder, conflict, and criticism” (p. 5). As schooling continued, so did the development of teachers; however, many teachers described training sessions as uneventful and useless (Corey, 1957 and Davies, 1967 as cited in Guskey, 1986). Researchers started to focus on teacher development in the 1950s. At the time, Henry (1957) (as cited in Showers, Joyce, & Bennett, 1987) compiled nearly 50 studies on staff development and related topics; only six were experimental studies. During the 1960s, descriptive and theoretical research increased (Showers...
et al., 1987). In the 1970s, Sparks and Loucks-Horsley (2007) found a trend regarding professional development, or in-service, that focused on teachers’ attitudes. The findings during this time “indicated nearly unanimous dissatisfaction with current efforts” (Sparks & Loucks-Horsley, 2007, p. 303).

In 1983, a boldly realistic view of the U.S. educational system arose as the National Commission on Excellence in Education (NCEE) emphatically declared a new focus on educational settings and employees. In A Nation at Risk, the NCEE (1983) stated, “our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them” (p. 9). The disciplined effort that the NCEE noted referred to research on learning and teaching in teacher preparation programs. This effort required understanding teachers’ skills and knowledge in the classroom after the preparation courses and early experiences ended. As the years passed, researchers and education agencies grew increasingly interested in educator professional development reform. In the 1990s, researchers developed a greater interest in connecting professional development to student achievement (Bayar, 2014). Some researchers concluded the single greatest factor in student learning was the teacher (Darling-Hammond, 1997). These findings regarding teacher quality guided more research to connect teacher quality and other influencing factors (e.g., professional development or curriculum and instruction) as they related to teaching.

President George W. Bush enacted the No Child Left Behind Act (NCLB) of 2001 that focused on higher accountability standards, including assessments and school improvements. NCLB required highly qualified teachers to retain full certification at the start of their teaching career. “No Child Left Behind also requires districts to spend Title I funds to improve teacher quality and allows them to pool Title I and professional development other federal formula
funds” (U.S. Department of Education, 2003, para. 3). The NCLB initiatives established professional development criteria, mainly the requirement of all professional development deriving from scientific research-based methods. The Teaching Commission (2004) published a statement to bolster action in failing U.S. public schools. The report noted that good teaching is the most important factor for success. “In other words, the effectiveness of any broader education reform—including standards, smaller schools, and choice—is ultimately dependent on the quality of teachers in the classroom” (The Teaching Commission, 2004, p. 13–14). The Teaching Commission (2004) specified an improvement to professional development focused on collaborative opportunities for educators to learn from the experiences of others.

In December 2015, legislators decided to reauthorize the Elementary and Secondary Education Act (ESEA) of 1965. As part of the amendment, the new legislative bill, Every Student Succeeds Act (ESSA), regulated K–12 public education policy. In ESSA, topics such as annual testing, academic standards, accountability, parental involvement, and achievement were established, among others. In particular, Title II Part A of ESEA (amended by ESSA) promoted higher standards for educators’ support and development. In ESSA (2015), support and development are explicitly defined with two main objectives:

The term “professional development” means activities that (A) are an integral part of school and local educational agency strategies for providing educators with the knowledge and skills necessary to enable students to succeed in a well-rounded education and to meet the challenging State academic standards; and (B) are sustained (not stand-alone, 1-day, or short term workshops), intensive, collaborative, job-embedded, data-driven, and classroom-focused. (S. 1177, Section 8101, page 396, paragraph 42)
Currently, teacher professional development is at a crucial point. Professional development is fundamental for professional educators to improve existing knowledge and instructional practices (Darling-Hammond, Hyler, & Gardner, 2017; Guskey, 2014). Teachers benefit greatly when they can implement newly acquired knowledge and strategies to improve their performance in the classroom and, potentially, the performance of their students. Providing training opportunities improves the quality of teaching.

Traditional professional development can provide necessary growth and change; however, the resolution to find effective and satisfying professional development has proven to be more difficult. In the last decade, researchers delved into finding effective professional development through the application of specific strategies regarding content (Kennedy, 2016). Researchers emphasized finding a connection between professional development and external outcomes (e.g., teacher instruction or student achievement) but results did not indicate the desired effects (Arens et al., 2012 as cited in Hill et al., 2013; Jacob & McGovern, 2015). The results revealed no statistical significance in the strategies implemented for professional development instruction to either improvements in teacher instruction or student achievement.

There are two persistent problems despite the efforts of researchers. First, the design of traditional professional development is flawed, specifically, the way information is relayed. Miller (1983) defined teachers’ major stance on teaching curriculum as metaorientation, which is how information is provided and shared. One type of metaorientation is the transmission model. This involves the transfer of information from teacher to students. An example of the transmission model is the lecture-style. Students receive information from the presenter through a one-way transfer of information. In traditional professional development, teachers listen to lectures, known as sit and gets, during which teachers sit through professional development.
sessions to get information from a professional or expert (McLeskey & Waldron, 2002). The experts control traditional professional development exercises by planning the sessions and choosing important content. Teachers do not engage in the process to plan, implement, or evaluate professional development learning activities. Therefore, the information may seem irrelevant to their concerns in the classroom because the content is not specific to their teaching purpose.

The second persistent issue is teachers’ negative perceptions about traditional professional development (Bill and Melinda Gates Foundation, 2014; Jacob & McGovern, 2015; Moretti et al., 2013; Sagir, 2014). In traditional professional development, “teachers have been told that other people’s understandings of teaching and learning are more important than theirs and that outside experts have determined the content and delivery of teachers’ professional development” (Lieberman, 1995 as cited in Gregson & Sturko, 2007, p. 2). “Teachers often are disappointed with the presenter style and format of the lesson” (Beavers, 2009, p. 26). Instructors and researchers, alike, failed to recognize and include teachers’ interests and insights, sustaining their role as passive learners (Louws, van Veen, Meirink, & van Driel, 2017).

Teachers feel isolated and disregarded in their learning. The discrepancy is between teachers’ perceptions of traditional professional development and researchers’ commitment to finding solutions without teacher input. It is a lack of consideration of the teacher as an adult learner and a primary source of learning. Teachers may benefit from adult learning principles that are unique to adults, promote autonomy, focus on need, and promote a process of holistic participation (Knowles, Holton, & Swanson, 2015). Adult learners are not passive learners and do not flourish through inactive learning. Most importantly, teachers want their voices heard throughout the process of professional development (Patton et al., 2015).
Thus, the conceptual framework for this study originated from the idea that professional development could have a positive impact on teachers’ instruction and perceptions by considering the teacher as an adult learner. One such framework for adult learning principles is andragogy. Knowles et al. (2015) conceptualized andragogy as a framework of adult learning principles and processes that facilitates their learning, deriving principles and processes from recognized assumptions about how adults learn (i.e., the principles of learning). Andragogy’s most important element is the learner; participant learning is the foundation of andragogy (Knowles et al., 2015). Learning is “the process of gaining knowledge and expertise” specialized to the learner’s transformation rather than education (Knowles et al., 2015, p. 17). This “emphasizes the educator, the agent of change who presents stimuli and reinforcement for learning and designs activities to induce change” (Knowles et al., 2015, p. 11). Andragogy does not align solely with the goals, purposes, or expected results of professional development. Rather, it emphasizes the process of learning for the learner. Andragogy is a transactional model of learning (Knowles et al., 2015). Transactional means “communication involving two or more people that affects all those involved” (transactional, n.d.). The transactional model for learning is an approach to teaching in which the learner constructs their learning experiences and connections to past knowledge (Knowles et al., 2015). There is no one-way learning; instead, individuals’ experiences enrich and facilitate learning when shared through lively collaboration and discussions.

**Statement of the Problem**

The problem with traditional professional development is teachers’ dissatisfaction whereas the research found that a cause may be its ineffective design. Researchers continue to debate educator professional development. At first, research results indicated a definitive answer
to resolve ineffective, traditional professional development via proper strategies that substituted traditional professional development for other forms of learning (Wei, Darling-Hammond, Andree, Richardson, & Orphanos 2009). Despite concerted efforts by researchers and school districts, teachers’ perceptions of traditional professional development are still negative (Jacob & McGovern, 2015; Moretti et al., 2013). Teachers’ negative perceptions coupled with researchers citing traditional professional development suggest it is an ineffective way to increase professional knowledge (Bayar, 2014). Past researchers failed to notice the disconnect between teacher satisfaction, traditional professional development structure, and existing research on adult learning. The disconnect lies between theory and practice. Researchers concentrated on strategies to improve student achievement but overlooked the teacher as a vital factor in learning as adult learners and disregarded the effect teacher perceptions have on the professional development experience. Researchers failed to study how professional development relates to teachers’ learning, the process of learning, and implementation of new knowledge (Matherson & Windle, 2017). Moreover, past researchers ignored adult learning principles when working with educators for professional development.

This problem negatively influences teachers because they did not feel traditional professional development contributed to their professional growth (Siko & Hess, 2014). Teachers in school districts with grades pre-Kindergarten through 12th are excluded from the process of planning, implementing, and evaluating professional development for each session. Instructors do not consider teachers as adult learners, further hindering their career growth. Unless the appropriate change is evident in the design of new professional development, school districts will worsen because teachers are the most important factors to improve student success.
Researchers have yet to elucidate a defined system, strategy, or practice for traditional professional development that is acceptable to teachers.

**Purpose of the Study**

The purpose of this action research study was to improve teachers’ perceptions of traditional professional development practices by using andragogy, an adult learning framework, for educators at an urban public school district in the southern United States. Traditional professional development is not an effective model (Gulamhussein, 2013). Rebuilding it through an adult learning model that considers teachers’ active role in their learning may improve attitudes toward professional development. Andragogy, as a design, may guide traditional professional development with other effective strategies. Andragogy is not a replacement for traditional professional development, but rather a supplemental feature to increase teacher input, involvement, and satisfaction.

Andragogy is a framework of set principles and processes for adult learning (Knowles et al., 2015). Henschke (2013) stated that andragogy exhibited favorable results in many professional working environments and higher educational settings. Few recent studies used andragogy as a conceptual framework, and did not specifically implement the principles of andragogy nor the andragogical process model for learning. No past studies applied the andragogical model and process model for learning systematically in a pre-Kindergarten through 12th grade educational setting. Applying andragogy as a new design structure could signify more flexibility and empowerment for teachers over their learning goals. The predominant theme of andragogy is a strict focus on the learners’ involvement and their needs for improvement (Knowles et al., 2015). In an andragogical setting, teachers maintain respect as motivated adult learners and facilitators honor the adult learner’s identity by being mindful of
who they are as a learner and what their expectations are for their learning needs. Teachers are no longer passive listeners in professional development. In this new model, teachers would actively engage in the process of their own learning.

Teachers who were responsible for their learning fully participated in a method of inquiry and contributed to the present research by collectively sharing their opinions and insights. Qualitative research seeks knowledge about people in personal ways such as “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam & Tisdell, 2016, p. 6). Qualitative research is considerate of not just what is learned and understood but also the process undergone. A goal for the present study was to understand the intricacies of teachers’ comprehension of professional development experiences. This was important due to poor teacher satisfaction with limited action in the process of reaching achievable solutions. Specifically, this study used an action research methodology to convey a shared vision to resolve a problem with mutual respect for the participants; much like andragogy (Herr & Anderson, 2015). This action research included a sampling of teachers from the United States population of pre-Kindergarten through 12th grade teachers who shared the belief that traditional professional development can improve through thoughtful use of andragogy.

Teachers’ participation was vital for this research to advance; they are the unit of analysis and a significant component of the development of the plans, implementation of activities, and evaluation of results. Teachers’ self-reports of their perceptions by way of an open-ended questionnaire provided the necessary data for the research. Teachers were highly qualified professionals in an urban public school district in southern United States. The teachers in this study were either teachers of record, responsible for a group of students for the duration of a
course in pre-Kindergarten through 12th grade who provided daily grades, or specialized teachers who serviced students in small group settings.

Another goal for this research study was to discover and describe a newly amended design for traditional professional development by using andragogy. Andragogy requires participation from its learners, which integrates with action research. In action research, participants directly impart their feedback and opinions to create positive change (Schmuck, 2016). Teachers provided their perspectives on andragogy and professional development. The immediate goal was for teachers’ perceptions to positively reflect the new design of traditional professional development. The research study findings assisted the research site and many others in understanding the needs of professional employees. The research site and other organizations may restructure their professional development goals and objectives to include a new framework based on the findings. This qualitative action research study may improve teachers’ poor perceptions of traditional professional development by incorporating andragogy, an adult learning framework, as the main design feature. This study filled a gap in the literature regarding andragogy and its practices in an educational setting for teachers.

**Research Questions**

This study examined whether andragogy improves teachers’ perceptions of traditional professional development. The research questions were as follows:

1. How does the andragogy framework improve teachers’ perceptions about traditional professional development?

2. What, if any, specific part of the andragogical process assist in improving teachers’ perceptions about traditional professional development?
3. What, if any, specific part of the andragogical process detract from attaining higher perceptions about traditional professional development?

Rationale, Relevance, and Significance of the Study

This study derived from the principle that professional development is for teachers to learn and strengthen their practice. Most traditional professional development focuses on learning, but it is considered ineffective due to limited teacher contributions (Smylie, 2014). Therefore, teachers’ perceptions of professional development, which is necessary for their own professional growth, are negative (Bill and Melinda Gates Foundation, 2014). Teachers are central to teaching and professional learning; thus, the design of professional development must include greater teacher input to yield better teacher perceptions. Previous researchers stipulated a lack of studies to support redesigning the format or adding supplemental strategies to traditional professional development to give teachers greater control or ownership (Calvert, 2016a). Kennedy (2016) underscored the lack of research to assert teachers’ unanimous satisfaction with traditional professional development. Current studies and educational trends promote reform or nontraditional styles such as coaching, mentoring, or Professional Learning Communities (PLCs) that are job-embedded and take place throughout the day (Bayar, 2014). Minimal research focused on maintaining aspects of traditional professional development while changing other parts, such as the design or planning. For example, Hill, Beiseigel, and Jacob (2013) suggested an intricate plan for the design of professional development during the planning stage to consider all stakeholders; however, the idea has not been empirically investigated.

Use of teachers’ satisfaction and perceptions for evaluating educator professional development dwindled in the research. Guskey (2014) established a method to evaluate educator
professional development and formulated five levels to measure effectiveness. The tiered continuum in Guskey’s system begins with participants’ reactions and ends with student outcomes. Each level is equally important in understanding and improving professional development. Guskey (2014) stressed, “success at one level is necessary for success at each higher level” (p. 13). Progress towards the highest level of student outcomes is impossible if, at the basis, teachers do not learn anything new. The aim of the present study was to improve teacher perceptions about traditional professional development, which according to Guskey, is the first level of evaluating professional development. Advancement cannot transpire until researchers evaluate the initial levels.

Many researchers postulated that professional development ineffectiveness is due to the lack of guidelines to create optimal learning experiences for teachers (Gulamhussein, 2013). Hill et al. (2013), however, cited two studies that did not successfully implement the strategies originally touted by Garet, Porter, Desimone, Birman, and Yoon (2001). Other studies promoted frameworks to improve professional development (Patton et al., 2015). Clearly, past researchers of professional development tried to find a robust solution that would be systematically applicable. New research must delve in alternate directions, empirically driven to provide a platform for teachers to express and improve their professional needs. The present study was an investigation of appropriate professional development design through qualitative action research that involved an uncommon practice by including the participants in the entire process. Listening to teachers is essential to professional development, as stipulated in the literature (Patton et al., 2015).

Researchers advocated for the importance of future investigations to understand how teachers learn (Kennedy, 2016). The transference of attention from student learning to teacher
learning facilitated the study of andragogy in educational settings for teacher development.

Investigating andragogy exemplifies valuing the teacher as a knowledgeable collaborator while distinguishing teachers as adult learners (Knowles et al., 2015). There is an urgent need for a paradigm design that assists teachers, as adult learners, both intellectually and emotionally. Adult learners require a different design of professional development to improve their overall contribution and to improve teacher perceptions. This study investigated the outcomes of such improvements.

The findings of this study may enrich the research community and school districts. This research study furthered knowledge regarding a paradigm design for traditional professional development that considers the adult learner in the process (Calvert, 2016a). The researcher applied an action research methodology and andragogy to better understand teacher learning (Kennedy, 2016). The findings from this research study may be relevant to school districts. Education reform increasingly burdens professional development to be an all-inclusive solution to all of education’s problems (Bayar, 2014). Schools districts invest considerably in professional development opportunities that are usually the ineffective traditional format (Jacob & McGovern, 2015). Overall, school districts proactively assist their teachers in professional growth; however, they need pragmatic methods to find solutions. Educators rely on professional development to gain the necessary skills and knowledge to do their job effectively. Darling-Hammond, McLaughlin, and Milbrey (as cited in Torff & Byrnes, 2011) found that teachers benefit from professional development when they have positive attitudes about professional development. To improve attitudes about professional development, teachers must first have positive and relevant experiences. To have positive and relevant experiences, teachers must express their viewpoints based on their needs and the principles of adult learning (Bayar, 2014).
In addition to the research community and other similar settings, the research site’s Instructional Technology Department may benefit from this research study. They were interested in researching solutions for technology professional development, because analysis of data over the last five years indicated a stagnant response in teacher perceptions of trainings (E. Sandoval, personal communication, December 16, 2016). The data revealed that teachers are uninterested or unmotivated by technology professional development opportunities. The findings of the present study may provide an opportunity for the research site to understand how teachers learn and what design method is most appropriate to provide opportunities to enrich their professional practices.

Opportunities to assist in teachers’ professional growth arise from the district’s technology plan of long-range goals; the intent of the school district to provide software and other applicable resources, trainings, and support to use technology equipment and devices in the classroom for teacher productivity, instruction, and student learning. Throughout the year and during the summer, the district, like many others, offered professional development opportunities that focus on learning technological skills, applications awareness and use, and technology integration within the content. For this study, the topics of the professional development sessions were technology integration with varying topics such as 21st century skills, assistive technology implementation, online safety, classroom management, content-specific technology integration, and technology for productivity.

**Definition of Terms**

**Action research.** Action research is a type of qualitative study in which ongoing contribution from participants is a distinguishable quality. Action research targets a practical problem, enacts change to solve the problem, and includes the participants comprehensively in
the process. Merriam and Tisdell (2016) delineated five key principles of action research:

1. It is based on an authentic problem with possibility of improvement.
2. The intention is to develop a solution in real-time; it is a cyclical process.
3. Researchers and participants work collaboratively.
4. The researcher may be known (insider) or unknown (outsider) to the community.
5. Concurrently, the researcher and participants gather and analyze the data for change.

Action research is an organized four-stage cyclical inquiry, or action plan, that encompasses planning, acting, observing, and reflecting collaboratively with the expectation to understand and change current conditions (Herr & Anderson, 2015; Merriam & Tisdell, 2016).

Andragogy. Knowles et al. (2015) related andragogy to the art and science of teaching adults, unlike pedagogy that is teaching children. Knowles et al. (2015) ultimately considered research on andragogy a framework, rather than a theory, with three models. The first model is the andragogical model of how adults learn with guiding assumptions. Second is the andragogical process model for learning to describe elements necessary for the process of learning to occur. The third model is the andragogy practice framework. Knowles et al. (2015) developed the framework as a transactional model that is flexible to the learning situation and the participants involved. The andragogical model is a process model in which the instructor plans a process to provide participants more control of their learning, as opposed to the content model in which the instructor makes all decisions in advance. Overall, the development of andragogy compliments other curriculum and instruction decisions. Knowles et al. (2015) considered this framework highly flexible; organizations can use the entire framework or parts of it. Knowles et al. (2015) acknowledged that the framework and the assumptions should be considered and applied to a varying degree depending on the adult learners. Adult educators, trainers, or
instructors who teach adult learners are facilitators.

**Design of professional development.** Design refers to the ways a person may “create, fashion, execute, or construct according to plan” (design, n.d.). Traditional professional development typically is consistent with a design that focuses on either behavioral or cognitive learning (Knowles et al., 2015). Learning through a behavioral approach is objective and observable. Cognitive learning is consistent and methodical relying on “exposure to logically presented information” (Birzer, 2004, p. 395). Birzer (2004) argued that both approaches were impractical for teaching adults. The cognitive learning approach applies to teacher professional development as it uses lecture-style teaching that is unvarying and standard across all topics of learning interests.

Regarding professional development, the design referred to how each session was organized depending on the way teachers, as adult learners, learn best (Calvert, 2016a). The design in the present is chiefly learner-centered, incorporating the andragogy principles of adult learning (Knowles et al., 2015). The principles and process model for learning guided the design to plan the activities, evaluate methods, discuss, collaborate, and pursue individual learning each time participants met. Although a specific schedule was set; the design is flexible for the participants to be able to plan their own activities.

**Facilitator.** A person who teaches adults is an adult educator or teacher. This is limiting, however, as Knowles et al. (2015) noted. In education, the focus is on the educator’s teaching. For Knowles et al. (2015), continuing to use the term *adult educator* was inconsistent with the ideals of andragogy. The term facilitator or instructor better defines the adult educator assisting the adult learner in their learning goals. A facilitator is “a person responsible for leading or coordinating the work of a group, as one who leads a group discussion” (facilitator,
Teacher. A teacher is “one that teaches; one whose occupation is to instruct” (teacher, 2016). In this study, teacher and educator are interchangeable because an educator is “one skilled in teaching” (educator, 2016). A teacher teaches in pre-Kindergarten through 12th grade or works with students in smaller group settings.

Traditional professional development. Wei et al. (2009) described traditional professional development as the “practice when it focuses on enhancing teachers’ knowledge of how to engage in specific pedagogical skills and how to teach specific kinds of content to learners” (p. 3). Darling-Hammond and McLaughlin (as cited in Patton et al., 2015) defined professional development as a person’s “educational experiences” correlated to professional growth to improve “practice and outcomes” (p. 28). Professional development opportunities vary as they can be formal or informal, face-to-face or online, voluntary or mandatory, individual or collaborative (Desimone, 2011 as cited in Patton et al., 2015). For this study, traditional professional development includes face-to-face trainings, workshops, or summer sessions on school premises or in other locations during the school year, school day, and summer.

Limitations and Delimitations

This study addressed the issue of poor teacher perceptions of traditional professional development. The section includes descriptions of the specific limitations and delimitations for the study.

Limitations. The limitations for this study consisted of:

1. Participation was voluntary. Those who chose to participate represented various career backgrounds prior to teaching, experience levels of teaching, tenure within the
school district, individual differences as learners, varying levels of expertise, and differing perspectives about professional development.

2. The researcher attained access to the research site; however, there were time constraints as to when teachers could meet within a given day and throughout the school calendar schedule. For example, research was not possible during the last 20 days of school nor on days when a state assessment took place.

3. Using an open-ended self-report questionnaire relied on participant honesty and elaboration of details necessary to accurately analyze the data.

4. This study occurred in one school district using a sample population; therefore, the results are not generalizable. The researcher ensured validity, specifically using thick and rich descriptions (Creswell, 2013).

**Delimitations.** Delimitations are the boundaries established within the study (Bloomberg & Volpe, 2016). The delimitations for this study consisted of:

1. Due to the various formats available for professional development, the researcher concentrated on traditional professional development. No other forms of professional development were researched such as online learning (a method of learning in which students use online tools to learn synchronously or asynchronously) or PLCs.

2. Due to the scheduling and quantity of professional development available within the research site, the professional development sessions focused on technology integration and education.

3. In consideration of the population and access for this study, the research sample and location were site-specific with a size of 14 teachers who worked for one southern urban public school district in the United States.
4. To attain extensive data, the data collection instrument was an open-ended questionnaire that participants completed.

5. The time frame was limited to 20 weeks, allowing for three cycles.

Summary

Professional development is increasingly a focal point of education research and reform. During its inception in the 18th century, teachers’ perceptions of professional development opportunities were dismal (Guskey, 1986). This dissatisfaction remained nearly 140 years later and the urgency to fix the education system increased. Student achievement was the objective and professional development linked teachers, their knowledge, and quality of teaching to student outcomes. This concept quickly forced researchers to abandon teachers’ perceptions as a reliable form of evaluation. The transference to evaluation methods abandoned teachers as the main component in professional development. Researchers attempted to improve professional development based on the probability to improve student outcomes. Wei et al. (2009) found commonality in studies based on previous studies by Garet et al. (2001) about professional development throughout the years. Later researchers, such as Hill et al. (2013), revealed flaws in the Garet et al. (2001) study and teachers’ perceptions continued to reflect dissatisfaction (Jacob & McGovern, 2015).

Teachers’ negative perceptions of traditional professional development discouraged further exploration because most researchers considered traditional professional development as a failure rather than seeking assistance from teachers to improve it. Teachers are dissatisfied and frustrated. They expect traditional professional development to provide relevant knowledge for professional growth. The teacher is a primary source; they are in the classroom with direct knowledge of what needs improvement. Thus, teachers must actively collaborate in the process
of professional development (Knowles et al., 2015). The purpose of this study, through action research, is to improve teachers’ perceptions of traditional professional development by implementing andragogy as the primary design for guiding teachers as adult learners. Traditional professional development relies on a facilitator for guidance but focuses on transferring information. Teachers may benefit from providing input through the andragogy process model for learning.
Chapter 2: Literature Review

There is an obvious disparity in research of educators’ perceptions about professional development. Current literature is deficient regarding associations between high quality educator professional development, classroom instruction, and student achievement (Kennedy, 2016). The review of the literature revealed the prominence of a content model of professional development focused on improving the content that teachers impart to students. Although this a worthy ideal, it fails to respect the educator as an adult learner. The failure is the learning approach connected to a content model. A content model focuses on learning through a behavioral or cognitive learning approach (Byrne, 2015). These styles transmit knowledge in specific ways to illicit change and leaving no room for customization in learning or learner-centered instruction (Knowles et al., 2015). The content model does not allow for learners’ acquisition of skillsets to help them learn on their own. Facilitators must include educators in the process of professional development that directly affects their teaching and learning in the classroom. The andragogical model established adults as adult learners (Knowles et al., 2015). This model relied on six key assumptions that drive adult learning: (a) the need to know; (b) self-concept; (c) the role of the learner’s experiences; (d) readiness to learn; (e) orientation to learning; and (f) motivation.

Educator professional development and adult learning have not fully converged, with few exceptions (Stricker, 2006 as cited in Henschke, 2013). Research studies emerged with similar topics but focused on other professional career and university settings. As research continued to expose the diverging views of educators and researchers on a universal framework of professional development, it is important to construct traditional professional development practices and processes geared toward educators as adult learners (Kennedy, 2016).
A review of keywords *educator professional development* in any database yielded between 6,000 and 14,000 results dating to the 1960s on topics such as models of professional development, expected outcomes, strategies, reform, and effectiveness. This illustrates the struggle to establish a definitive paradigm model that ensures positive change in teachers’ instruction. Several reports cited effective strategies, mostly recognizing a content model, in transmission form but they are not commonly understood or acknowledged across the U.S. (Wei et al., 2009). Current traditional professional development does not meet the needs of educators based on teacher perceptions (Jacob & McGovern, 2015; Patton et al., 2015).

For this literature review, the terms *professional development, education,* and *andragogy* returned 34 peer-reviewed entries. In the ProQuest Education Journals database, the search terms *professional development, educators,* and *adult learning* returned 330 peer-reviewed results. In Dissertations and Theses Global on ProQuest, the keywords *andragogy* and *teacher* resulted in 24 full-text dissertations published since 1981, of which five relate to teacher professional development. Other databases included Sage Journals Online, Taylor and Francis Online, Wiley Online Library, and JSTOR. There were variances in search keywords, alternating between *educator* and *teacher* or *andragogy* and *adult learning.* The researcher also completed a survey of the literature on Google Scholar and a Google search using these terms.

The purpose of this literature review was to explore Knowles’ andragogy framework to guide the design for traditional, on-site educator professional development. This review includes articles on professional development ineffectiveness based on educators’ perceptions of traditional professional development. The literature revealed how teachers feel about professional development and what they desire. Educators’ perceptions highlight their need for involvement, independence, and respect, much like the assumptions of andragogy. This review
provides background knowledge to inform the reader of past research and the guiding framework. The five sections in literature review include: (a) the conceptual framework; (b) research literature and methodological literature; (c) methodological issues; (d) a synthesis of research findings; and (e) a critique of previous research.

**Conceptual Framework**

The conceptual framework for this research relies on several concepts that created a chain of circumstances leading to unfavorable and unsatisfactory feelings for teachers toward traditional professional development. This realization is the impetus that led to inquiring about Malcolm Knowles’ seminal research on andragogy for the present study. Initially, the definition of traditional professional development was summarized as a method to increase the teacher’s knowledge, skills, and practices to effectively use it in the classroom as they see fit (Wei et al., 2009). A more precise definition of traditional professional development includes:

- a planned effort by a company to facilitate learning of job-related competencies, knowledge, skills, and behaviors by employees. The goal of providing a training is for employees to master the knowledge, skills, and behaviors emphasized in training and apply them to their day-to-day activities. (Noe, 2013, p. 8)

Traditional professional development prepares teachers for their job (i.e., to work effectively with students to produce student learning). It uses a transmission orientation. Although the emphasis is on content, it still relies heavily on the presenter providing or passing information to the participants with little interaction. Learning interactions for teachers using a content model focus solely on the content areas that teachers teach (e.g., reading, math, science, and social studies). The premise for using this model is to promote a deeper knowledge of subject matter. Teachers learn about possible strategies, misconceptions of teaching, proper vocabulary, the
standards needed to teach, and state assessments to measure understanding and mastery (Porter et al., 2013). This information is useful. However, when it is used solely or in combination with the transmission orientation to learning, learning decreases because interaction is superficial. The learner may grasp key concepts by listening to an expert trainer, lecturer, or presenter. The transmission orientation to learning induces a one-way learning model; information is given to learners with the expectation of remembering the skills, facts, or other information the trainer provided.

Researchers tried to compile strategies for effective professional development to improve external outcomes, but results did not indicate the desired effects (Hill et al., 2013). Researcher searched for strategies that created effective and relevant professional development, but found no significant changes or improvements (Hill et al., 2013). Consequently, teachers are not satisfied with traditional professional development. Researchers failed to incorporate teachers’ attitudes, perceptions, or interests. Traditional professional development continued to persist despite the negative perceptions of teachers (Bill and Melinda Gates Foundation, 2014; Jacob & McGovern, 2015; Smylie, 2014). Moreover, the evaluation of traditional professional development was no longer relevant to teachers’ perceptions or satisfaction. This left teachers unable to voice their concerns or provide feedback to improve the conditions. Instructors and researchers failed to recognize and include teachers’ interests and insights, sustaining their role as passive learners (Siko & Hess, 2014).

The goal is to elevate teachers’ roles in the traditional professional development process. Researchers are determined to improve professional development but lack the understanding that the learner (i.e., the teacher) is important (Matherson & Windle, 2017). Placing the teacher in a primary role in traditional professional development allows them to be at the core of their own
learning to determine what knowledge and skill they need (Siko & Hess, 2014). Teachers are adults; therefore, they are capable of proper decision-making for their own learning. As adult learners, teachers can define their own learning in an active role but also should participate in traditional professional development that employs adult learning principles (Stacy, 2013). In this orientation, providing professional development for teachers would require using strategies in accordance with adult learning principles such as Malcolm Knowles’ andragogy framework.

The present study is rooted in seminal research by Malcolm Knowles, which employed three models of the andragogy framework (Knowles et al., 2015). The first model is the andragogical model of how adults learn with guiding assumptions. Second is the andragogical process model for learning that describes elements necessary for learning to occur. The third model is the andragogy practice framework. Knowles et al. (2015) developed andragogy based on previous research on adult learning by Eduard Lindeman, Sigmund Freud’s psychotherapy, and Carl Roger’s humanistic psychology. He also referenced developmental psychology, sociology, social psychology, philosophy, and adult education. The framework includes influences from Dewey, Bruner, and other theorists who prompted greater examination of how children and adults learn.

**Andragogy.** Knowles et al. (2015) studied the history of andragogy and how it gained popularity throughout the years. The word *andragogy* is Greek; *andra-* means adult and *agogus* means leader. Teaching adults is unlike pedagogy (i.e., teaching children). Knowles et al. (2015) discovered that Alexander Kapp, a German educator, first used the term andragogy in 1833 but it did not gain popularity until Eugen Rosenstock, a German social scientist, used the term in 1921 and declared a need for adult education to encompass a novel way to describe and apply it. Rosenstock felt that this field needed to have exclusivity (e.g., distinctive people as
teachers and well-defined strategies that transform and distinguish it from the others) (Knowles et al., 2015). The use of the term andragogy continued in Europe where Swiss psychiatrist Heinrich Hanselman published a book on the topic and adult educators began to use the principles in their classrooms. Andragogy derived from Lindeman’s publication, *The Meaning of Adult Education*, which propelled adult learning theory into existence explaining “the resources of highest value in adult education is the learner’s experience” (as cited in Knowles et al., 2015, p. 20). Likewise, Gessner (as cited in Knowles et al., 2015) cited Lindeman as stating,

> I am conceiving adult education in terms of a new technique for learning, a technique as essential to the college graduate as to the unlettered manual worker. It represents a process by which the adult learns to become aware of and evaluate his experience. To do this he cannot begin by studying “subjects” in the hope that some day information will be useful. On the contrary, he begins by giving attention to situations in which he finds himself, to problems which include obstacles to his self-fulfillment. (p. 21)

Knowles et al. (2015) summarized Lindeman’s assumptions about adult learners as follows:

1. Adults are motivated to learn as they experience needs and interests that learning will satisfy.
2. Adults’ orientation to learning is life-centered.
3. Experience is the richest source for adult learning.
4. Adults have a deep need to be self-directing.
5. Individual differences among people increase with age. (p. 22)

Lindeman’s key assumptions about adult learners recognized the adult as a learner, their experience as a source of learning, and a necessary sense of self in the learning process.
The andragogical model. Knowles’ derived his assumptions from how adult learning differs from the manner in which children learn (Knowles et al., 2015). The premise is recognition of differences in adult and child developmental domains, such as the intellectual, affective, and socio-emotional. Andragogy focuses on the adults’ maturity and ability to understand their own learning. Knowles’ andragogical model has six assumptions, detailed in the following sections.

The need to know. Knowles’ research and reliance on Tough’s (as cited in Knowles et al., 2015) study propelled the first assumption, the need to know, based on the learner’s quest to know and learn. Tough’s research continued the work of Cyril Houle who investigated the adult learning process through qualitative interviews (Knowles et al., 2015). Houle’s (as cited in Knowles et al., 2015) study discovered why adult learners keep learning and how they learn through adulthood when he found overlapping typical learner types, and defined their participation in ongoing education goal-oriented learners, activity-oriented learners, or the learning-oriented learners. Furthermore, Houle implied adults need to know what they are learning to acquire an interest in learning something new and investigated advantages or disadvantages. Tough (as cited in Knowles et al., 2015) added to the research, exploring what and why adults learn as Houle did, how adults learn, and advantages they acquire from the learning. Participants named various motivational reasons for learning something new, whether it was curiosity, just for learning, sharing the knowledge gained, or enjoying the activity.

Learners’ self-concept. Self-concept is the idea or mental image of the self and one's strengths, weaknesses, and status (self-concept, n.d.). Clinical psychologists who studied human development influenced Knowles. Carl Rogers, a humanistic psychologist, and Abraham Maslow, a psychotherapist, familiarized the idea of self-concept as “full functioning persons” or
“self-actualizing persons” (as cited in Knowles et al., 2015, p. 29). Rogers declared, “every individual exists in a continually changing world of experience of which he is the center” (as cited in Knowles et al., 2015, p. 31). Knowles defined self-concept as an adult’s authority over their life, but limited it to perceptions of decisions-making, learning, and other factors that affect personal responsibility. Knowles et al. (2015) stated that people “develop a deep psychological need to be seen by others and treated by others as being capable of self-direction. They resent and resist situations in which they feel others are imposing their wills on them” (p. 44).

The role of the learners’ experiences. Unlike childhood when experience emerges as part of ongoing learning and exploration, an adult is defined by learning experiences (Knowles et al., 2015). Experiences mold an individual, either positively or negatively, to comprehend their world and solve their problems. Experiences make each individual unique and create a “rich resource” for learning (Knowles et al., 2015, p. 45). Experience enlightens adult facilitators who customize teaching and learning to be inclusive of the adult learner.

Readiness to learn. Knowles et al. (2015) attributed this assumption to theories of human development in which individuals may not be ready to learn based on the stage of development and experiences held. Abraham Maslow (1972), a behavioral scientist, reasoned,

Growth takes place when the next step forward is subjectively more delightful, more joyous, more intrinsically satisfying than the previous… the only way we can ever know that it is right for us is that it feels better subjectively than any alternative. (Knowles et al. 2015, p. 29)

Readiness will be evident when “they need to know and be able to do in order to cope effectively with their real-life situations” (Knowles et al., 2015, p. 45). An individual’s readiness to learn is based on the need to learn something new because there is gap of knowledge or there is a
problem to solve. In either scenario, the individual will feel ready to learn because the demand to learn new knowledge is required.

**Orientation to learning.** Knowles stressed the importance of adults’ orientation or preference to learn based on life experiences (Knowles et al., 2015). Learning should employ the challenges that arise in life. Learning focuses on life, tasks, or problems (Knowles et al., 2015). There must be relevance and meaning to create a solution, relate learning to life, or be applicable to life expectations.

**Motivation.** For Knowles, the assumption of motivation relied on understanding adults’ external and internal motivators. The external motivators link to improvements in career, such as a promotion or increase in salary. Intrinsic stimuli drive an individual to specific desires, such as increased confidence or improvements in personal or professional life. Knowles relied on Tough’s (1979) research that found an intrinsic desire to learn, “to keep growing and developing” despite deterrents (Knowles et al., 2015, p. 47). Deterrents may be “negative self-concept as a student, inaccessibility of opportunities or resources, time constraints, and programs that violate principles of adult learning” (Knowles et al., 2015, p. 47).

**The andragogy in practice model.** The framework explained in this model refers to the application of andragogy. In this model, Knowles et al. (2015) described three areas in practice.

1. The first part of the model emphasized the goals and purposes for learning, which are distinctive to the organization. They may, however, be classified as individual, institutional, or societal goals (Knowles et al., 2015).
2. The next section consisted of the differences in individuals and situations within each organization. Knowles et al. (2015) attributed these differences to content focus,
situation toward learning such as small or large groups, and individuals’ personality and learning style, which will be different at each organizational site.

3. The last part of the model is the andragogy core learning principles mentioned previously.

**The andragogical process model for learning.** Expanding on the principles mentioned above, the andragogical process model for learning defined elements for implementation. Knowles stressed the process model in which the facilitator generates a method to include the learners from beginning to end (Knowles et al., 2015). This is unlike the common content model in which the instructor prepares content in advance for the class or training. The process model from Knowles et al. (2015) included the following guidelines considering: (a) learner preparation; (b) climate for learning; (c) mutual planning; (d) diagnose the needs; (e) program objectives; (f) allow for learning experiences; (g) use suitable techniques and materials; and (h) evaluate and rediagnosis of the learning needs.

**Preparing the learner.** This part of the model includes the learner in the responsibility of learning. By preparing the learner prior to learning, the learner is equipped for self-directed learning. Knowles initially believed self-directed learning was defined by the proactive disposition an adult may possess to assess and reflect on their own needs, learning gaps, and goals. It signified a “preparatory learning-how-to-learn activity” prior to the inception of learning directly focused on self-directed learning ideals (Knowles et al., 2015, p. 53). Knowles et al. (2015) suggested three elements:

1. An overview of proactive and reactive learning; proactive involves initiative and reactive is pedagogical by responding to teachers’ requests.
2. An experience to identify each participant’s resources in past experiences, current skills, and to determine collaborative interactions.

3. A trial project to practice proactive learning.

However, these depend on the length of time allotted and rigorousness of the entire program design.

**Creating a climate conducive to learning.** There are two parts to creating an appropriate learning environment. The first deals with the physical settings of the room such as the temperature, furniture, size and quality of room, and also access to certain needs such as bathrooms, food, and drinks. The second part is the quality and access to the resources. These resources are physical or human resources such as computers, books, and other print or media/visual products. Knowles et al. (2015) stressed, “the most important thing is not just that these resources are available, but that learners use them proactively rather than reactively” (p. 55). Knowles emphasized this element by analyzing the perspectives of ecological psychologists, cognitive and personality theorists, and humanistic psychologists who emphasized the importance of learners who are respectful, orderly, organized, accepting, supportive, and collaborative. This part of the process is most significant because “if it doesn’t convey that an organization values human beings as its most valuable asset and their development its most productive investment, then all other elements in the process are jeopardized” (Knowles et al., 2015, p. 57).

**Creating a mechanism for mutual planning.** This concept derives from believing teachers, in this case the facilitator, are not the sole resource for information but rather an assistant for the learner. This concept differentiates pedagogical and andragogical processes accentuating that “a mechanism should be provided for involving all the parties concerned in the
educational enterprise in its planning” (Knowles et al., 2015, p. 58). Mutual planning affords the opportunity for acknowledgment of all participants’ goals with respect of others.

**Diagnosing the needs for learning.** In constructing a model to diagnose the needs for learning, Knowles identified three sources: the individual, the organization, and society (Knowles et al., 2015). These levels are the initial point for constructing objectives to reach outcomes specific to each source. Knowles indicated the model’s success is not due to the potent objective but rather the change in the learner that deems this a paradigm of learning (Knowles et al., 2015). The learners increase their purpose and acknowledge their learning with ownership. They have a better understanding about learning and, thus, the potential to increase performance.

**Formulating program objectives.** The next step in the process model for learning is to create and write objectives. Knowles relied on two perspectives for desired outcomes, cognitive and behaviorist, but also investigated other styles such as aligning to the skills needed in self-directed learning or inquiry-based learning. Behaviorists call for “terminal behaviors in very precise, measurable, and observable terms” (Knowles et al., 2015, p. 61). Cognitive theorists, on the other hand, appreciate guidelines to formulate objectives that use underlying principles from behaviorists. One such guideline that contrasts the behaviorists stresses the focus on development of the learner, building on previous achievements as opposed to static goals (Taba, 1962 as cited in Knowles et al., 2015). Program objectives are dependent upon learners’ needs and goals desired, but flexible in the approach that formulates them.

**Design a pattern of learning experiences.** The choice of how to systematically create learning opportunities is dependent on the objectives and goals for learning. Behaviorists organize possible events that support, generate, and sustain behaviors. Cognitivists provide opportunities to gradually develop by solving problems sequentially (Knowles et al., 2015).
Moreover, cognitivists offer resources to assist in learning. Third-party psychologists encourage settings where both learner and facilitator assist in learning according to their desired goals (Rogers, 1969 as cited in Knowles et al., 2015). The andragogical model is a combination of differing approaches in which learners select problem areas to diagnoses and identification goals, culminating with their implementation and evaluation.

**Conducting learning experiences with suitable techniques and materials.** At this stage, learners analyze the individuals responsible for implementation of training and materials. The facilitator should receive training in andragogy concepts and processes. This takes considerable time if facilitators are not accustomed to or never employed adult learning strategies in trainings.

Reviewing the role of a facilitator requires knowing what the role of facilitator entails. Piaget (as cited in Knowles et al., 2015) posited the role of a teacher is instead a facilitator. Learning, according to Piaget, is constructed organically through experience and active learning built from the discussions, exploration, and student-led activities. This belief positions the teacher as a supporter to the learner’s learning, not as the giver of information. This supporting role is a facilitator who guides the learner to understand their experiences and social interactions. According to Petty (2009), in the role of a teacher, there is more control as compared to the role of a facilitator where students have more control. In a traditional teacher role, the teacher plans for everything related to teaching and learning while as a facilitator, students are included in the planning and evaluation. The difference between a traditional teacher role and a facilitator is what students learn. As a facilitator, students are given opportunities to learn more complex learning and thinking processes in addition to the content. This belief applies to adult learners. A facilitator understands the learner’s past experiences will enrich their current learning. A facilitator provides ample opportunity for learners to seek knowledge in various ways that assist
in constructing meaning that makes sense to each of them (Patton et al., 2015). A facilitator continuously encourages the learner. The facilitator, regardless of previous assumptions, must now shift their approach from the pedagogical model focused on knowledge transmission to the andragogical model where transactions of learning occur.

The learning should occur in an area conducive to meeting the needs of the learners (Knowles et al., 2015). The curriculum should not be limited or specific but rather proper planning is necessary to create a generic curriculum. This kind of curriculum lends to the learner’s flexible learning based on their needs and dynamic learning process. Moreover, materials and resources will be accessible ensuring every learner has choice.

**Evaluating learning outcomes and rediagnosing learning needs.** Kirkpatrick’s (1971) evaluation process is consistent with Knowles’ andragogical framework (Knowles et al., 2015). Kirkpatrick’s evaluation process has four levels required to attain a comprehensive and successful assessment, including:

1. Reaction evaluation: participant perceptions and attitudes about the process or program implementation. Methods to obtain data include surveys, interviews, or group discussions.
2. Learning evaluation: acquire data from the participant. This includes pre- and post-tests gauging the learning process and knowledge gained.
3. Behavior evaluation: attain data about the participant regarding behavioral changes using observer reports, self-assessments, interviews, questionnaires, or participant diaries.
4. Results evaluation: analyze other secondary factors. Such data includes costs, turnover rates, absences, and others.
Knowles added *rediagnosis* of learning needs as a fifth part derived “directly from the fundamental conception of adult education as continuing education” (Knowles et al., 2015, p. 68). Rediagnosis means to re-evaluate the learning needs by analyzing the reactions, artifacts, and behaviors felt and observed by the adult learner.

**Impact of andragogy on professional development.** This study investigated teachers’ perceptions of the application of andragogy assumptions and the andragogy process model of learning into traditional professional development. Andragogy is not a replacement to traditional professional development, but rather an addition to the design feature for effective traditional professional development. Data in the report by the Bill and Melinda Gates Foundation (2014) supported that professional development “should treat us as adults, rather than children,” “has to be personalized,” and “needs to be something that you keep working on” (p. 4). These grievances further drive the need to construct a framework for professional development infused with andragogy.

Applying andragogical strategies to an educator’s professional development and research remains unsupported despite preliminary research (Gregson & Sturko, 2007). There is some evidence in the literature that demonstrate the concepts developed by Knowles provide effective professional development trainings (Knowles et al., 2015). Moretti et al. (2013) investigated factors that impact professional development among elementary school teachers. They found that 82% of teachers indicated they are responsible for their professional development with collaboration from the head teacher or administration, and of that same participant group, 91.8% indicated they want complete responsibility for their professional development (Moretti et al., 2013). This response directly supports Knowles’ andragogy assumption of the learner’s self-concept. Learners are capable of investing in their own learning. These responses illuminate the
need to consider the orientation of learning, because unlike children, adults prefer problem-oriented tasks based on real life problems and solutions (Knowles et al., 2015). The Bill and Melinda Gates Foundation (2014) reported 30% of teachers are able to choose their own professional development opportunities. Those that are able to choose their own are reported being more satisfied with professional development.

The idea of self-direction correlates to andragogy’s principle of the learner’s experiences. Experiencing life dictates how humans evolve into adults (Knowles et al., 2015). These experiences allow each individual to know their strengths and weaknesses; therefore, direct themselves to learning customized for their needs. Garet et al. (2001) revealed common strategies promoting effective professional development. Promoting active learning corresponds to andragogy’s principle of orientation to learn where adults are more inclined to prefer task-oriented activities or activities that are relevant to their lives (Knowles et al., 2015). Embedding and using andragogy to guide the process of traditional professional development may positively influence teachers’ capacity and positive perceptions.

Change, nonetheless, is evident as the research literature increases. Researchers hope to combine various educator professional development models to improve teaching quality, teacher growth evaluations, and student achievement (Kennedy, 2016; Wei et al., 2009). Wei et al. (2009) underscored this notion in their technical report, citing the uprising of awareness in “recognizing teacher professional development as a key component of change and as an important link between the standards movement and student achievement” (p. 1). Garet et al. (2001) argued that “despite the size of the body of literature, however, relatively little systematic research has been conducted on the effects of professional development on improvements in teaching or on student outcomes” (p. 917). Kennedy (2016) indicated professional
development’s significance but described that researchers have not resolved “how [professional development] works, that is, about what happens in [professional development], how it fosters teacher learning, and how it is expected to alter teaching practice” (p. 1). This deficiency is evident because educators deem professional development ineffective (Bill and Melinda Gates Foundation, 2014; Gulamhussein, 2013; Jacob & McGovern, 2015). Wei et al. (2009) relayed teachers do not find professional development opportunities useful.

Little research focused on the teacher as an adult learner despite heavy concentration on professional development as a means to deliver content to improve teaching outcomes (Gregson & Sturko, 2007). This mode of professional development is content specific, where the “the content model – as most research is focused on – is concerned with transmitting information and skills, whereas the process model is concerned with providing procedures and resources for helping learners acquire information and skills” (Knowles et al., 2015, p. 15).

**Review of Research Literature and Methodological Literature**

Professional development for this study included traditional, face-to-face training opportunities. Models of traditional or formal professional development include workshops, expert consultations, university courses, trainings, and conferences during working hours (Wei et al., 2009). Professional development began in the 1800s, more than 180 years ago (Labaree, 2008). However, andragogy research only dates back 40 years. Henschke’s (2016) compilation of research revealed the controversy surrounding andragogy. Researchers argued about the term and its fit in research as a solidified theory. Research was empirical and applicable to settings such as universities, medical organizations, and businesses.

**Professional development.** Research on traditional professional development is varied and includes different careers, grade levels, and features such as technology or newer non-
traditional models. The present literature review included only research on effective educator professional development, educators’ attitudes or perceptions of professional development, professional development and teaching quality, andragogy or adult learning, and andragogy and educator professional development. Results varied by methodology. Some researchers conducted meta-analyses or case studies. Others wrote argumentative essays or technical reports. The use of qualitative and quantitative measures was evident as well, such as surveys, questionnaires, and discussions.

Research on professional development and teaching quality emerged within the last decade; however, collectively, the United States does not rely on these findings to promote change. Wei et al. (2009) identified several key research studies on teacher professional development and its effects on teaching quality. The studies included the 2003-2004 Schools and Staffing Survey from the National Center for Education Statistics, the MetLife Survey of the American Teacher, the National Education Association’s Survey of America’s Teachers and Support Professionals on Technology, and the National Staff Development Council’s Standards Assessment Inventory (Wei et al., 2009).

The Bill and Melinda Gates Foundation (2014) reported that the delivery of professional development lacks coherence between policymakers’ intentions and teachers’ experiences. Their study included more than 1,300 individuals with different careers in education such as teachers, education agency specialists, and administrators, and an additional 1,600 teachers. The study concentrated on current trends in professional development participation, needs, and satisfaction for each state; factors that contribute or detract from the decision process; analysis of market size and the suppliers who offer professional development; future trends and needs; and variances in supply and demand (Bill and Melinda Gates Foundation, 2014).
Like the Bill and Melinda Gates Foundation (2014) report, Jacob and McGovern (2015) noted a discrepancy between research and beliefs of administrators that a solution to assist teachers was accomplished. Jacob and McGovern’s (2015) technical report revealed a lack of universal solutions despite the investment of time and money to improve outcomes through professional development. The data collection included surveys on perceptions, analysis of teacher evaluations, and discussions. Jacob and McGovern (2015) gathered data from 10,507 teachers, 566 school leaders, and 127 staff members involved with professional development in three large school districts and one charter network. Their performance measure differed from others because they first identified teachers whose evaluations displayed improvement. Then, they looked for commonality compared to teachers who showed no significant improvement. Jacob and McGovern (2015) also surveyed teachers about their professional development experiences and analyzed budgets and expenditures to calculate the cost according to financial documents.

Andragogy. Andragogy is a framework that defines the methods, practices, and processes of teaching adults (Knowles et al., 2015). Alexander Kapp was the first to study andragogy in 1833. Since then, many researchers examined the andragogy framework and ideals. The analysis of andragogy consists of understanding the term, its inception, theory comprehension, andragogy application around the world, and application in various adult learning settings, as noted by Henschke (2013) who compiled the most comprehensive report chronicling research on andragogy by surveying 325 documents.

Past research on andragogy lacks empirical investigations (Caruth, 2014). Many researchers examined the potential of andragogy implementation in organizational workplaces. Researchers focused on university settings, corporate or business fields, and online learning

Research of andragogy in the educational fields is limited. Vorhies (2015) focused on heutagogy, or self-determined learning, to assess teachers’ perceptions of where they felt they were in the continuum of pedagogy, andragogy, and heutagogy. Vorhies (2015) completed a mixed method study at a Southern California school district with secondary teachers using Common Core State Standards. Vorhies (2015) investigated teachers’ education orientation of learning and whether it influenced their choices in the classroom with a survey, interviews, and documents. Moore (2013) also researched andragogy with educators in a public school setting, focusing on professional learning practices for 21st century skills and technology. Moore’s (2013) study clustered technology integration use, professional development practices, and andragogy to uncover levels of teachers’ technology integration as measured by a framework called Levels of Technology Integration (LoTi). The goal was to understand current professional development practices to implement andragogical-focused professional development for teacher instruction in the classroom. Moore (2013) used interviews, surveys, field notes, and focus groups.
Fitzgerald (2014) investigated andragogy in public school settings within professional development constructs with educators as the participants. Fitzgerald (2014) focused on job-embedded professional development, perceptions that teachers’ hold of themselves, and andragogy. Fitzgerald (2014) investigated professional development of teachers as adult learners, current professional development design, and frequency of job-embedded professional development using a custom survey to gauge teachers’ professional development experiences. Approximately 680 secondary teachers received the survey and 289 responded. Fitzgerald (2014) also conducted interviews with participants.

**Review of Methodological Issues**

Methodological issues present various limitations that hindered past research. One such issue is the breadth of studying general professional development rather than focusing on specific topics (Bill and Melinda Gates Foundation, 2014; Gulamhussein, 2013; Jacob & McGovern, 2015). Other issues included sampling sizes, methodology selection, and survey question choices.

Wei et al. (2009) did not reference traditional professional development in their definition of effective professional development although their research relied on Yoon et al.’s (2007) meta-analysis of nine studies out of 1,300 that met the What Works Clearinghouse evidence standards. The nine studies analyzed by Yoon et al. (2007) used workshops or summer institutes. However, traditional professional development may be successful under certain conditions (Guskey & Yoon, 2009). When Wei et al. (2009) mentioned traditional professional development, it related only to the frequency of professional development sessions. Researchers should indicate whether it is effective or ineffective. More qualitative data from teachers would be beneficial for understanding which portions of traditional professional development are
effective. Using qualitative studies engages the participant in their own learning environment through participatory action, reflection, and use of their perspectives to gain meaning (Creswell, 2013).

Torff and Sessions (2008) studied 214 educators’ perceptions of professional development using a survey. A few issues arose as they analyzed the data. The survey included reversed questions to reduce response bias. The results formed a distribution of scores ranging from 1.11 to 5.58, displaying a positive skew. Torff and Sessions (2008) performed a log transformation, reorganizing and coding the educators by level of experience. Afterwards, the researchers claimed a “censoring” effect that limited data on one side of the scale (Torff & Sessions, 2008, p. 127).

In the Bill and Melinda Gates Foundation (2014) survey, one question asked participants to rate their satisfaction level of past professional development session. Another question from the survey asked about teachers’ perceptions of current professional development practices in the traditional format. The researchers could improve this study if they included open-ended questions to ask teachers to identify the attributes of professional development they appreciate and learn from and those they do not. A greater qualitative discussion should occur when trying to pinpoint the root of teachers’ dissatisfaction with professional development practices because there are many influential factors (e.g., delivery and design, time allocation, presenter knowledge and style, accommodations or tools, content relevance, and frequency) (Yoon et al., 2007).

Gregson and Sturko (2007) used qualitative and quantitative methods to gather data about teachers’ experiences. The report relied more on qualitative data, using recorded responses to exhibit the success of implementation. The researchers surveyed teacher participants but should have surveyed teacher trainers about their preparation for the professional development as well.
Gregson and Sturko (2007) described the process of creating the professional development course as “taught by master teachers with support of university faculty” in order to capture the preparation for building the content of the course and applying the concepts of adult learning (p. 7).

Masuda, Ebersole, and Barrett (2013) conducted a qualitative study in Hawaii with 16 teachers to analyze teachers’ attitudes about professional development. The problem in this study was the relatively small sample size. With 16 teachers, the approximate margin of error was 25%, which created an unreliable study with a large gap for possibly divergent views (Masuda et al., 2013). The researchers asked open-ended questions but limited them to professional development experiences. Masuda et al. (2013) asked for state-specific portions of value and feelings towards kinds of professional development, such as mandatory or voluntary.

Comparably, Yoon et al. (2007) described research studies revealing connections between professional development and student achievement. Initial reviews yielded more than 1,300 research reports; yet, when analyzing the studies according to the standards of What Works Clearinghouse, only nine remained. As Yoon et al. (2007) described, most of those studies revealed no statistical relevance regarding kinds of professional development for self-growth or student achievement. This accentuates the need for new research to capture reliable evidence of appropriate standards based on andragogy to produce positive gains for educators and students.

**Synthesis of Research Findings**

Traditional professional development research includes some significant findings. Kennedy (2016) compared research on effective professional development, similar to Guskey and Yoon (2009), but used a different set of criteria, yielding 28 studies to analyze, and created
an altered set of strategies. Strickland (2009) identified complaints about traditional professional development, such as claims sessions are “‘drive-by workshops,’ ‘one-size-fits-all’ presentations, ‘been there, done that’ topics, little or no modeling of what is being taught, focus on rotating fads, and lack of follow-up” (para. 3). These findings influence the current research. The synthesis of past literature includes concepts of teacher perceptions, effective professional development and teaching quality, and andragogy.

**Teacher perceptions.** In the Bill and Melinda Gates Foundation (2014) survey, only 29% of teachers were highly satisfied with current professional development and 34% thought it improved. A contributing factor was the traditional format of professional development. A question asked participants to rate, on a 10-point scale, the satisfaction level for professional development offered at the district they are employed. The data was then calculated using the Net Promoter Score system. In this system, the lowest response percentages are subtracted from the highest response percentages to find the difference. This difference is the net score used to determine satisfaction. In all eight styles given in the question such as workshops, intensive summer training, and self-guided professional development, only courses had a higher satisfaction score than the others. Five of the professional development options provided in the question received a negative score meaning there were more lower responses of satisfaction than positive responses. In Jacob and McGovern’s (2015) survey, only 40% of teachers considered professional development useful. Approximately half of teachers viewed professional development as successful at giving them new information.

Sagir (2014) surveyed 127 teachers about their satisfaction with professional development. One survey question asked participants to rate whether in-service training activities contributed to their learning; responses included 38 disagreeing, 41 partially agreeing,
and 48 completely agreeing (Sagir, 2014). The in-service model modestly contributed to teachers’ professional development. Sagir (2014) also surveyed teachers about various professional development trainings. Another question asked if training sessions contributed to professional development and 127 teachers responded; 38 disagreed completely and 41 partially agreed but left negative comments. Likewise, Moretti et al. (2013) studied teachers’ opinions about professional development. Many of the questions were overwhelmingly in favor of teachers’ own responsibility for their learning. In the first question, for example, the researchers asked participants who was responsible for their professional development and 82% replied it was teachers with assistance from leadership (Moretti et al., 2013). Another question asked if teachers would give up the responsibility for their professional development to school leadership and 91.8% of teachers replied no. Teachers want responsibility for their own learning.

Wei et al. (2009) found that 92% of teachers in the United States participated in formal, or traditional, professional development. The highest percentage rating given for the training’s usefulness by teachers was 59%. There is a paucity in what teachers believe to be useful or relevant. Similarly, Jacob and McGovern (2015) revealed that about 40% of educators considered professional development valuable; most teachers dislike professional development’s uniformity. The Bill and Melinda Gates Foundation (2014) uncovered similar sentiments; teachers sought customization but only 30% chose their professional development and 83.9% cited inadequate professional knowledge.

**Effective professional development and teaching quality.** Wei et al. (2009) reported several facets of professional development, specifically strategies and procedures that make it effective. Wei et al. (2009) identified “cross-cutting themes” in the literature including professional development context, contexts for learning, and design of learning experiences (p.
3). Opportunities for professional development needed increased duration to yield positive effects. Successful European countries suggested reaching 100 hours per year. Fifty-seven percent of teachers in the United States receive only 16 hours per year (Wei et al., 2009). The report indicated that 23% of U.S. teachers acquired 33 hours or more in one year.

Porter et al. (2003) identified six key qualities of professional development focused on structure and core features: (a) the identification of the activity, whether reform or traditional; (b) the time provided and how often; (c) the degree of participation; (d) the content; (e) the participation level, whether lecture, active participation, or other; and (f) alignment to all agendas important to a teacher. Their findings suggested some characteristics increase knowledge and skill, specifically, content focus and coherence. Jacob and McGovern (2015) tried to connect professional development with teacher improvement through formal evaluations. They surveyed more than 10,000 teachers, analyzed their evaluations, and found that most teachers do not improve yearly. In the three districts studied, “only three out of every 10 teachers tended to improve their performance substantially over the years studied, as measured by their overall evaluation scores” (Jacob & McGovern, 2015, p. 13). Of every 10 teachers, five others were unchanged and two regressed.

Penuel et al. (2007) studied 454 teachers who attained a specified professional development program for curriculum implementation. The effectiveness (i.e., the teacher implementing what they learned) of professional development increased because the content of the professional development was highly specialized to the program or curriculum. Additionally, the amount of time spent in professional development influences teachers’ implementation in the classroom. Ongoing professional development was significant in teachers’ implementation in the classroom (Penuel et al., 2007).
Andragogy. Henschke (2013) provided the most thorough synthesis of research on andragogy to date. Much of the research centered on either the design of andragogy, critiquing it or an element of it, and implementation. At the beginning of the century, previous research on andragogy was anecdotal (Caruth, 2014). Knowles et al. (2015) explained, “much of the research on andragogy emerged out of practice, and thus there is a strong connection for applying these findings to the improvement of practice and theory” (p. 310). Most researchers conducted studies in professional settings or during university level courses. For example, Martell (as cited in Henschke, 2013) tested andragogy in a religious setting for Bible study, favoring andragogical discussion groups to the lecture model.

Fitzgerald (2014) researched secondary teachers’ perceptions as adult learners, perceptions of current professional development, and its design using a 57-item survey with Likert scales to assess teachers’ perceptions. Of the sample, 53% agreed they learn best through the application of adult learning strategies and 77% learned best when they are involved through inquiry or problem-solving activities. Fitzgerald (2014) reported that 76% of participants agreed that they learn best given the purpose and objectives for the training. Interestingly, 84% of participants indicated they occasionally or rarely experienced adult learning strategies in professional development and 62% occasionally or rarely experienced self-directed learning by choosing their own way to learn (Fitzgerald, 2014).

Critique of Previous Research

Past literature advanced the identification of key factors for professional development effectiveness. These stemmed from Porter et al.’s (2003) study of the Eisenhower Project participants who received funding for professional development. This synthesized list recreated the definition of professional development in working research and reinvigorated others to
espouse new forms of professional development with characteristics such as job-embedded development or PLC/Nets (PLC/Ns). The problem lies within two overarching themes. First, past researchers ignored traditional professional development, particularly on-site workshops or trainings (Gulamhussein, 2013). Second, professional development strategies do not consider the teacher as an adult capable of responsibility, autonomy, and collaboration. Previous researchers failed to acknowledge how adults learn or determine explicit information about the ineffectiveness of professional development.

Hill (2009) declared, “rather than replacing one form of professional development with another, we would be wiser to examine what exists and make it better” (p. 472). Guskey and Yoon (2009) declared that traditional professional development, such as workshops, could be effective when executed correctly; of the nine studies they analyzed for effectiveness, four were workshop style. The existing gap in knowledge is that it is unknown whether researchers, school leaders, or educators can reform traditional professional development. Ignoring traditional professional development, which school districts still provide, is a mistake. In one estimate from 2012–2013, 44% of federal funds go to teacher development, which is approximately $2.33 billion (Gulamhussein, 2013). Jacob and McGovern (2015) reported the financial commitment to be approximately $18,000 per teacher per year. Similarly, the Bill and Melinda Gates Foundation (2014) cited spending closer to $18 billion annually, of which $3 billion is for professional development consultants.

The six characteristics of effective professional development are valuable in their own right; however, only three focus on teacher participation. Teachers are adults and no research on professional development (except about andragogy) includes teachers’ responses to adult learning principles. The Bill and Melinda Gates Foundation (2014) related the sentiments of
teachers who wanted to be treated as adults and be involved in the professional development process. Overall, many studies advocated for effective strategies, much like Porter et al. (2003), but failed to acknowledge the need for adult learning, particularly andragogy. In professional development, coherence is a value-added characteristic needed to ensure a well-rounded and unified professional development program. Substantial learning occurs when professional development aligns to teachers’ experiences and other expectations such as district goal, state standards, and student needs. When this occurs, there is greater chance for implementation of the newly acquired skills or change in teaching strategies gained from professional development (Wei et al., 2009). Coherence resembles andragogy’s principles of including teachers’ experiences for relevancy.

Another critique of professional development strategies is the need to recognize the impact of teacher involvement in the process, not just the session itself (Porter et al., 2003). There is a need for greater promotion of teacher involvement, but researchers often neglect to identify this strategy as part of andragogy. Knowles et al. (2015) explained that the andragogy process of learning includes evaluating and adjusting according to the needs of the learner, which Porter et al. (2003) proposed as an effective strategy but did not acknowledge as part of Knowles’ process model.

Many teachers revealed a dislike for uniformity in their professional development. Jacob and McGovern (2015) and the Bill and Melinda Gates Foundation (2014) reported many teachers’ disapproval of the “one size fits all” model, using more favorable terms such as “customized” (Jacob & McGovern, 2015, p. 26) and “personalized” (Bill and Melinda Gates Foundation, 2014, p. 4). Expanding on these sentiments, Wei et al. (2009) determined teachers in the United States do not have a significant role in the professional development process.
Traditional, on-site professional development is important to the educational system. It is vital to research ways to improve this type of professional development to improve financially gains, use of time, and the human capacity. Other models should not replace traditional professional development simply because it is outdated. Instead, it may be better to transform traditional professional development to include andragogy principles. It is more practical to use strategies already in existence that are effective and implement other approaches to improve them (Hill, 2009). Traditional professional development does not need to remain ineffective; the idea is to reinvent traditional professional development without abandoning it for other models.

Current research on andragogy lacks empirical research of educator professional development (Moore, 2013). Vorhies (2015), Moore (2013), and Fitzgerald (2014) used surveys and interview strategies. The data is useful; however, there was no attempt to apply andragogical assumptions or a process model of learning. Moore (2014) applied andragogical assumptions to guide teachers in creating a learning goal for greater study of technology integration. Vorhies (2015) and Fitzgerald (2014) examined teacher perceptions in regards to andragogy application or self-awareness as adult learners but did not apply andragogy.

**Summary**

The literature review included five sections: the conceptual framework, review of the research and methodological literature, review of methodological issues, a synthesis of research findings, and a critique of previous research. This literature review is a synthesis of the research available on the topic of study, which revealed key findings related to the purpose of this study. Professional development is difficult to study due to the lack of statistical or definitive proof that any kind of professional development model is effective (Guskey, 2014). Professional development lacks various elements such as alignment to broad goals, universal solutions,
diverse budget, and evidence of improvement. Additionally, varying factors involved in professional development affect its outcome. The literature review exposed a lack of research regarding adult learning principles and educator professional development that includes teachers’ perceptions of its implementation.

The conceptual framework demarcated traditional professional development and key concepts. Teachers’ knowledge should increase but traditional professional development is ineffective. Teachers feel dissatisfied by the delivery and design; they are not engaged nor involved. Teachers express interest in being involved in their learning and having more responsibility. To accomplish this, the trend of thinking of teachers are passive learners must change. Teachers are adults; therefore, they should be taught using adult learning principles. One such framework is andragogy developed by Knowles et al (2015), which uses principles of how adults learn best to suggest the inclusion of teachers in the process of learning.
Chapter 3: Methodology

Introduction

The literature review in the previous chapter introduced research and data indicating educators’ discontent with traditional professional development. Previous researchers overlooked educators as active, adult learners who can contribute to the process of learning through their professional development. The bleak overview is a reminder that although researchers identified effective strategies to improve traditional professional development at the turn of the century, there is a discrepancy between research and practice (Jacob & McGovern, 2015). New research must focus on the needs of educators while improving traditional professional development. The motivation for the present study derived from the andragogy framework emphasizing adult learning through a set of principles that reflect characteristics that differentiate adults from children. The andragogy framework aligns with a process model that provides “procedures and resources for helping learners acquire information and skills” (Knowles et al., 2015, p. 51) rather than concentrating only on transmitting information or skills, as in a content model. The process model is inclusive of the educator as an adult learner with full participation in the collective process from inception to evaluation.

In this study, the outcomes focused on educators’ perceptions of traditional professional development with the andragogical assumptions and process model implemented through a qualitative action research study. This methodology was suitable as it allowed for participatory and collaborative action in solving the identified problem (Herr & Anderson, 2015). This study included educators, as adult learners, who assessed their own perceptions through a self-report questionnaire with open-ended questions about the andragogical process, principles, and design of professional development. The perceptions of adult learner participants indicated whether
implementation was successful through their responses to the open-ended questionnaire. This chapter includes the details of the methodology of the present action research study. This chapter includes: (a) a description of the research questions, purpose, and design; (b) the research population and sampling method; (c) the instrumentation, data collection, and identification of variables; (d) the data analysis procedures, limitations, and validation information; and (e) expected findings and ethical issues.

**Research Questions**

This inquiry originated from the literature review that revealed teachers’ dissatisfaction with traditional professional development (Bill and Melinda Gates Foundation, 2014). The researcher explored whether andragogy can improve teachers’ perceptions of traditional professional development. The research study pursued the following research questions:

1. How does the andragogy framework improve teachers’ perceptions about traditional professional development?
2. What, if any, specific part of the andragogical process assist in improving teachers’ perceptions about traditional professional development?
3. What, if any, specific part of the andragogical process detract from attaining higher perceptions about traditional professional development?

**Purpose and Design of the Study**

The purpose of this action research study was to improve teacher’s perceptions of traditional professional development using andragogy, an adult learning framework, for educators at an urban public school district in southern United States. The design involved the planning, implementation, and evaluation portions and included teachers in the process as specified in Knowles’ andragogy (Knowles et al., 2015). Past researchers confirmed teachers’
dissatisfaction with traditional professional development practices despite it being the highest attended form of professional development (Jacob & McGovern, 2015). There is contrasting evidence of the success of best practices (Hill et al., 2013). The replacement of traditional professional development is impractical; however, using the few strategies that are effective while implementing new strategies, such as andragogy, may create an effective format (Siko & Hess, 2014). New research may improve the perceptions, actions, and processes of participants who desire change. Thus, the researcher used teachers’ perceptions as data to apprise how professional development should be implemented.

Traditional educator professional development is deficient, failing to include educators as the most important factor in teaching and learning (Darling-Hammond, 1997). Researchers overlooked educators in the process of developing, implementing, and evaluating professional development. The Bill and Melinda Gates Foundation (2014) reported only 29% of 1,300 teachers were extremely satisfied with professional development and those who felt dissatisfied believed their time was mismanaged and poorly organized. Educators felt underrepresented in the process. The paradigm for teachers should involve greater responsibility, supportive attention, and actively thinking of ideas for and with each other (Bill and Melinda Gates Foundation, 2014).

Traditional professional development is not useful with one-time workshops, but can be beneficial when several carefully planned and meaningful sessions transpire over time (Truesdale, 2003 as cited in Gulamhussein, 2013). This is valuable to contextualize the problem of educator professional development. It is better to include the process of educator learning to understand that learning emerges over time using andragogy. Kennedy (2016) suggested future research must shift toward understanding and considering the ways teachers learn. One-time
workshops do not allow for profound discussions or ownership of professional development. Teachers want to be vocal in the process of their learning (Patton et al., 2015). Therefore, the present action research used a qualitative methodology. Including teachers in a cyclical process to plan, implement action, evaluate the process, and reflect on their growth from the professional development created the foundation for active collaboration, participant voice, and resolution (Herr & Anderson, 2015).

Lewin (1946) was the first to finalize action research into a theory within the social sciences (Herr & Anderson, 2015). Adelman (1993) described Lewin’s purpose to “demonstrate, respectively, the greater gains in productivity and in law and order through democratic participation rather than autocratic coercion” (p. 7). As action research progressed into a clearly defined methodology, Lewin defined four types of action research. This study used participatory action research, which involves participants in all aspects of the research to inspire change.

Merriam and Tisdell (2016) defined five key principles of action research:

1. It is based on an authentic problem with possibility of improvement.
2. The intention is to develop in real-time; it is a cyclical process.
3. Researchers and participants work collaboratively.
4. The researcher may be known (insider) or unknown (outsider) to the community.
5. Concurrently, the researcher and participants gather and analyze the data for change.

**Action Research Process**

Action research is a cyclical process based on the participation of others and includes four parts: (a) a plan to improve the current process/condition; (b) act to apply the plan; (c) time for observation; and (d) reflection for further planning or amendments (Kemmis, 1982, p. 7 as cited in Herr & Anderson, 2015).
Develop a plan. The purpose of this study was to improve traditional professional development based on teachers’ perceptions through action research. The researcher used Knowles’ andragogical principles and process for learning (Knowles et al., 2015). The andragogical principles and process for learning are essential to developing a plan to improve current conditions because they encompass characteristics of adult learners and provide guidelines to teach them according to their needs. Adult learners provided feedback as to whether using andragogy contributed to their satisfaction with professional development. The researcher acquired an adequate number of participants, finalized the consent for their participation in the study, reserved the location of the study, and gathered all necessary resources. This section includes descriptions of the roles of the researcher and participants, the research timeline of events, and an overview of the process.

Participants. The sample selection best suited for qualitative study is non-probability. The researcher selected a specific population so there was no equal chance to participate (Creswell, 2013; Merriam & Tisdell, 2016). The target population of this study included teachers in the United States who taught pre-Kindergarten through 12th grade in public school districts. The sampling frame for this study was all teachers employed at one urban, southern school district in the United States that was the research site. The sampling frame was attained from the school district’s Microsoft Azure Active Directory list, a technology application used by Information Technology departments as a form of employee management and their access to district technology services such as email, workflow, or time clocks. This application has all employee information stored from Human Resources, creating distribution lists based on position. The type of sampling was purposive (Merriam & Tisdell, 2016).
**Timeline sequence.** After a considerable number of volunteers responded, approximately 22 participants, the researcher set an initial meeting to describe the study in detail, attained informed consent, and set future dates for training sessions. The researcher created a tentative timeline for a 13-week research study as follows:

- **Week 1:** A 1-hour initial meeting to describe the study, attain informed consent, and set the dates for future professional development sessions according to timeline.
- **Week 2:** Meet for 2-hour professional development session.
- **Week 3:** Do not meet; participants may study on their own if desired.
- **Week 4:** Meet for 2-hour professional development session.
- **Week 5:** End of first cycle. Do not meet, but complete online questionnaire.
- **Week 6:** Meet for 2-hour professional development session.
- **Week 7:** Do not meet; participants may study on their own if desired.
- **Week 8:** Meet for two-hour professional development session.
- **Week 9:** End of second cycle. Do not meet, but complete online questionnaire.
- **Week 10:** Meet for 2-hour professional development session.
- **Week 11:** Do not meet; participants may study on their own if desired.
- **Week 12:** Meet for 2-hour professional development session.
- **Week 13:** End of cycle; final session. Wrap up and complete final questionnaire.

The training sessions aligned with the action research cycle spanning 16 weeks with three cycles meeting every other week and extra time to recruit participants. This timeline also adhered to the conditions set forth by the research site. For example, the timeline accommodated the State of Texas Assessments of Academic Readiness (STAAR) state-mandated testing. The timeline for each individual cycle included time to plan the goals through a learning contract, implement
teachers’ self-selected activities, and evaluate the work and process. Meeting together following this schedule allowed the participants to learn from each other and from the researcher as facilitator, if needed. Meeting face-to-face provided time to address questions, collaborate, or reflect. This continued twice more, but could have ended if the feedback stipulated participants felt satisfied with the new design.

**Learning contract.** The researcher, as facilitator, and participants created a plan/learning contract that detailed the learning goals and activities. Tough’s (as cited in Knowles et al., 2015) research strengthened the idea that adults are more self-directing when learning occurs authentically. That is, adults prefer and respond to learning that occurs through self-inquiry or need rather than learning dictated by another person. As Knowles et al. (2015) indicated, self-directed learning can stimulate a desire to learn at any time, but this method can be in direct opposition to mandated professional development by organizations. These diverging views of self-inquiry and mandated learning coalesce in the form of a learning contract that combines self-inquiry, aspirations, and organizational requirements. Learning contracts amalgamate adult autonomy and accountability by “providing a means for negotiating a reconciliation between external needs and expectations and the learner’s internal needs and interests” (Knowles, 1995, p. 24). Knowles et al. (2015) specified eight steps for developing the learning contract:

1. Identify the learning needs.
2. Create the learning objectives.
3. Record the resources and strategies.
4. Describe the evidence of accomplishment.
5. Document how the evidence was validated.
6. Peer consultation; contract review.
7. Implement the learning contract.

8. Evaluate the learning.

Learning needs assessment. The researcher gathered the learning needs of each participant through a rubric created by Johnson and Mielke (2013) that assessed teachers’ effective use of technology in the classroom. The rubric employed Charlotte Danielson’s The Framework for Teaching (as cited in Johnson and Mielke, 2013). There are four domains in the rubric. The first domain analyzes the planning and preparation of every teacher through effective resources to determine each student’s level. The second domain considers the classroom environment promoting technology use through meaningful and safe interactions. Domain three focuses on instruction of the teacher that seamlessly integrates technology through a variety of forms allowing students to be creative. In domain four, professional responsibilities, the rubric stresses using technology for productivity and administrative tasks. For the present study, participants used Johnson and Mielke’s (2013) rubric as a diagnostic tool to gauge their proficiency level. Teachers identified their learning needs as either basic, proficient, or distinguished. The learning needs assessment was the basis for their learning contracts.

Content focus and structure. For this study, professional development sessions focused on technology integration topics. Each session focused on the learning needs from the survey and the interests of the participants. There are four domains based on the rubric (Johnson & Mielke, 2013) to assess learning needs:

1. The planning and preparation domain features topics on theory in technology integration, the importance of technology integration, understanding state technology standards and objectives, assistive technology, and digital resources and assessments.
2. The classroom environment domain presents topics about technology and online safety, classroom management, and 21st century teaching and learning.

3. The third domain on instruction introduces ubiquitous applications for technology integration, content-specific technology integration, and technology for differentiation.

4. The fourth domain includes information about technology and productivity, technology and communication, and Personal Learning Networks (PLNs).

During each session, participants worked on their goals through an activity, self-study, collaboration with peers, or input from the researcher as facilitator as specified by the participant in the learning contract. At the start of each cycle, each session was planned to include the agenda with specified time allotted to small or whole group instruction or solely concentrating on individualized learning with assistance from others. Each participant worked at a different pace and on different goals, which they set during the first professional development session through the learning contract. After each cycle, the participants provided feedback and assisted in redesigning the format for the next cycle.

Knowles et al. (2015) acknowledged previous research in the fields of psychology and philosophy that were contributing factors to the conceptual framework for andragogy. The concentration on learner-centeredness exemplified the way the researcher organized the professional development sessions. To be student-centered, sessions had dedicated time based on the students’ learning rather than the teacher’s transmittance of knowledge to students. Rogers (as cited in Knowles et al., 2015) stressed that each person learns on their own through relevant experiences that are inviting, safe, and reassuring. Likewise, Dewey’s (as cited in Knowles et al., 2015) research encouraged student-centeredness; the first step was determining
the needs and interests of the student. Knowles et al. (2015) stated that each individual is responsible for their learning if they are able to choose what is relevant and needed. The adult educator is a facilitator who assists students in learning and accepts the adult learners’ experiences as part of the learning.

The researcher as a facilitator in the sessions did not provide any lengthy lectures because it directly conflicted with the idea of holding the student and their learning experiences as most important. The researcher as a facilitator did not strictly use whole group instruction. Rather, the researcher provided guidance to any participant who needed extra help in the form of individualized teaching within the sessions. The researcher assisted in learning experiences but always maintained learner-centeredness rather than teacher-centered instruction. The researcher as a facilitator provided any tutorials necessary to enable learning.

**Andragogy assumptions/principles.** The andragogical model provides assumptions for adult learners (Knowles et al., 2015). The researcher as a facilitator considered the participants as adult learners during the professional development sessions. The adult learners needed to know what they were learning to create relevance and inquiry; thus, the researcher defined and stated the purpose of each professional development session. The adult learners were independent and the researcher as facilitator provided opportunities for participants to make decisions through the learning contract and to share their experiences with others during the sessions. The adult learners learned from relatable and job-specific tasks. The researcher assisted participants in creating activities and tasks that were appropriate for their level of experience, knowledge, and potential (i.e., not too easy or too complicated). Participants created their learning goals and the researcher assisted in creating activities that were meaningful. Last, the researcher measured the adult learners’ intrinsic motivation using the open-ended
questionnaire responses that indicated whether participants felt motivated. The researcher as facilitator assisted the adult learners in creating meaningful and relevant tasks during each cycle of this action research.

**Implement the plan.** This stage is the action, the implementation of the goals, that the study set. The collaboration and planning processes determined the actions depending on the needs of the participants during scheduled traditional professional development sessions. Implementation of Knowles’ andragogical process model for learning occurred at this stage. The first principle in this process model is that adults must be included in the entire process; they must outline the objectives, tasks, and other information pertinent to making resolute decisions (Knowles et al., 2015). This transpired during the first week of the research cycle and repeated during cycles two and three with new goals, depending on the participant.

Knowles’ second recommendation stated that adult learners need an environment that is favorable to learning with necessary equipment and resources (Knowles et al., 2015). The focus of the professional development sessions was technology integration; therefore, the researcher ensured that hardware including iPads, laptops, desktop computers, projectors, and a Mimio device were present. The adult learners required full involvement in planning for their learning, which took place during the first week of the cycle and throughout the study. During the planning stage, the adult learners assessed their needs, participated in creating the objectives customized for their needs and learning desires, and assisted in developing learning activities to develop positive results (e.g., acquiring new knowledge or learning a new skill). A learning contract summarized learning objectives and evaluated them (Knowles et al., 2015).

The next step was to conduct the learning experiences in three different cycles for four weeks each. Knowles relied on Kirkpatrick’s (1971) evaluation process, but the current study
focused only the first level to assess participant perceptions about the process of implementation. This step of the andragogical process occurred concurrently with the next step of action research.

**Observation of actions.** In this stage of action research, the researcher monitored participants as they gathered the necessary data appropriate for decision-making in collaboration with others. Observation occurred during each session when participants worked on their learning goals and during each face-to-face session for all three cycles.

**Reflection for change.** The action research process requires purposeful reflection by individuals and collectively by the research group. This step facilitated refinement of the process, design, or other areas based on feedback. Action research requires reflection; however, it is most important to reflect at the end of each cycle to review the actions that improved and instances that hindered growth. Unless determined otherwise by the participants, the researcher reserved the fifth, ninth, and fourteenth weeks for reflection via open-ended questionnaire. This methodology differed from previous research on teacher professional development or andragogy implementation. For example, Moore’s (2013) qualitative study focused on improving teachers’ instruction by including more technology integration through andragogy was qualitative but only included a sample population of four participants, used a variety of data collection methods, and focused on one-to-one coaching. Vorhies (2014) sought to understand teachers’ preferences of style of learning. Other andragogical research, documented by Henschke (2013), were mainly quantitative studies.

Three elements of the current study differ from those studies. First, the emphasis of the present research was on andragogy itself and its effects on adult learners. Specifically, the researcher focused only on the assumptions Knowles compiled or a model called the *andragogy in practice* model (Knowles et al., 2015). Andragogy may be beneficial to learning; it is a
natural progression of how certain professionals should learn in relation to their job (Henschke, 2013). Second, past researchers did not investigate the population in this study: educators in a pre-Kindergarten through 12th grade setting at one urban southern school district in the United States. Other professionals were the subject of past research, such as steel workers, nurses, and fiscal managers. Third, others studied andragogy in general, focusing on the adult educator’s role as a facilitator or their perceptions of teaching with an andragogical model. They did not use adult learners as participants to inform changes to professional development based on participants’ perceptions.

The intention of qualitative action research is to explore a known problem (Creswell, 2013). The motive for the present qualitative action research reflects four points. First, teachers expressed concern for the current conditions of traditional professional development. Using qualitative action research allowed teachers to express their concerns, opinions, and assert decisions throughout the process to ensure development of a design that was favorable to them (Creswell, 2013). Second, educators participating in traditional professional development are passive participants. With action research, the educators were active participants collaborating with the researcher. The goal was to improve traditional professional development from its current design by changing to learner-centered instruction focused on the adult learner. Third, traditional professional development is unsuccessful when planned as isolated, one-time sessions (Patton et al., 2015). Using andragogy acknowledges the need to include the participants in planning their time accordingly over several sessions, rather than just one (Knowles et al., 2015). Educators are adult learners; thus, it is best to employ an adult learning theory such as andragogy. Improvement of traditional professional development relied on the participants who
not only focused on the content of what they studied but also the process of attaining information and skills.

**Research Population and Sampling Method**

Qualitative action research necessitates studying fewer units, rather than many, to acquire data with breadth and depth (Creswell, 2013). Qualitative researchers study smaller samples to attain meaningful information. To attain sufficient information is to reach data saturation where data is repeated or no new information is revealed (Creswell, 2013; Merriam & Tisdell, 2016). The sample selection best suited for qualitative study is non-probability. Non-probability sampling allows the researcher to select a specific population and concentrate on answering the questions that qualitative research supports, “such as discovering what occurs, the implications of what occurs, and the relationships linking occurrences” (Honigmann, 1982, p. 84 as cited in Merriam & Tisdell, 2016, p. 96). In non-probability sample selection, the researcher has greater input, unlike probability sampling, to use judgement in the selection; not every person in the population has an equal chance to participate (Creswell, 2013; Merriam & Tisdell, 2016). The target population of this study were teachers in the United States who taught pre-Kindergarten through 12th grade in public school districts because the problem is teachers’ dissatisfaction with the way traditional professional development is implemented in these schools.

The sampling frame for this study were all teachers employed at one urban southern school district in the United States, which was also the research site. There were approximately 1,450 educators in the district. These educators had varied work experience ranging from 0 years to more than 35 years of work. Elementary educators may teach all content areas or be departmentalized and include music teachers, special education teachers (e.g., dyslexia and speech therapists), and physical education teachers. At the secondary levels, teachers are
departmentalized concentrating on specific content and include a myriad of vocational and other subjects. This school district operated on a nine-month school period with summer months off except for certain students who attended three weeks of summer school.

The sampling frame originated from the school district’s Microsoft Azure Active Directory list, a technology services application for employee management and access, which is connected to another application, Alio, used by the Human Resources department to manage personnel and payroll information. The type of sampling was purposeful or purposive (Merriam & Tisdell, 2016). Purposive sampling appealed to the researcher because of its direct function to acquire comprehensive and exact data through an adequate sample providing the necessary information (Merriam & Tisdell, 2016). Specifically, the researcher acquired a sample of teachers who worked at the research study site, an urban southern school district in the United States. All teachers at this school district attended professional development annually. The inclusion criteria were:

1. Professional certified teachers who teach in the southern region of the United States.
2. Teachers employed at the research site, an urban southern Unites States school district.
3. Teachers who maintain the status of teacher-of-record for at least one homeroom class in any grade pre-Kindergarten through 12th grade class for any content area.
4. Teachers who are not teacher-of-record but service students in smaller groups due to differentiated/specialized instruction (e.g., class size reduction teachers, resource teachers, content mastery teachers, or gifted and talented teachers).

The researcher required that all participants be available to participate for the time required for the duration of the study and be prepared to cooperate, discuss, and provide objective feedback.
The researcher gathered an initial list of 25 participants prior to the first meeting to preserve 17 participants after acceptance or denial through informed consent.

The researcher was employed by the district in which the study took place. Therefore, the researcher had access to organizational email addresses; however, the researcher attained permission from the researcher’s supervisor prior to commencing the study by requesting the use of the organization email system to send a mass email to all educators employed in the district. The recruitment of teachers occurred over a two-week period. The use of the district’s email system was to invite potential participants within the district. The researcher sent an initial email and sent reminders using the same announcement twice more within a two-week window. Additionally, during this time, the researcher contacted administrators by email to ask for support in encouraging participation. The researcher employed the help of other instructional technology employees and provided a hard copy of the recruitment announcement to give to teachers during their trainings or meetings.

**Instrumentation**

Based on the research questions, the researcher developed one questionnaire to measure teacher perceptions of traditional professional development delivery using andragogy and implementation satisfaction. The questionnaire consisted of unstructured, open-ended statements and questions for each participant to complete. The questions or statements were unstructured to allow participants to provide responses entirely in their own words (Creswell, 2013). The researcher provided questionnaires to all participants in an electronic format using the online application Google Forms at the end of each cycle during weeks five, nine, and fourteen (see Appendix E). This questionnaire gathered teacher demographic information, opinions on traditional professional development after each cycle, and opinions on andragogy in relation to
professional development. Action research requires a cyclical process in which feedback is given at the end of each cycle to gain new insights to solve the problem and reflect on the next cycle’s plan (Herr & Anderson, 2015). After the first cycle, a new cycle began with adjustments suggested from the participants (Herr & Anderson, 2015). At each cycle, the questionnaire identified elements that were undesirable to the participants to change.

The questionnaire included the topics of professional development and andragogy based on Knowles et al.’s (2015) research of teachers’ perceptions. Peer debriefing determined credibility of the questionnaire (Merriam & Tisdell, 2016). Colleagues of the researcher assisted in analyzing and providing recommendation to amend the questionnaire. These colleagues, four in total, were educators before they promoted into the Instructional Technology department as coordinators or trainers. Their current job expectation required the creation of various evaluations, analysis of data, and revision of evaluations, surveys, and other data instrumentation they used throughout the year for various reasons.

**Data Collection**

The collection of data is vital to understanding the process, participants, and the overall fulfillment of the study’s purpose (Herr & Anderson, 2015). The primary method of data collection for this research study was one questionnaire given at the end of each cycle during weeks five, nine, and fourteen. Participants completed the questionnaire three times because there were three cycles of the action research process. Using action research’s cyclical process ensures data collection, analysis of data, and action based on the data (Herr & Anderson, 2015). The researcher collected data each time to gain awareness of participant perceptions and take action to make corrective actions. The data was in the form of unstructured, open-ended responses. Questionnaires are appropriate for qualitative research as they can be flexible in
format and provide the necessary information to answer the research questions posited about teacher perceptions of professional development (Schmuck, 2006). The researcher maintained and analyzed questionnaires.

Other data in action research and the andragogy process model are the various professional development documents that arose through the process of setting objectives, the attainment of those objectives, and reanalyzing the process. These documents included the learning contracts created as part of the andragogy process, agendas, activities that adult learners planned and completed, and any field notes written by the researcher during the implementation of the andragogical process. Herr and Anderson (2015) emphasized that “some form of journaling is imperative for the action researcher as a way to document ongoing thinking, decisions, and action” (p. 91).

**Identification of Attributes**

An attribute is “any entity that can take on different values” (Trochim, n.d., para. 3). An attribute is a reasonable way to classify similar items. The research used one, open-ended questionnaire to evaluate participants’ perceptions of traditional professional development design and andragogy during the study. Attributes connected to the affective state of the participants based on agreement with the current state of professional development and the new design with andragogy that they experienced during the study.

**Data Analysis Procedures**

To align with the methodology of action research, data analysis was an ongoing process of interpreting evidence. Creswell (2013) described data analysis as part of the qualitative research process of coding, which necessitates data organization through codes, categories, and classification into themes. Similarly, Merriam and Tisdell (2016) affirmed the process of data
collection and analysis as concurrently revealing discoveries while the researcher observes, collects, and analyzes the data.

**Timeline and data security.** The initial span of the research was approximately 12 weeks, meeting seven sessions for two hours every other week. Each cycle was intended to last for 4 weeks, repeating the cycle three times. Action research stipulated the participants’ active inclusion in the decision process that changed the timeline once participants discussed the tentative timeline provided. Action research originated from the beliefs that research can be a dynamic process that resolves issues through the actions of those affected by a problem. It is a cyclical process that establishes a continual and flexible advancement to solve a problem. Herr and Anderson (2015) specified the importance of the unique features of action research’s cyclical process. Each cycle should produce a practical solution. Each cycle influenced the researcher and participants in a manner that evoked new ideas or knowledge that, in turn, influenced problems to be solved (Herr & Anderson, 2015). Data analysis occurred simultaneously with data collection.

The assistance of technology proved essential to saving the considerable amount of data. The researcher saved all data electronically for straightforward retrieval and management. After four weeks of implementation, the researcher distributed a questionnaire for electronic completion using Google Forms, an application that creates digital surveys and questionnaires. Google Forms auto-populates data into a spreadsheet using Google Sheets. The researcher scanned and saved these files into a cloud-based storage system, Google Drive. Google Drive sorts all files by participant; however, the researcher used alternative naming conventions to ensure confidentiality.
The participants completed the questionnaire during weeks five, nine, and fourteen (i.e., the evaluation and reflection stages of action research). The reason for a concurrent analysis was to collect data and immediately analyze it (Merriam & Tisdell, 2016). In this way, the researcher gathered new information to influence the researcher and participants’ decisions influencing the process to find a solution. Unlike quantitative designs that capture data in a single moment to interpret the meaning at a later time, qualitative research pursues ongoing data to offer insights at that moment (Schmuck, 2014).

**Coding strategies.** For data analysis of the open-ended responses, coding methods are necessary because participants responded openly and in their own voices. “A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language” (Saldaña, 2016, p. 4). The researcher produced codes that embodied information deemed important from the data and translated data into codes (Saldaña, 2016). These codes extracted critical information from the data that formulated new themes or categories that elucidated new interpretations of knowledge (Saldaña, 2016). The researcher employed the data analysis spiral process suggested by Creswell (2013) while using a coding strategy recommended by Saldaña (2016).

**Data management.** The initial step in Creswell’s (2013) spiral process is data arrangement. This step informed the manner of organization. For the present study, the researcher stored data from the electronic questionnaire via automatic population of the results into a spreadsheet. The data analysis was manually completed by printing the responses and writing the information in the margins instead of using a computer-assisted program. Saldaña (2016) suggested printing materials in “double-spaced format on the left half or two-thirds of the page, keeping a wide right-hand margin for writing codes and notes” (p. 19).
**Read and pre-code.** Creswell (2013) suggested reading each of the responses while annotating notes referencing an idea or concept. Saldaña (2016) referred to this as pre-coding. The researcher read the text to find commonality in the answers. The researcher highlighted the text if it was quoting someone directly or underlined the text to show it referred to an emotion. Pre-coding allowed the researcher to identify certain types of responses in preparation for the next step.

**Code.** The researcher used a technique known as simultaneous coding using descriptive coding first, then emotion coding. Simultaneous coding allowed for more than one code in the same data. This method revealed initial suggestions to return to the data with a novel perspective to obtain new, alternative codes.

**Descriptive coding.** Saldaña (2016) defined descriptive coding as a one-word noun or short phrase summary, “the basic topic of a passage of qualitative data” (p. 102). Saldaña (2016) suggested descriptive coding for most qualitative studies, including action research. Descriptive coding was acceptable for this study as it assisted in forming concise ideas from the open-ended questionnaire responses regarding traditional professional development.

**Emotion coding.** Emotion coding uses emotional words, feelings, or opinion-based data. Emotion coding serves a purpose when qualitative research explores participants’ experiences. This study aimed to improve teachers’ perceptions of professional development. Understanding emotional perspectives propelled the study to progress by finding collective motives to take further action. Corbin and Strauss (2015) affirmed, “one can’t separate emotion from action; they flow together, one leading into the other” (Saldaña, 2016, p. 125).

**Data interpretation and representation.** The next step was synthesizing information into categories. The researcher investigated recurring patterns, topics, phrases, or perceptions based
on the previously created codes (Creswell, 2013). Saldaña (2016) referred to this process as “code mapping” in which previously created codes are “clustered” into broad groups (p. 278). Recording the list of categories constructed with a short definition referenced further modification of coding. As noted by Creswell (2013), a general guideline is to conclude with approximately six to ten categories. Based on the purpose of the study, possible initial categories included satisfied, dissatisfied, design, content of professional development, processes of andragogy, collaboration, self-directed learning, and overall satisfaction. The researcher did not limit synthesizing the data to these pre-set categories; rather these were only a sample based on the goal of the study. After completing coding and categorizing, the researcher presented the findings to the participants to refine the process cycle. Creswell (2013) and Saldaña (2016) recommended visually appealing depictions of the data.

Limitations of the Research Design

Specific limitations emerged in this action research study. They included:

1. Participation was voluntary and those who choose to participate represented various career backgrounds prior to teaching, experience levels of teaching, tenure within the school district, individual differences as learners, and varying levels of expertise.

2. The researcher attained access to the research site; however, there were time constraints as to when the teachers could meet within a given day and throughout the school calendar schedule. For example, research could not occur during the last twenty days of school nor on days of state assessments.

3. Using an open-ended self-report questionnaire relied on participant honesty and elaboration of details to analyze the data.
4. This study was conducted in one school district using a sample population; therefore, the results may not be generalizable. Although generalizability may not occur, transferability is possible with this study. Knowles’ research on andragogy included studies of a myriad of settings and professions (Knowles et al., 2015). To allow others the opportunity to formulate a mindful decision on this study’s transferability, the researcher relied on a strategy of rich, thick description (Creswell, 2013). Rich, thick description is “a highly descriptive, detailed presentation of the setting and in particular, the findings of the study” (Merriam & Tisdell, 2016, p. 257).

**Validation**

Validation is necessary for a research study. When preserving validity in a study, the researcher maintains the research is authentic by performing measures to safeguard and maintain “confidence in the conduct of the investigation and in the results” (Merriam & Tisdell, 2016, p. 238). This increases the value of this study and other research closely related that expands on this study’s topic in a trustful and ethical manner. For qualitative research, Lincoln and Guba (as cited in Merriam & Tisdell, 2016) established equivalent terms to quantitative research validity. The trustworthiness in this study will be determined with the techniques listed below.

**Credibility.** Merriam and Tisdell (2016) demarcated credibility as a way to comprehend whether a research study aligns with reality. Creswell (2013) described credibility as the reliability or plausibility of the research study. That is, the methodology of the study should measure and align with the research questions; which should be tangible. The strategy used to ensure credibility throughout the study was respondent validation/member checks. This strategy lessened “misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and
misunderstanding of what you observed” (Merriam & Tisdell, 2016, p. 246). Member checking allowed the researcher to request participants’ feedback on the data and the interpretation from the analysis (Creswell, 2013).

**Transferability.** Transferability applies to qualitative research as the possibility of a study’s results applying to other research settings or other individuals in similar situations (Creswell, 2013). Providing depth in the research description is opportunity for transferability by other researchers who want to replicate the study. Elaborating the research study details allows the reader to decide how or if it relates to their specific situation. Bloomberg and Volpe (2016) explained, “transferability refers to the fit or match between the research context and other contexts as judged by the reader” (p. 164). To ensure transferability for this study and for the instrumentation, the researcher provided rich, thick descriptions of the procedures (Bloomberg & Volpe, 2016; Creswell, 2013; Merriam & Tisdell, 2015). For descriptions to be rich and thick, the researcher included all appropriate steps, procedures, documents, and other information that would constitute an abundance of details for readers to follow and reproduce.

This study involved only one organization, a large public school district with more than 1,300 full-time teachers in pre-Kindergarten through 12th grade out of approximately 3,500 full-time employees. The teachers were the population of the study. The sampling frame consisted of all active teachers in the urban southern school district in the Unites States. The teachers in this school, much like the student population, were comprised of an ethnic minority group. The school district serves more than 20,000 students with almost all of the student population identified as being part of an ethnic minority group.
**Expected Findings**

The problem in the study was teacher dissatisfaction with traditional professional development. The researcher desired a solution to traditional professional development to improve teacher perceptions and attitudes. In the action research, participants provided feedback and aligned with adult learning principles. Based on previous literature, the research applied adult learning principles, specifically andragogy, to improve educators’ attitudes about traditional professional development. The researcher expected to discover positive teacher perceptions by using andragogy within traditional professional development design.

**Ethical Issues**

**Conflict of interest assessment.** The Institutional Review Board (IRB) described conflict of interests as any situation that may lead to inappropriate influence or intimidation and may or may not include financial benefits (U.S. Food and Drug Administration, 2016). This action research study occurred at a school district where the researcher was currently employed; however, there was no influence on the researcher or the participants during any part of the study. The researcher conducted a conflict of interest assessment to ensure the absence of any conflict. The researcher asserted:

1. There was no monetary gain for either researcher or the participants.
2. The researcher did not know all individuals in the population. The researcher may know some colleagues but this did not have any effect on the study.
3. The researcher had no association with members of the school board, external consultants, or other third-party members.
4. Disclosure was explicit with participants.

**Researcher’s position.** In this research, positionality of the researcher is defined as an
insider in collaboration with other insiders (Herr & Anderson, 2015; Merriam & Tisdell, 2016). As a previous educator and current trainer of educators, the researcher held a position of an insider. There were two benefits to this arrangement. First, there was potential for the research to have a positive influence within the setting; second, there was opportunity for amicable equality (Herr & Anderson, 2015). This research may benefit the participants and the larger population in the setting by improving professional development methods. Furthermore, “getting access and developing trust with participants is often more natural if relevant aspect of one’s positionality are similar to those under the study” (Merriam & Tisdell, 2016, p. 64). The role of the researcher was limited although the researcher was employed within the same district as the participants and research site. The researcher’s role within the district in relation to the teacher participants is that of a colleague, not a supervisor.

**Ethical issues in the study.** Patton (2015) stated, “ultimately, for better or worse, the trustworthiness of the data is tied directly to the trustworthiness of those who collect and analyze the data – and their demonstrated competence” (as cited in Merriam & Tisdell, 2016, p. 260). All human subjects participated voluntarily. All participants submitted consent based on informed decisions. All participants knew the purpose, process, and method of research (Herr & Anderson, 2015). Moreover, the researcher informed participants about any potential risks, although there was no harm to the participants in this study.

The researcher engaged in thoughtful and ethical data collection from participants. The researcher for this action research study ensured confidentiality and a right to privacy during participation and thereafter. This information is kept confidential by collecting the data anonymously. Moreover, the researcher made thorough efforts to maintain confidentially of the research site. Tracy (2013) explained, “a relational ethic means being aware of one’s own role
and impact on relationships and treating participants as whole people rather than as just subjects from which to wrench a good story” (as cited in Merriam & Tisdell, 2016, p. 261). The researcher avoided offensive or unethical treatment of the participants and data.

Summary

Traditional educator professional development is a mainstay in education to introduce new knowledge, review strategies, and pursue professionally growth. Yet, professional development’s focus is on its content rather than the process of how adults learn and what they prefer. By studying the effects of andragogy on traditional professional development, education leaders may improve the quality and teacher’s perceptions of traditional professional development. The purpose of this study was to improve traditional professional development processes by implementing Knowles’ andragogy, focusing on the assumptions of adult learning and the process model for learning. This study focused on improving traditional professional development based on teachers’ perceptions. The study was qualitative, action research involving participants in making decisions, collaborating, and being part of the investigation to resolve the problem.

The choice to study this topic was a response to previous research stipulating teacher dissatisfaction with professional development design, lack of collaboration, and lack of opportunity for ownership or self-directed learning (Jacob & McGovern, 2015), although research exists regarding effective professional development strategies (Wei et al., 2009). This inconsistency between research and practice provided an opportunity to perform a research study to change current conditions. Adult learning principles, specifically Knowles’ andragogy theory (Knowles et al., 2015), assumptions, and the process model for learning may correspond to implementation in traditional professional development settings with educators.
This chapter included details of the methodology of the action research study. The researcher defined the research questions, study purpose, and design features. Additionally, this chapter included the research population and sampling method, the instrumentation, data collection method most appropriate for this study, and the known attributes of the study. This chapter included descriptions of data analysis procedures and the limitations of the study. Finally, the chapter concluded with discussions of credibility, expected findings, and ethical issues.
Chapter 4: Data Analysis and Results

Introduction

As designed, this study involved implementing andragogy assumptions and the andragogical process for learning through qualitative action research with traditional teacher professional development. Action research is cyclical and purposeful to allow for application through trial and error by testing the framework, evaluating it, making changes, and trying again with potentially improved results (Bloomberg & Volpe, 2016; Merriam & Tisdell, 2016). Three cycles were completed; each ended with the completion of an open-ended questionnaire. The researcher analyzed data to identify and describe the attitudes and perceptions of the participants towards andragogy use in traditional professional development. Analyses of these data may inform the redesign of traditional professional development to increase the satisfaction of teachers who rely on it for professional growth. This chapter includes the findings from the research in detail, including the analysis and a discussion, as they relate to the research questions that guided the study.

Findings provided insight regarding whether teachers’ low perceptions of traditional professional development at the research site improved by using andragogy as an added feature within traditional professional development. This research study derived from literature describing a problem with traditional professional development’s effectiveness based on teachers’ negative perceptions. The main purpose for this research study was for teachers, as participants, to be actively in charge of their learning. During the study, participants were involved in making decisions about their own learning; therefore, the study was action research (Bloomberg & Volpe, 2016). This chapter includes descriptions of the sample, research methodology and analysis, a summary of the findings, data, and results.
Description of the Sample

The sample for this research was small to gather meaningful data. The sample selection was purposive, targeting teachers in the United States who taught pre-Kindergarten through 12th grade in public school districts. The sample frame was teachers employed in one urban southern school district in the United States. During the initial recruitment phase, 22 teachers submitted their request to participate. A total of 17 teachers consented to participate in the study; however, two withdrew within the first week due to scheduling conflicts and a third participant left the district towards the end of the cycle prior to completing the questionnaire. The final count of participants was 14. Of those, only 12 completed the questionnaire at the end of the third cycle, leading to an 86% response rate and 14% non-response rate. Baruch and Holtom (2008) argued that the ideal response rate for completion is 100% of the sample population. Research, however, reveals that the response rate is always less than that. Demographic data consisted of gender, age, teaching experience, education level, and technology level. All respondents answered demographic questions.

Gender and age. All participants responded to this question (12 responses). Of the 12 participants, seven (58%) were female and five (40%) were male. The ages ranged from 27 years old to 66 years old. Most participants were in the middle-aged bracket from 40 to 50 years old (42%). There were no participants for the age bracket spanning 51 to 60 year of age. In Table 1, the participants’ age ranges are clustered by 10 years, displaying the number of females and males in each age range, and the percentage in that 10-year cluster.
Table 1

Participants’ Age Ranges

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Female</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20–30</td>
<td>2</td>
<td>0</td>
<td>16.5</td>
</tr>
<tr>
<td>31–40</td>
<td>2</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>41–50</td>
<td>3</td>
<td>2</td>
<td>42</td>
</tr>
<tr>
<td>51–60</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>61–70</td>
<td>0</td>
<td>2</td>
<td>16.5</td>
</tr>
<tr>
<td>Totals (N = 12)</td>
<td>7</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

Teaching experience. The participants also provided information about their years of teaching experience. The years of teaching ranged from zero years (first year teacher) to 39.5 years of teaching experience. Additionally, participants provided information regarding their current teaching level, whether elementary or secondary. Ten of the 12 participants (83%) worked in the secondary level. In Table 2, the participants’ years of teaching experience are clustered into several groups that display the number of females and males in each range and the percentage total in the group.

Table 2

Participants’ Teaching Experience

<table>
<thead>
<tr>
<th>Years of Teaching</th>
<th>Female</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 5</td>
<td>2</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>6 – 10</td>
<td>2</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>10 – 20</td>
<td>3</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>20 or more</td>
<td>0</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Totals (N = 12)</td>
<td>7</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

Education level. Participants shared their highest degree acquired. Only four participants (33%) continued their education to obtain a master’s degree. In Table 3, the participants’ education levels are clustered by the three higher education degrees (bachelor’s, master’s, and doctorate). Each of those groups displays the number of females and males in each
group and the percentage in that for each group.

Table 3

Participants’ Education Level

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Female</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>4</td>
<td>4</td>
<td>67</td>
</tr>
<tr>
<td>Master’s</td>
<td>3</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Totals (N = 12)</td>
<td>7</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

Technology proficiency level. The last demographic question focused on teachers’ personal ratings of their technology proficiency level (i.e., how tech-savvy they feel they are). Only one (8%) rated the level as basic/intermediate, seven (58%) rated their technology level as intermediate or average, three (36%) rated their technology level as proficient or advanced, and one (8%) rated their level as very advanced or proficient. Table 4 includes participants’ full background, including technology proficiency. Each participant is described by their gender, age, years of experience, degree, and technology proficiency.

Table 4

Background of Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Age</th>
<th>Years Teaching</th>
<th>Degree</th>
<th>Technology Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-1</td>
<td>Male</td>
<td>45</td>
<td>18</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-2</td>
<td>Male</td>
<td>32</td>
<td>5</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-3</td>
<td>Female</td>
<td>34</td>
<td>8</td>
<td>Master’s</td>
<td>Proficient/Advanced</td>
</tr>
<tr>
<td>P-4</td>
<td>Female</td>
<td>27</td>
<td>0</td>
<td>Bachelor’s</td>
<td>Basic/Average</td>
</tr>
<tr>
<td>P-5</td>
<td>Female</td>
<td>34</td>
<td>12</td>
<td>Master’s</td>
<td>Proficient/Advanced</td>
</tr>
<tr>
<td>P-6</td>
<td>Male</td>
<td>66</td>
<td>20</td>
<td>Bachelor’s</td>
<td>Proficient/Advanced</td>
</tr>
<tr>
<td>P-7</td>
<td>Male</td>
<td>64</td>
<td>39.5</td>
<td>Master’s</td>
<td>Very Proficient</td>
</tr>
<tr>
<td>P-8</td>
<td>Female</td>
<td>41</td>
<td>15</td>
<td>Master’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-9</td>
<td>Male</td>
<td>45</td>
<td>12</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-10</td>
<td>Female</td>
<td>46</td>
<td>18</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-11</td>
<td>Female</td>
<td>47</td>
<td>3</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
<tr>
<td>P-12</td>
<td>Female</td>
<td>28</td>
<td>6</td>
<td>Bachelor’s</td>
<td>Average</td>
</tr>
</tbody>
</table>
**Research Methodology and Analysis**

The purpose of this qualitative action research study, unlike other research on traditional professional development, was to understand and improve teachers’ perceptions using an open-ended questionnaire as its main instrumentation, and researcher observations. The teachers were in active roles throughout the study and were able to freely voice their opinions. Participants made decisions about their learning as part of the andragogical process while providing insight into the elements of each cycle of the research.

With qualitative research, the aim is to gather participants’ insights, reasons, or opinions about the research problem. Action research solves a problem. In essence, the process includes having a problem, devising a plan, and solving it while using the participants’ opinions and reflections to progress towards a solution. It is an ongoing process consisting of data interpretation through codes, categories, and themes.

**Action research.** Action research is a cyclical process based on the participation of others that has four parts: (a) a plan; (b) application of the plan; (c) observation; and (d) reflection (Kemmis, 1982 as cited in Herr & Anderson, 2015). The goal of the action research in this study was to improve teacher perceptions by adding the andragogy framework to traditional teacher professional development design.

**Plan.** The outcome at this stage was to have a draft, an executable plan of action, that would sustain the entire research process. This included: (a) recruitment and site access; (b) research schedule; and (c) questionnaire preparation. With action research, some of the items in the action plan were flexible and discussed with the participants. The researcher greatly valued their input. Descriptions of the finalized actions appear in the following sections.
Recruitment and site access. As part of the planning phase, site access was acquired by completing an Institutional Permission packet created by the research site, a public school district, that is required for any research conducted on their premises. The information they requested related to the title of the research, purpose, and participants as well as agreement to their terms (e.g., adhering to certain schedules to avoid disrupting tests or other important events). The researcher submitted a brief abstract that included sample population descriptions, data collection methods, a timeline, and potential risks and discomforts. Permission was granted by the department head for the Curriculum, Instruction, and Assessment Department.

Once the researcher received permission from the Concordia University IRB (see Appendix A) to begin the research study, the initial recruitment of volunteer participants began. The researcher sent a recruitment email (see Appendix B) two weeks prior to the end of the school year. The initial email stated “Volunteers wanted for research study” in bold at the top. The email stated the title of the research, intended audience, purpose, benefits, risks, and compensation. At the bottom of the informative text was a link to a Google form to sign-up, if interested. Further below was information about the researcher and the research information from IRB. Within the first few days, approximately 14 individuals registered with interest to participate. A week later, the email was resent with a short reminder at the top of the email. A few more volunteers registered during this time.

At the same time, the researcher forwarded the recruitment email with another script directed toward campus administrators (see Appendix C). Three administrators replied to the email citing support for the research. Another reminder email was sent to all teachers within the district. The researcher requested assistance from campus technology personnel to announce the study and refer potential participants to the researcher. The recruitment time extended an extra
week, which was the last week of school. The researcher sent an additional follow-up email (see Appendix D) to participants who already registered to volunteer. The initial meeting was scheduled for the first week of summer. This registration was not an automatic consent to participate, but rather interest in participation. The recruitment window closed 3 weeks later. By this time, six individuals declined due to scheduling conflicts. There were several inquiries, calls, and emails asking for more information about the research and schedule.

*Research schedule.* Action research stipulates an ongoing and flexible stance to reassess and change any action, if necessary. Initially, the researcher scheduled the study for approximately 12 weeks. This was tentative based on the participants inclusion in this decision process and their own schedules. The meeting schedules appear in Table 5.

Table 5

*Research Calendar, Cycle 1 and 2*

<table>
<thead>
<tr>
<th>Session</th>
<th>Timeline</th>
<th>Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>Start of Research</td>
<td>Research overview, consent form, needs assessment completed; learning contract completed</td>
</tr>
<tr>
<td>Session 2</td>
<td>Cycle 1, Week 1</td>
<td>Started working on goals. Different topic for everyone</td>
</tr>
<tr>
<td>Session 3</td>
<td>Cycle 1, Week 2</td>
<td>No meeting</td>
</tr>
<tr>
<td>Session 4</td>
<td>Cycle 1, Week 3</td>
<td>Continued working on goals. Different topic for everyone</td>
</tr>
<tr>
<td>Session 5</td>
<td>Cycle 1, Week 4</td>
<td>Complete questionnaire</td>
</tr>
<tr>
<td>Session 6</td>
<td>Cycle 2, Week 1</td>
<td>Needs assessment review, learning contract completed, started working on goals. Different topic for everyone</td>
</tr>
<tr>
<td>Session 7</td>
<td>Cycle 2, Week 2</td>
<td>Continued working on goals. Different topic for everyone</td>
</tr>
<tr>
<td>Session 8</td>
<td>Cycle 2, Week 3</td>
<td>Finished working on goals. Different topic for everyone</td>
</tr>
<tr>
<td>Session 9</td>
<td>Cycle 2, Week 4</td>
<td>Complete questionnaire</td>
</tr>
</tbody>
</table>

Participants chose to meet two hours on one day each week rather than one hour on two different days each week as initially described. Together, a schedule was created. Two of the
tentative dates were changed due to schedule conflicts that included prescheduled out-of-town travel and medical procedures or appointments. There were no major problems with the schedule as it was decided together with participants. Once we began meeting, conflicts arose for some participants (e.g., medical problems with children). For most, the researcher scheduled make-up days.

It is at this point, the researcher decided to continue another cycle with increased attention on new recruitment since the school year was going to begin again. The last cycle (2) had only four participants and two of them were consistently absent and did not complete the questionnaire. To produce ample data, the researcher scheduled a new cycle. The third cycle added an additional seven weeks to the study. Table 6 shows the updated schedule.

Table 6

*Research Calendar, Cycle 3*

<table>
<thead>
<tr>
<th>Session</th>
<th>Timeline</th>
<th>Group</th>
<th>Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Week 1</td>
<td>1 and 2</td>
<td>Research overview, consent form, needs assessment and learning contract completed</td>
</tr>
<tr>
<td>2</td>
<td>Week 2</td>
<td>1 and 2</td>
<td>Worked on goals. Different topic for everyone</td>
</tr>
<tr>
<td>3–6</td>
<td>Week 3–6</td>
<td>1 and 2</td>
<td>Continued goals. Different topic for everyone</td>
</tr>
<tr>
<td>Online</td>
<td>Week 7</td>
<td>1</td>
<td>Complete questionnaire</td>
</tr>
<tr>
<td>7</td>
<td>Week 7</td>
<td>2</td>
<td>Make-up weekend</td>
</tr>
<tr>
<td>Online</td>
<td>Week 8</td>
<td>2</td>
<td>Complete questionnaire</td>
</tr>
</tbody>
</table>

*Questionnaire.* The questionnaire was a custom, open-ended, researcher-made instrument focusing on andragogy and general professional development questions. Using an open-ended questionnaire (Appendix E) aligned to the study provided a way for the participants to voice their opinions and explain, in their own words, their perceptions. It was an appropriate
tool to show what portions of andragogy were relevant and how this style compared to previous traditional professional development experiences. Using a questionnaire revealed significant trends or problems. Using a questionnaire can expedite gathering responses from many participants (De Vause, 1991; Fink, 1995). The questionnaire was comprised of four sections created on Google Forms that addresses the following:

- Section 1 included questions about demographic data such as age, gender, years of experience, highest level of education, and teaching level.
- Section 2 included six questions about andragogy principles such as motivation to learn, self-concept, and readiness to learn.
- Section 3 consisted of seven questions regarding the process of learning and the design of the traditional professional development sessions.
- Section 4 included ten questions that asked participants to identify the differences and perceptions between andragogy and traditional professional development.

To ensure credibility of the questions, the researcher employed peer debriefing. Four colleagues with knowledge of professional development assisted. They were all previous teachers who worked with the development of curriculum, initiatives, and evaluations for many technology department programs.

Prior to meeting, the researcher created a Google Drive folder to store necessary documents such as questionnaire questions, a condensed version of the research study purpose, and the andragogy components. The researcher advised the group to review these documents before the meeting. The tentative questionnaire was a live, working document using Google Docs so participants could add comments or amend it. One member was absent on the day of the meeting but left comments on the electronic document for the group to consider and spoke with
the researcher for extra details beforehand. In all, there were five recommendations to consider for question clarity.

Apply the plan. In this phase of action research, the researcher implemented the study as organized and intended. During this time, the components involved: (a) initial meeting; (b) needs assessment; and (c) learning contract. Descriptions of the finalized actions for each component appears in the following sections.

Initial meeting. The initial meeting was organized to inform the volunteers of the research of details, attain consent (see Appendix F), and collaboratively create a timeline and schedule meet-up dates. Consenting participants stayed to begin working on the initial part of the research, which was the needs assessment portion. This was the only time when most of the speaking was completed by the researcher as it was the time to explicitly state the research purpose, overview, and schedule. On the Google Form, there were approximately 23 participants; however, only five volunteers attended the meeting and two of them stayed after the summer professional development session held in the same room that day and after inquiring about the study.

Needs assessment. The tool the researcher used for the needs assessment was a rubric developed by Johnson and Mielke (2013) with four distinct sections (see Appendix G). In the first cycle, the rubric was used as is with no corrections or modifications. The participants read the objectives and chose where they fit from three choices: (a) basic; (b) proficient; and (c) distinguished. The participants noticed that many of the objectives/expectations did not apply to them. The researcher reassured them and minimized the misconception that they must be technology savvy. The purpose of the study was to try andragogy in traditional professional development. In andragogy, the aim is to find a weakness to learn more about to attain a goal. It
is acceptable if participants are low on the scale because they can build their skills over time. Once they completed the needs assessment, participants reviewed their responses and narrowed down to one or two weaknesses that they wanted to improve. This process was flexible and participants could change to concentrate on another topic altogether.

Learning contract. Once the participants narrowed down their topic, the researcher provided Knowles’ learning contract with no modifications (see Appendix H). Knowles’ learning contract is the essential component of his work. This contract holds the learner accountable and, yet, empowers them to choose relevant goals. The participants enjoyed creating their goals but it was evident that some were decisive and sure of what they wanted to work on and others were confused or unsure of what they wanted to learn everything. This transpired in each cycle. There were a few participants who needed extra guidance from the researcher to narrow down to one goal.

At the start of the second cycle, a conversation began about perceptions and responses to the questionnaire and other elements. To ensure familiarity and agreement with changes, the researcher discussed a few items. For the learning contract, the participants wanted to see either a list of samples from each section or a brief description. The researcher added a description as a question to help them answer each section. For example, for the section labeled learning objectives, the additional question asked, what are you going to learn? This was meant to guide participants as a reference.

As an example of how participants completed the learning contract, the needs assessment rubric was completed by selected their level of competency for each domain. Then, the participant used the needs assessment domains and competencies as their learning goals in the learning contract. One participant added domain 3 focusing on instruction, competencies 1 and 2.
on differing forms of discussions to the learning objective. This participant decided to learn about an application (app) called Edmodo. This app is a learning management system (LMS) for teachers to post assignments and other information for students. This app also encourages discussions with the teacher. The participant decided to learn more about this app using another application called Hoonuit that houses thousands of how-to videos and pathways to learn about applications and educational strategies. The participant decided the evidence of accomplishment would be a certificate received for viewing the videos and creating classes for students with all resources uploaded into folders ready for the beginning of the school year.

*Organization of meeting days.* The agenda for each scheduled meeting day consisted of the participants working on their learning goals related to instructional technology. Using the learning contract, participants researched how-to videos or tutorials, spoke to the researcher as facilitator for help with an application, or worked with an application for their desired task. There was no agenda or set time that the researcher as facilitator directed the learning or lectured because the goal of this study was to employ andragogy concepts while giving participants more control. At the start of every sessions, the researcher as facilitator did ask if the participants wanted a review or explanation together for anything. Each time in the first two cycles, the participants felt confident working on their own or in collaborative discussion. In the last cycle, the researcher as facilitator gave a few lectures that lasted less than 10 minutes to describe or explain an application. Once, the researcher as facilitator spoke about online resources that provided lesson ideas regarding the use of technology. For these cycles, the population was small enough that if participants wanted guidance, the researcher as facilitator was able to assist one-on-one. The researcher as facilitator walked around asking the participants if they needed
help or asked them to explain their work based on their needs and contract. Conversations and quick lessons from the researcher as facilitator took place organically when necessary.

**Observation.** At this time, the participants worked on their goals. This time was flexible so they could learn individually, with others, or seek help from the facilitator. The researcher as facilitator approached participants at different times to check their progress. All participants were engaged. Some changed their minds or remembered something that they wanted to learn more about in preparation for a lesson. The researcher’s notes emphasized the level of responsibility of all participants who stayed on-task and engaged in their learning. All participants had conversations with the researcher as facilitator to find clarity, learn how to use an application, or get ideas. All conversations addressed their learning or how to implement something in the classroom that would benefit them or their students.

**Reflection.** In this phase of action research, the researcher and participants reflected on their time during the research study. During this time, the components involved: (a) data collection; (b) data analysis; and (c) validation. Details of the finalized actions for each component appear in the following sections.

**Data collection.** Once scheduled meetings were complete, the participants spent time online to complete the questionnaire at the end of each cycle. The researcher completed three cycles because each cycle produced new suggestions for improvement. Each new cycle focused on implementing changes. Regardless of the responses for the third cycle, the research study ended. Collecting data consisted of administering one questionnaire multiple times. The questionnaire on Google Forms automatically assembled the data by user and by questions. The researcher used data from the open-ended questionnaires to analyze participant responses through qualitative coding. Many of the participants reported taking 30 minutes to 1 hour to
complete the questionnaire. The questionnaire could be completed anywhere on any device with internet access. During the first and second cycles, participants had approximately 7 days to complete the questionnaire to give to the researcher time to analyze the data and make necessary changes for the next meeting. The third and final cycle included more time for the participants to complete the questionnaire. The researcher had to remind participants to complete the questionnaire. The time frame to complete the final questionnaire was approximately one month. After providing substantial time to complete the online questionnaire, the researcher downloaded the Comma Separated Value (.csv) file from Google Forms and began data analysis. During the first cycle, the researcher received four responses. During the second cycle, the researcher received two responses. There were twelve responses during the third cycle.

*Data analysis.* Data analysis followed Creswell’s (2013) data analysis spiral with four steps: (a) organize the data; (b) read through the data and write memos; (c) interpret the data; and (d) represent the data. Bloomberg and Volpe (2016) advocated that researchers must become engrossed in the coding process. The researcher should become acutely familiar with all the data that arose from the data collection.

At the end of each cycle, the participants completed questionnaires. When the window closed, the researcher gathered the data. In Google Forms, the responses are stored as a .csv file, similar to an Excel spreadsheet. The top row listed the questions, one per cell. Participants appeared in the first column and their responses appeared under each question. The researcher printed a copy of this file leaving space on the right-hand side for additional notes, as Saldaña (2016) suggested. The researcher color-coded (using Excel) each question with answers, column by column, for better visual organization.
For the second step in the process, Agar (as cited in Creswell, 2013) recommended reading the entire transcript holistically to get an idea of the participants’ perceptions through a quick overview. The researcher read every question and response with no other actions. During the second reading, the researcher underlined key words and wrote simple notes. The researcher discerned between the notes and memos by identifying similarities. This was completed twice.

Interpretation is the epitome of the process. In this stage, the researcher began coding using descriptive and emotion coding. The information was anonymous. The survey did not collect emails or names. Lincoln and Guba (1985) stated that this part of the process is making sense of the data. The researcher focused more closely on each question and response while creating initial codes. Creswell (2013) recommended looking for codes that provide possible information that was expected, surprising, or interesting. Some codes were in vivo taken directly from the participants responses for each question. The researcher focused on emotion and descriptive coding, analyzing the data several times. Four major themes arose from the data collected by the questionnaire: (a) positive perceptions; (b) agency; (c) personal relevance; and (d) process contributions. Table 7 displays the coding information used to gather the findings. The column to the right, displays the codes found in the data. The categories were created because of the data. The themes emerged as results of the codes and categories created. Table 7 includes samples of codes, categories, and themes attained from analyzing the data of this research.
Table 7

**Code Map Sample**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Perceptions</td>
<td>Satisfied</td>
<td>Enjoyable, Liked, Satisfied</td>
</tr>
<tr>
<td></td>
<td>Motivated</td>
<td>Determined, Focused, Desire to…</td>
</tr>
<tr>
<td>Positive Evaluations</td>
<td></td>
<td>Open, Flexible, More Effective</td>
</tr>
<tr>
<td>Agency</td>
<td>Empowered</td>
<td>Freedom, Choice, Reflection</td>
</tr>
<tr>
<td></td>
<td>Control Over Learning</td>
<td>Independent, Custom, Ownership,</td>
</tr>
<tr>
<td></td>
<td>Engaged &amp; Decisive</td>
<td>Involved, Self-assess, Active.</td>
</tr>
<tr>
<td>Personal Relevance</td>
<td>Applicable</td>
<td>Transferable, Assess Needs,</td>
</tr>
<tr>
<td></td>
<td>Learner’s Experience</td>
<td>Share Ideas, Meaningful</td>
</tr>
<tr>
<td></td>
<td>Facilitator</td>
<td>Contributor, Guide, Knowledgeable</td>
</tr>
<tr>
<td>Process Contributions</td>
<td>Inclusion</td>
<td>100% Included, Choice, Planning</td>
</tr>
<tr>
<td></td>
<td>Practical and Ongoing</td>
<td>Explore, Ongoing, Complete Project</td>
</tr>
<tr>
<td></td>
<td>Additional Tools &amp; Resources</td>
<td>Useful, Helpful</td>
</tr>
</tbody>
</table>

**Validation.** Validation is necessary but in any qualitative study it is credibility which guarantees authentic, confidential, and ethical results (Creswell, 2013). In addition, the researcher adhered to the policies and high standards set forth by the university (see Appendix I). The researcher achieved credibility and transferability. The researcher employed respondent credibility, or member checks for credibility and rich, thick descriptions for transferability.

Respondent credibility, or member checks, allowed the researcher to discuss a few of the participants’ responses to diminish any misunderstanding of the meaning conveyed (Merriam & Tisdell, 2016). In each cycle, expression and comprehension were accurate. The discussion was
informal during the subsequent meeting. The researcher began by mentioning one of the topics in the questionnaire and the participants’ response with a brief summation of the responses. The participants would concur if the researcher was precise in the explanation. The participants and researcher were able to effectively communicate the meaning from the responses provided.

The researcher employed transferability by providing in-depth descriptions for each of the processes used during the study. This included the action research process, the andragogy principles, and the andragogical process for learning. Additionally, included are the descriptions of resources used during this study. The researcher included all the pertinent information to allow the reader to reproduce this study from the rich, thick descriptions provided (Merriam & Tisdell, 2015). The researcher provides rich, thick description of not only the research but the data for participants to voice their perceptions in their own words.

**Summary of the Findings**

As noted in the literature review, teachers’ perceptions of traditional professional development provide irrelevant information, no sense of inclusion, or no way to voice their needs. Throughout the three cycles of the present action research, responses were consistently positive with minor disagreement or negative opinions given for differing questions. In this section, the summary of the findings reveals a connection to the study’s intentions.

The findings from the third cycle responses indicated a positive perception of the use of andragogy in this research study. The results over the three cycles were similar; most response examples in this section are from the third cycle. After analysis, themes arose based on detailed responses to questions about andragogy assumptions, the andragogy process for learning, and overall perceptions of traditional professional development. Overall, most participants were intrigued and receptive to adding andragogy to their traditional professional development
sessions. They gained knowledge and skills that were relevant to them and the needs of their classroom. The use of action research fit with the exploration of andragogy because, in both, the participant is an active collaborator in planning, preparing, enacting, reflecting, and evaluating. Participants provided feedback as active members in the research process. Their voices were heard and the researcher used their feedback to make improvements. The findings revealed four major themes from the data: (a) positive perceptions; (b) agency; (c) personal relevance; and (d) process contributions.

The summary of findings in this section is the culmination of the research study presented in previous chapters. The findings were:

1. Most participants acknowledged improved perceptions and satisfaction with traditional professional development designed with the andragogy assumptions and process for learning.
2. Most participants acknowledged a feeling of agency over their learning.
3. Most participants acknowledged elements of traditional professional development design that created relevant and meaningful experiences through self-direction.
4. Most participants acknowledged being included in the entire process from planning to evaluation with the use of various tools.

Presentation of the Data and Results

The researcher used the andragogy model and process model for learning to improve teachers’ perceptions of traditional professional development. Overall, the participants agreed that they want control over learning in order to select what is most relevant while having options for how to learn and from whom. In this section, the researcher presents the findings with support and discussion from the data acquired from the questionnaire. There is documentation
from all participants as it relates to the research questions and findings. In this section, the data appears as relevant to each research question and according to the themes.

**Research question 1.** How does the andragogy framework improve teachers’ perceptions about traditional professional development? The study demonstrated that most participants were satisfied and preferred the implementation of andragogy principles in traditional professional development. By using andragogy principles and the andragogical process for learning within traditional professional development, the teachers’ perceptions improved. The overarching theme is that participants were satisfied with the new version of traditional professional development. This finding is highly significant; 11 of the 12 participants (92%) responded positively to whether they were satisfied. One response was vague and did not directly answer the question. Based on their responses, participants felt engaged in learning; producing a more effective way to learn. This created more confident teachers who could use what they learned in the classroom immediately. Research question one correlates to finding one: most participants acknowledged improved perceptions and satisfaction with traditional professional development designed with the andragogy assumptions and process for learning.

**Positive perceptions.** This finding relates to the theme titled *positive perceptions.* Four categories reside within this theme: (a) satisfaction; (b) motivation; (c) positive evaluations; and (d) overall experience. The participants’ feelings of satisfaction included feelings of being content or stating positive sentiments, such as *I liked* or *I loved.* Each of the questions yielded significant results.

**Motivation.** Motivation refers to either intrinsic or extrinsic performance that is rewarding for internal or external reasons (Rothes, Lemos, & Gonçlaves, 2017). Internal motivations and rewards can be due to enjoyment, feelings of satisfaction, or because an action is
tied to a higher purpose. External motivations may be tied to recognition or awards. Question 1 and Question 19 related to motivation, which directly correlates to one of Knowles’ andragogy principles (Knowles et al., 2015). The results are significant; 9 of 12 (75%) participants described average or high motivation during this experience for Question 1 and somewhat significant for Question 19. Eight participants (67%) participants agreed that their motivation was also high on days when the group did not meet. The following responses indicated positive motivation levels:

I am very motivated about participating in the andragogy study. After spending decades participating in dozens of often meaningless staff development sessions, especially those that are not relevant to my teaching assignment of 25 years, it’s nice to be able to choose self-study topics that will contribute to my knowledge of technology-related subjects. Because of my experience I don’t feel I need any more pedagogy courses as what I learned in college in 1973 and ‘74 has been repackaged and offered as the latest trend several times over the decades. (Participant 7)

Another participant stated,

I was very motivated during this experience because I was learning about something I wanted to learn about. Also, I felt motivated because it was something that was meaningful to me. I was given the freedom to choose what I wanted to do, so naturally it would be something that really motivated me to learn. (Participant 5)

Participant 9 wrote, “very motivated. I felt what I was doing actually would benefit me and my students.” Participant 8 specified, “high because i [sic] was able to choose what i [sic] was learning about.” Participant 2 commented, “Average - After figuring out what I wanted to learn about and how I could use Edmodo better in my classroom, I was really determined to create a
set of quizzes that would help me evaluate student understanding.” Participant 12 had similar sentiments and stated, “I was very motivated to start this project because we were given the opportunity to choose our own topic.” Participant 3 declared, “This professional experience was very motivational as I was able to have hands on time with a variety of resources as well as collaborate with other colleagues.” The responses highlight the high motivation of the participants when they were able to choose what to learn. They were intrinsically motivated because they and freedom and the purpose to learn, for some, was tied to student learning outcomes.

Three of the 12 participants (25%) wrote vague responses that seemed to align with motivation but there was no definite response code. For example, Participant 10 wrote, “interesting” and Participant 11 stated, “exciting.” Participant 4 explained, “I enjoyed this experience since I was able to work my myself and ask peers about my topic. I believe by doing so is a more efficient method of learning.” The responses were positive; however, they did not directly answer if it was motivating.

Motivation to learn varies among individuals. Some are highly motivated and can coordinate their time to allow for learning; however, for others, external factors may be more important than a desire to learn. For example, Question 19 also related to motivation; however, this was motivation to work outside of the group gatherings. Although it was not required, it was worthy of asking if any participants felt motivated to continue their learning when the group did not meet. Participant 6, for example, affirmed, “Even on the days that we did not meet, I still was highly motivated to study and work on my own because I was sure that I really needed to learn and apply these apps as soon as possible.” Participant 9 declared, “Yes, because I was seeing how well the program worked in my classes. So I began to explore and modify existing
templates in the program to apply them to future units in my class.” More interesting were the responses that deterred participants from working on their own. They all had a desire to dedicate some time to it but other school and familial duties took priority. For example, two participants responded in the following ways:

During the summer, yes but not as much as I would have liked as my spouse wanted her share of attention, plus we did some traveling to visit grandchildren. During the school year having to take work home to grade and work related to teaching makes studying more of a problem. (Participant 7)

Another participant stated,

During the days we did not meet, it was more difficult to a-lot time to work on my own since there are always things to do. Only at times It was more difficult to make the decision to work on the project on my own than it was when we would meet. At other times, it was a great feeling of control when I would look up things or tried new ideas for the project during my own quiet time. It allowed me to focus. (Participant 11)

Other participants held similar sentiments. Participant 2 wrote, “Somewhat, but with all the other duties and responsibilities that come with the job, it was a little difficult to stay motivated.” Participant 8 admitted, “I would work on it on the weekends, but not during the week. There is never enough time as a teacher.” Various statements by the participants demonstrated the desire or intent to learn at other times for some, but time constraints or other responsibilities affected the participants in completing the task.

Readiness to learn. Closely related to motivation is a learner’s readiness to learn, which is also one of Knowles’ andragogy principles. Adults will come to a stage where there is a needed skill or learning gap that requires additional learning (Knowles et al., 2015). The data
indicated significant results. Question 5 addressed the principle that adults have a readiness to learn. Ten of 12 participants (83%) responded positively to this question and acknowledged their readiness. Some of the responses are as follows:

I’m [sic] always ready for new things that are relevant to me. Since I could control my learning, the activities were flexible and I could customize them to what I feel I needed to study. So, I feel everything I did was relevant to me and relevant to the instructor’s research. (Participant 7)

Another participant stated,

Yes it was very much flexible because it was during my planning period. I think this is what I need to do maybe a few weeks before school starts to help me plan my lessons better and use Edmodo as a learning tool in my classroom. (Participant 2)

Another participant stated,

Yes, the activities were flexible and customized to my learning which I really liked. I was very ready at this time to learn because the school year had already started and I wanted some new and innovative ways to teach the students. (Participant 5)

Participant 6 explained, “I am very ready to learn more. The activities are really tailored to my needs and ability.” Participant 8 clarified, “I was very willing to learn. The activities were very flexible and easily fit what I needed.” Participant 9 justified her readiness by writing, “They were customized. The guidance and parameters were flexible enough to allow for exploration and learning at my pace, yet evoked a sense of accountability to myself. I am more willing to learn now.” Participant 4 held similar sentiments and noted, “I am open to learn at any time specially if it will benefit the students, co-workers, and myself. The activities were flexible to perform since I was the one deciding what to do as I was learning the content.” The reoccurring
positivity in having a high readiness to learn by participants signified their willingness to learn something new because they each recognized a skill or learning gap that they wanted to learn more about or improve.

Two of the 12 participants (17%) did not feel ready to learn although one described wanting to continue to learn, which is part of the readiness to learn. The other participant felt there were too many external factors at work that inhibited her learning. Participant 10 wrote, “No, I am not ready. Yet I would like to continue learning.” Participant 11 rationalized,

My readiness to learn at this time is limited. So much work and time is being focused on getting students ready for STAAR. I was glad that the activities were flexible enough for me to work from home and was able to learn here and there at my own pace, but the pace was not as I would have liked it to be.

The responses of not ready indicated there was interest; however, the time commitment or other personal factors led to feeling not ready. Neither of the participants indicated their readiness to learn was tied to an unwillingness to learn something new or not acknowledging they have a skill or knowledge gap.

Positive evaluations. Overall, the perceptions of this research study and its components were positive. Comparisons to previous traditional professional development experiences were positive within two questions. Question 14 compared the current research study design to previous traditional professional development experiences. All participants (100%) communicated some differences. Most preferred the new version to previous professional development. The participants responded in the following ways:
This experience provided me with the authority of deciding what to learn and in what way. I believe if I research on how to perform an activity/action, it will stay engraved in my head and will be more likely to recall that info if ever need it. (Participant 4)

Another participant stated,

I enjoyed meeting several times so that I could build something I could use and reflect and modify what I ended up with. Usually in 1 day trainings I am only finding and learning about different tools to use in the classroom, but I am never given the time to create something or plan a way in which I could use it in my classroom. (Participant 2)

Participant 7 stated,

Decades of professional development has left me dreading it. I've always found these experiences boring and uninteresting, and for the past 25 years irrelevant to my teaching assignments. This professional development sequence was a breath of fresh air, as I was allowed to choose what is relevant to me, and I was an enthusiastic participant in my learning opportunities.

Participant 9 stated,

The main difference is that I was able to explore what I know is specifically necessary for me to explore. I didn’t need to follow a set sequence which might entail exploring some program I know I can’t apply to my classes or one I know is less effective than one I might already use.

Participant 5 stated,

I thoroughly enjoyed this learning experience. It was very engaging and meaningful because I was able to pick what I wanted to learn and guide my own learning. This
experience has been much better than the traditional professional development process and more effective.

Participant 11 stated,

I enjoyed this process more than previous professional development experiences because it was a longer time dedicated to the project, self learning, self driven, able to make own choices of applications and learning styles and techniques as well as resources.

Participant 12 stated,

The experience was very different compare to any other professional development that I have participated in. With this project we were given full control of our learning, this is something that I had never had the opportunity to experience. Because we were given full control of our learning, it made the project more enjoyable.

Other participants described sentiments in more concise manners. Participant 1 summarized, “It was more open to discussion and less stringent to an agenda that had to be met by the end of the training. I got to work on one thing that I felt I needed improvement in.” Participant 3 succinctly wrote, “very different.” Participant 6 explained, “The main difference is that more time is provided for self-inquiry, discussions of the technology and practical classroom applications.” Participant 8 quipped, “Normally we just sit and might get 30 mins to ‘play’ with programs.” Participant 10 emphasized the difference as “the time to do it.” The participants cited various reasons, comparisons, such as time for self-inquiry, freedom, flexibility, ongoing learning, and full control to name a few. The various responses by the participants highlighted the significance of the differences between traditional professional development and this traditional professional development with the amended design using andragogy.
Positive evaluations. The question inquired whether this new design is an improvement from traditional professional development. Question 15 responses fell into the category of the first finding; it asked participants to gauge whether they felt this new design improved traditional professional development. The results were significant; 11 of 12 participants (92%) firmly agreed to this statement. The participants responded to the question in the following ways:

I do feel that this is an improvement because in the traditional way, we were told what to learn and when, and some of it wasn’t relevant to us. In this new way, we are able to choose what we want to learn based on our strengths and weaknesses, therefore making the learning more relevant and meaningful to us. (Participant 5)

Another participant stated,

It is an improvement. Again, the tailoring to my own needs is the key and the flexibility to change directions if need be. By this, I mean the ability to stop exploring a particular program and start on a different one if the first one was impractical to me. (Participant 9)

Other responses were similar and brief. Participant 1 described, “It is an improvement because I got to evaluate my needs and work on them instead of working on different things and not focus on one thing I really need help in.” Participant 4 pronounced, “Yes because I was in charge of my learning and responsible of finding the information/resources needed for my success in the project.” Participant 6 illustrated the improvement by stating, “This new [sic] is an improvement from the way we used to have in our regular professional development because we were given more and sufficient time to plan, do, absorb and apply new learning and accomplish our goals.”

One participant was not as affirmative in her response; therefore, it was not included in the responses of agreement. Participant 10 wrote, “It probably is, but short goals may work better at least for me.” These responses indicated positive perceptions toward the overall design of the
professional development sessions. The positive focus by participants on the improvement demonstrated the importance to provide more freedom, flexibility, choice, and self-evaluation strategies.

Overall positive perceptions. This question asked about satisfaction level in its entirety. The responses were significant; 11 of 12 participants (92%) were satisfied with a design of traditional professional development intermixing andragogy principles and processes. The following responses are from several participants who expressed their satisfaction or positive sentiments:

I believe that professional developments should be done in this manner which involves more active learning, more self-directed inquiry, and peer-to-peer collaboration within an appropriate time frame instead of the usual lectures on several new technology and apps in an hour and try to apply it in my classes the next day. (Participant 6)

Another participant stated,

I really enjoyed this new method of learning. I have never been part of a staff development were [sic] I was given full control of my own learning. I believe that from this new method we are able to grow more as educators because not only are we choosing what we would like to learn based on our student's needs, but we are also given an opportunity to pick a project that we have been wanting to learn about but have never had the opportunity and time to complete. (Participant 12)

Participant 5 stated,

I am very satisfied with the process because I was left alone to do my learning, but the facilitator was always there to help if I needed something. The learning was very self-directed which I enjoyed because I was learning about something I wanted to know about
and the learning became very meaningful and personalized to me. I believe that the traditional professional development ways are not as effective because the learners are not engaged in what they are being told to learn.

Participant 2 stated,

I really enjoyed this design better than other professional developments because every week I kept coming back to trying to better my understanding of Edmodo. It allowed me to reflect on my overall knowledge of Edmodo and get a better grasp of how I can better implement it in my classroom.

Participant 7 stated,

I’m satisfied with the process and its components. I think if teachers and administrators could be sold on this method of staff development, and would take it seriously, then broad goals could be set district-wide. Expectations would then allow for reasonably good use of time, and the majority would find success in reaching their own learning goals.

Participant 8 acknowledged, “I think this type of staff development is much more useful.” They continued, “I agree with the process provided that we are given sufficient time and given flexibility” (Participant 8). Participant 9 asserted, “I am overall very satisfied with the process, i [sic] just wished i [sic] had more time through the district or campus to allow to have more meeting or learning time to devote to the project of self learning.” Participant 1 declared, “I was satisfied with this type of staff development. I never felt any down time or overwhelmed with what I was doing.” Participant 10’s response was neither favorable towards satisfaction or dissatisfaction; therefore, it was not counted. Participant 10 stated, “I thank you very much for giving us the opportunity to participate. I cannot tell you my goal is completed. But I keep
working on it. I hope I can tell you one day that I am ready.” The responses indicated positive perceptions overall favoring the newly amended design. The last statement provided is the exception, which did not indicate either way

**Research question 2.** What, if any, specific part of the andragogical process assist in improving teachers’ perceptions about traditional professional development? The andragogical model and process for learning reflect several principles that are learner-centered and focused on adults’ ways of learning. The andragogical model is based on several assumptions: (a) the need to know; (b) the learner’s self-concept; (c) the role of the learners’ experiences; (d) readiness to learn; (e) orientation to learning; and (f) motivation. The andragogical process for learning provided foundational procedures to include the learners. These elements include: (a) preparing the learner; (b) establishing a climate conducive to learning; (c) creating a mechanism for mutual planning; (d) diagnosing the needs for learning; (e) formulating program objectives that will satisfy these needs; (f) designing a pattern of learning experiences; (g) conducting learning experiences with materials; (h) evaluating the learning outcomes; and (i) re-diagnosing learning needs.

Both models contributed to the overall perceptions of the participants. The questionnaire specifically asked about each principle of the andragogy model and andragogical process for learning. Research question 2 corresponds to findings 2, 3, 4, which state the following:

- Most participants acknowledged a feeling of agency over their learning.
- Most participants acknowledged the evolution of traditional professional development design that created relevant and meaningful experiences.
- Most participants acknowledged being included in the entire process from planning to evaluation with the use of various tools.
**Agency.** The participants overwhelmingly recognized that their agency was established. They felt empowered, engaged, decisive, and had control over their learning. Norton (1997) defined teacher agency as “choices about how they do, can or wish to participate in learning in light of their goals, values and beliefs” (as cited in Gurney & Liyanage, 2016, p. 50). The findings related to the theme titled agency. Three categories emerged within this theme: (a) empowered; (b) control over their learning; and (c) engaged and decisive.

**Learner’s self-concept.** The learner’s self-concept was a main factor that was continually stressed throughout the questionnaire. Most participants (83% or 10 out of 12) emphasized that having ownership over their learning was the most different aspect of the new/amended design of professional development and the part they enjoyed the most in the process. Participants were passionate about having responsibility, flexibility, and options to make choices that were relevant to their learning and to teaching their students. They felt empowered and independent.

Learning is a personal and lifelong process. This is directly related to agency. Calvert (2016a) defined teacher agency as “the capacity of teachers to act purposefully and constructively to direct their professional growth and contribute to the growth of their colleagues” (p. 4). Individuals should freely decide what is important and relevant to their own needs. The participants expressed their approval for having such control and empowerment over their learning. “When empowered to direct their own professional development, teachers claim ownership of their work and invest in it accordingly” (Stacy, 2013, p. 40). Participants responded to Question 2 in the following ways:

 Throughout the project I felt that I had full control of my own learning. Not only did I have the opportunity to pick my own project, but I was also able to pick a project which I was able to incorporate in my classroom. One of the projects which I worked with was
the creation of online videos. Since completing this project I have continue to incorporate these videos for my students to use as a review. (Participant 12)

Another participant stated,

I had total control over my learning and choices. I was able to make my own decisions and my activities were appropriate to my level of experience. One example was I was able to get help in making my Forms Quizzes/Assessment available to students in my 4 classes. Another one is that I became more adept at using and its useful features for my classes. (Participant 6)

Participant 5 stated,

I had complete control over what I wanted to do and learn. I was able to make my own decisions and that added a lot of value to my work. For instance, for the first three sessions, I kept changing my mind about what I wanted to do and what I wanted to focus on. I was given the ability and the choice to change my mind as many times as I wanted until I found something I wanted to do and that would be interesting to me. I felt that the activities were appropriate for my level of experience because I chose what I wanted to do.

Participant 4 stated,

I was very pleased to direct/re-direct my path of learning. Indeed, I was able to make decisions on what information to look as well as how I wanted to organize that info to my advantage for the creation of my "project.
Participant 2 stated,

It was a very enjoyable and pleasant experience knowing that I was tailoring what I wanted to use in my class the way I wanted to use it. The decision making went well and I got to learn how I could modify different assessments to suit the needs of my students.

Participant 9 stated,

It was a lot of control. This made me more interested in working hard during the professional development. I was able to make decisions on what to explore and to what depth. If I found something that was interesting in one of the applications, I went with it rather than stopping because I had a set sequence I needed to follow.

Two of the 12 participants (17%) responded somewhat favorably and not favorably. One participant blamed themselves, and not the process. Participant 8 declared, “I liked it, but at times it seemed overwhelming. Once a path was chosen but before that was done it was quite hard.” Participant 11 articulated,

A little disappointed because I would not make more time for myself due to the due to the duties from work at this time, The activities were appropriate for my level of experience as well as my grade level but was difficult to implement immediately into the classroom setting.

The responses indicated positive perceptions towards the idea of the learner’s self concept except for two participants. The various statements highlighted the significance in providing participants ownership over their learning. The participants focused on knowledge or skills that were specific to their own needs.
Independent decisions and choice. One of Knowles’ process model for learning elements suggested that learners assist in formulating the objectives and goals of their own learning (Knowles et al., 2015). All participants (100%) had favorable reactions to Question 7.

I [sic] really gave me a sense of ownership in my endeavor for trying to learn a tool that I could use in my classroom. I wanted to learn something and get better at using Edmodo so my goal was set for something I could attain and incorporate in my own way.

(Participant 2)

Another participant stated,

I really like this opportunity. I don’t feel the pressure of learning something that I know I won’t be able to apply to my specific classes. I was given suggestions on applications and programs after I explained what I needed them for. Then, I was given enough freedom to explore them and helped when I didn’t understand one of their functions. (Participant 9)

Other participants noted similar feelings of agreement. Participant 4 confirmed, “I like to be in charge and to decide what route to take depending on how or what I am learning provides a sense of authority and self-motivation.” Participant 5 proclaimed, “I was very excited to be able to set my personal learning goals and achieve them because I was able to learn something new and challenge myself with learning something new.” Participant 1 stated, “It helped set targets that I was comfortable with. It also gave me the opportunity to set goals that I felt were useful.” Participant 3 asserted, “Empowered.” The responses indicated positive perceptions that demonstrated the significance of allowing opportunities for open choice and designing the traditional professional development sessions with the participants in mind. That is, giving them the agency to choose what they learn and with what resources and make decisions throughout that will affect their learning.
Prepare the learner. Another element of the andragogical process model for learning is the learner’s preparedness for the entire process, which may include their mindset, expectations, and general information that will allow them to be successful. The results were significant for Question 10; 10 participants (83%) felt prepared to take on this new task. Participant 2, for example, articulated, “Yes, I think it was something that was needed. It gave me time to reflect, listen, and grow.” Participant 9 explained, “It was a break from the norm. But it was one that is appreciated. I feel I was more productive than in other professional developments.” Participant 8 disclosed, “I feel i [sic] was prepared. It allowed me to use all the ‘drive by’ tech seminar information in a meaningful way.” Participant 5 responded, 

Yes, I was very prepared for this professional development process because I was tired of being taught whatever our district wanted us to learn, and instead I was excited at the prospect of being able to learn about what I wanted to learn and what I felt I needed to learn as a teacher.

Other participants stated positive sentiments as well. Participant 7 admitted, “I didn’t know what to expect at first, but quickly adapted to the opportunity to choose topics of study that were relevant to me, and to have expert assistance when I needed help.” Likewise, Participant 4 affirmed, “I was somewhat prepared for this process since I like to learn new things by myself and usually find my own ways to accomplish them.” However, 2 of 12 participants (17%) did not feel prepared to learn. Participant 10 expressed, “No, probably no. But it was nice to know there was this option.” Most statements by the participants highlight the significance that most adults are looking to improve their practice and as some suggested they were ready for a change. This change was in how they were going to learn and making decision about their own learning. For some, they felt more productive.
Learner involvement. Allowing participants to be involved in the entire process to achieve a shared goal is an important element of andragogy. “Members of the planning group must be treated in good faith, with real delegation of responsibility and real influence in decision making, or the process will backfire” (Knowles et al., 2015, p. 58). This is reflected in Question 13. All participants (100%) felt they were included in their own learning and in decision-making throughout the whole process. Participant 3 remarked, “100% involved.” Participant 2 noted, “It was really all up to me to decide how I wanted to use Edmodo. It was very pleasant knowing it was me doing the design of it all.” Other participants responded in the following ways:

I was able to, at all times, have control over my learning, and I liked that. I was very involved in the design process of my own learning, and fully enjoyed that. We were allowed to assist in the planning of the sessions. The sessions took place at a time and location that was convenient for all of us. (Participant 5)

Another participant stated,

I think participants did the majority of the designing and implementing of learning, after initial discussions with the instructor, and from my observations participants seemed to use their time wisely. Personally, I was always allowed to help plan what I was going to do, and was enthusiastic in following through on my plans. (Participant 7)

Participant 11 stated,

During the times we met, i [sic] was very involved in my learning because of the environment we were in. We were in a classroom setting with more people around to be able to share ideas and converse about the process.

Additional responses from participants validated perceptions of involvement. Participant 12 stated, “I believe that I was very involved in the design and learning of my own project. I was
given full control of my choice of project and the methods of learning of my own choice.”

Participant 1 indicated, “I was able to plan what I wanted to work on and do this at a pace I was comfortable with.” The focus on learner involvement indicated participants’ desire to have ownership over their learning and enjoyed having ownership over their learning. This emphasizes the significance that the participants will likely follow through on their goals when they are more involved.

**Flexibility.** Participants also found this new design to be quite flexible in the choice of topics or integration of goals associated with district or mandated initiatives. For example, a district-wide mandate is meeting the yearly goal of technology professional development hours. By agreeing on certain topics and expectations beforehand, it is possible to not only satisfy the learner by allowing freedom of choice but also fulfill district or campus-mandated goals. All participants (100%) had positive replies to Question 16 and felt that this design can amalgamate learner choice and other requirements. Participants responded in the following ways:

Yes, andragogy was flexible to be used on any topic and content. I was able to complete this learning session as well as receive technology hours which is a requirement at my district. Also, I was able to do more of what the district wanted of us which was to be more tech-savvy. (Participant 5)

Another participant stated,

Andragogy was flexible enough to focus on any content and topic because of longer time we have for our new learning. We were able to make connections to district goals such as use of technology and having 15 hours of technology in a year. (Participant 6)

Participant 7 stated,
Andragogy allowed me to choose what was interesting to me, and still allowed me to greatly exceed this year's district requirements for staff development hours and Atomic Learning hours. What I felt I needed was instruction in software programs I am using/teaching, and also allowed me to investigate one, One Note, which turned out to be one that students rejected.

Participant 11 stated,

Yes, andragogy was flexible enough to help us learn at our own pace with our own problem solving strategies to find resources to help in the learning process. This project also help meet some of the technology hours needed by our district.

In analyzing the flexibility of andragogy, all participants agreed demonstrating that it is possible to amend traditional professional development to not only include the participants, but also fulfill any district or state mandated goals. It is possible to use andragogy for any topic, content, grade level, and with other requirements needed in the field of professional development.

**Personal relevance.** Personal relevance connected to three categories grouped within this theme: (a) applicable to teaching; (b) personal experience; and (c) facilitator’s contributions. In this theme, participants collectively measured and agreed to the design, which allowed for relevant and meaningful learning that applied to their teaching practice immediately. Additionally, participants felt that the facilitator had a relevant position assisting and guiding them to learn more, rather than asserting personal views or expert status.

**Using experiences and knowledge.** Prior life experiences, current knowledge, and expertise are the main factors in andragogy that differentiate children from adult learners. The knowledge an adult brings to their learning experience provides a depth of connections, useful perspectives, and advice for collaborating with others. The relevance and meaningfulness of this
process was demonstrated when the participants collaborated and shared ideas with one another. Stacy (2013) explained, “When teachers work in isolation, they are unaware of the potential collaboration and support they can receive from other professionals” (p. 42). The results for Question 3 were significant; 10 of 12 participants (83%) responded positively as having been able to share or use prior experiences to further their learning. Participants commented in the following ways:

I was able to use prior work experiences because the school year had already started and I was able to incorporate past learning right now in the classroom. Also, I really liked this method of study with my department teachers because we were each able to "specialize" in something and teach it to the rest of our teachers. I also feel like it maximized our time because each of us were learning something different, and then we were able to teach it to the rest of the department later. We all work very well together, so it was nice to bond over teaching each other something. (Participant 5)

Another participant stated,

I shared my knowledge of the convenience of using Forms in giving quizzes and assignments. It has very useful features such as automatic grading of tests, quizzes, and assessments. It also has statistical analysis of answers to the questions to be able to valuate which parts of the lesson the students are weak, middling, and strong. (Participant 6)

Participant 7 stated,

I was able to use life and work expertise to help me in further learning. One example is my creation of class websites for my newspaper and literary magazine students using free Weebly sites. I also use Weebly as a class requirement for seniors when they create
portfolios of their work as part of the requirement to receive the VMT medallion. This knowledge, plus previously acquired knowledge of page layout and photo editing programs, helped me understand programs new to me. The background I have in professional publishing from working part-time at the local paper (now retired) has also helped me quite a bit.

Participant 2 stated,

Just as I was learning how I could use the different ways to use Edmodo, it helped me understand how some students come in with different levels of expertise on using technology so creating different forms of assessments is necessary so that students can feel that they can accomplish a task.

Two participants (17%) participants had differing opinions on this question. Participant 4 stated, “I did not have the opportunity to share any info since I was new to the content,” which is understandable as andragogy allows for flexibility to study individually or seek and share advice. Participant 10 was a bit vague and did not directly answer the question stating, “Coding is a new language. I knew it was something new. YouTube videos was not going to be enough for tutorials. So I looked for help.” Various statements by the participants underscored the significance of using their personal experiences and knowledge for their own growth and to help others. Not all participants were able to share their knowledge, but there were quite a few who did and found it beneficial.

Orientation to learn. Adults learn for different reasons. The motivation to learn stems from an aspiration to resolve a problem or accomplish a task (Knowles et al., 2015). One question asked whether the timing of this professional development was appropriate and easily applicable to something teachers may need. This aligned with Knowles’ principle of orientation
to learn to solve a problem or complete a task. For Question 4, 9 of 12 participants (75%) shared that this was a perfect time and it was very much relevant to their situation. Participant 2 commented, “It was very much relevant and it gave me a time to really focus on using Edmodo for the betterment of student learning and increasing the use of technology in my class.” Participant 9 remarked, “I feel that doing the development this way increased my motivation and hence productivity. I was able to create and save templates and games using the newly acquired knowledge that was applied that same week in class.” Participant 8 revealed, “I think the timing allowed for development of skills that could be implemented easily.” Other participants shared the following responses:

The training is very relevant and timely as it made my work much easier. I was doing several things manually, such as checking and statistical analysis of answers to questions, but now this is automated and has become very convenient. (Participant 6)

Another participant stated,

This opportunity came at a good time because the school year had already started and I was able to see what was working with my students and what was not, and I was able to choose a topic to study that would help me right now with my students in the classroom. I really liked that and I value that experience because I was able to learn right now, in order to help my students right now. (Participant 5)

Three participants (25%) felt the timing was not appropriate for them and would have preferred the beginning of the year. Participant 4 reasoned, “The timing of this training was somewhat appropriate. I would have preferred to perform the training before classes started.” Participant 12 disclosed,
The timing of the study might have worked out better if it would have been in the beginning of the semester. The issue with the project was not the timing, it would have just been better to do in the beginning because I would have liked to implement what I learned in this study since the start of the school year.

The participants’ responses varied. For some the timing was perfect as it was relevant to a problem that needs a solution whether finding an easy learning management system to have all pertinent files for optimal class organization or learning new applications to use in the classroom for an upcoming lesson. For those, as Knowles indicated, that were not in an orientation ready to learn was most likely due to not having a likely need to learn something new or improve on existing skills.

Facilitator’s role. The facilitator is grouped with the theme personal relevance because the facilitator contributed to the meaningfulness of the training by allowing participants to guide their learning. The results were significant; 11 of 12 participants (92%) agreed about the usefulness and role the facilitator took with them. The following responses to Question 11 reflect the participants’ appreciation of the facilitator’s attitude of equality and respect. Participant 6 conveyed, “The facilitator’s participation and teaching style contributed very much to my learning. She is very knowledgeable about many apps and processes and was able to discuss in detail what we asked to explain.” Participant 9 assured, “The facilitator did exactly that: Facilitate. I didn’t feel I was being judged, but rather aided in my explorations. And helped when I was confused or stuck.” Knowles et al. (2015) noted that adult learners dislike it when they are instructed to do something or directed regarding what is important. Facilitators may exacerbate this sentiment by treating adult learners like child learners, dependent on them for knowledge and learning. Participant 4 acknowledged this feeling by expressing, “She was more
like a guide. I prefer to have a guide than someone telling me what to do and how to do it.”

Other participants reflected in the following ways:

I feel it contributed positively to my learning because I was able to get any questions I had answered very quickly which enabled me to progress with my learning, instead of getting stuck and giving up. I liked that the facilitator was there to answer our questions, yet she left us alone to learn at our own pace without interference. (Participant 5)

It was nice to be given the opportunity to set my own goals and be able to have someone that was there to still help and guide me. I felt it contributed in learning more about where I’m at and how I use Edmodo. (Participant 2)

Another participant stated,

The facilitator’s participation and teaching style contributed to my learning because it allowed me to go at my own pace with my own decisions as to what type of video, hands on, or application i needed to learn. It did not quite hinder my learning but i did wish i would have been pushed a bit more because i needed to force myself to make time for the project. Again, school work at this time did not help in the self driven opportunity part of the learning experience. (Participant 11)

Participant 12 stated,

The facilitator was extremely helpful throughout the project. She was able to guide and answer any questions while on and off site (email). Part of the techniques that I learned to use throughout this project were a result of the advice and teaching of the facilitator.

Participant 7 stated,

The teaching style is one of being available for assistance when needed, and supervising from a distance at other times. I feel this method contributed much to my learning,
allowing me to explore and not requiring participation in receiving instruction in topics not important or relevant to me.

One participant (8%) felt unsure about the facilitator’s contributions. Participant 10 stated, “I probably did, but not as much as I would like.” Mostly, the participants except participant 10 felt the researcher as facilitator performed the duties as stipulated of a facilitator to guide the learners. The statements of the participants stressed the significance of the role of the facilitator to guide and be available to assist when they need it. For most, this contributed to their learning as the researcher as facilitator ensured there was learning occurring without disturbing the process.

Applicable and relevant. The first question addressed motivation and adult learners’ need to feel their learning is relevant and useful. Overwhelmingly, the participants wanted this experience to be relevant so they could be more productive or efficient in the classroom for their students. Matherson and Windle (2017) affirmed that teachers want professional development that is engaging and hands-on so they can practice skills or learn new ones. Teachers want professional development that provides the skills necessary to apply new approaches instantly.

Eleven participants (92%) participants positively responded to Question 18 that they would apply the skill, lesson, information, or content learned during this training to their instruction. Participant 1 explained, “Yes, I can apply this approach to various projects we do in my class.” Other participants responded in the following ways:

I was able to immediately apply what I learned because through this experience I was able to become a Nearpod certified educator. Also, I was able to put into practice immediately what I learned, and I didn’t have to wait until the beginning of the year or the semester. (Participant 5)
Another participant stated,

I have been able to apply what i [sic] have learned in this process and feel very well prepared to continue learning more on the same topic to improve my teaching as well as provide more opportunities for student to have different types of learning and more personalized for them. (Participant 11)

Other participants declared they had immediately used their products or knowledge to improve productivity, efficiency, and instruction. Participant 12 declared, “Yes, I have actually been applying my new skills in the classroom. I have created more videos for my students and I am still working on designing a virtual reality lesson for a future semester.” Participant 6 confirmed, “I was able to apply immediately what I learned about Forms and Edmodo and this made my teaching easier.” One participant (8%) did not respond favorably to this question and answered, “Probably yes. But not at the level I would like” (Participant 10). Participants want to know their time has been well spent in any professional development session. The need to have applicable and relevant learning experiences increases the likelihood of the participants using what they have learned.

Self-directed learning. Darling-Hammond and Richardson (2009) noted that professional development that includes participants in active learning or hands-on sessions are most beneficial (as cited in Matherson & Windle, 2017). For Question 20, 11 of 12 participants (92%) felt their learning style was more open and self-directed than rigid and instructor led. This was evident from Participant 1 who stated, “It was all hands-on learning but still able to collaborate with the facilitator and colleagues.” Participant 4 commented, “Definitely. Once a topic was decided, I was in charge of seeking the information needed (blogs, videos, talking to colleagues).” The more teachers felt engaged, the more motivation, control, and accountability they felt (Darling-
Hammond & Richardson, 2009; DuFour, DuFour, Eaker, & Many, 2010 as cited in Matherson & Windle, 2017). Other responses from participants are as follows:

Yes it did. Andragogy requires active learning and self-directed inquiry. One has to choose what to study, then take steps to set goals and create a way to reach these goals. Then the goals have to be documented in some concrete way. All of this is the responsibility of the learner (those of us in the study). (Participant 7)

Another participant stated,

Andragogy allowed for extensive learning in that my knowledge of what I already know was increased and added knowledge to what I did not know before. My inquiry was self-directed in that I, with the help of the facilitator, delved into the details of what I have to know. I collaborated with my colleagues in knowing more about Edmodo and shared with them my newly-acquired knowledge in using Forms. (Participant 6)

Participant 5 stated,

Yes, because during the sessions, we were self-directed. We had ample time for our own discovery and learning. Since we picked what we wanted to work on, it was very self directed and meaningful, active learning. At the end of the sessions, we shared out on what we had been working on and collaborated with each other to teach what we had learned to someone else.

Participant 9 stated,

At the beginning of every meeting we were allowed to read our objectives to remind ourselves of what we originally intended accomplish. Then, we were allowed to either continue working on what we were previously exploring or allowed to change directions.
The fact that all the teachers there were science allows for a better type of collaboration given that we all have similar needs in our classes.

Participant 11 stated,

Andragogy allowed positively for extensive active learning, self-directed inquiry, and collaboration. It allowed ample time to be self-directed, work in groups or with a partner (when we met), as well as collaboration with others opinions and experiences in the classroom. We were allowed to communicate at any time or during the meeting times, which helped learn from each other during those times.

One participant (8%) did not respond elaborately; thus, this response is not included in the group of agreement. Participant 10 wrote, “Collaboration more difficult,” which could infer that the others were easier; however, since there is no definitive or explicit response, it is not positive.

**Process contributions.** The findings related to the theme titled *process contributions* include the categories: (a) inclusion; (b) practical and ongoing; and (c) additional tools and resources. As Knowles et al. (2015) described it, “the difference is that the content model is concerned with transmitting information and skills, whereas the process model is concerned with providing procedures and resources for helping learners acquire information and skills” (p. 51). The results showed that participants appreciated and preferred the process elements and resources used in this research study.

**The need to know.** Adults need to know the purpose for learning; they want to feel safe knowing that their time will be spent wisely. For Question 6, all participants (100%) asserted that they were given proper explanation of the study and their learning goals. Participant 5 shared, “Yes, I fully understood what the purpose of the study was and I was in full agreement to participate because I feel it is a valuable study to develop an innovative way to receive our
professional development.” Participant 7 commented, “Yes. We received easy-to-understand written and oral explanations of the purpose of the study. There was no doubt in my mind as to what we were doing and how we the participants and the instructor would benefit.” Participant 9 revealed, “Yes, there was an explanation and frequent reminders of the reasons why the training was being done in the way it was being done.” Other participants shared their opinions in the following ways:

Yes, the purpose of the study was in a way to move away from the traditional staff development learning. In this study, the members are in charge of their learning as well as to collaborate with the other team members. This is beneficial for the entire group since everyone collaborates and brings experiences to the table. (Participant 4)

Another participant stated,

I believe so, we were given the background of the study to be a more self oriented and driven opportunity for teachers to get a hands on learning at their own time, pace and convenience, as well as their own choices of learning styles and methods. (Participant 11)

Participant 2 stated,

Yes, I understood fully the purpose of this study and fully agree with how it was done in allowing me as the teacher to have more control in choosing what I wanted to use and how I wanted to use it. It was a time for me to reflect a lot and see how much I have grown in using technology in the class, as well as seeing where other colleagues are at and the ideas that they had.

Participant 9 stated, “Goals were set from the beginning and advancement was monitored through the weeks. I feel that this kept me in track, but allowed me the flexibility to advance at different rates on different days.” The responses from participants points out the significance of
informing the learners of the objectives and expectations. For adults, knowing the purpose for learning is just as important as learning.

**Pro-learning setting.** Knowles et al. (2015) stressed the importance of setting or climate in the andragogical process for learning. For Question 8, the results were significant; 11 participants (92%) had positive perceptions of the setting’s contribution to their learning. Participant 2 noted, “Yes it did assist me. Asking questions with other colleagues and hearing their discussions allowed me to keep trying to learn more and kept me wanting to get better at my profession.” Participant 9 confirmed, “I do prefer and feel less pressured when working in small groups. Also, I was more focused and became more productive.” Participant 1 declared, “The setting assisted in my learning because I prefer to actually work on what I am learning instead of just listening to someone talk about it.” Other responses included:

Yes. The setting is important. It’s away from my school, in a neutral setting, and the distractions of school or of my classroom were not a factor in my learning. Had I been in my classroom, or at school, then there would be plentiful distractions to keep me from succeeding. (Participant 7)

Another participant stated,

The setting assisted to some degree in my learning. Personally, sometimes it is needed to have a designated area to complete assignments that would not otherwise be completed at home due to distractions or efforts. The setting was very convenient but at the same time, I personally lacked more motivation and time. (Participant 11)

One participant (8%) did not feel the setting contributed to learning.

The setting did not really make a difference either way in my learning because we were all into what we were doing, and the location just served as a meeting place. The only
thing that helped was that the facilitator was available to answer our questions and the meeting place served to formalize the instructional meetings that were taking place. The setting just helped to formalize things, but did not really assist in my learning. The same outcome would have resulted for me if I had been alone in my classroom, because it is still something I want to learn about. (Participant 5)

Most participants agreed that the setting contributed to feeling more engaged. The setting should relate to the learning topics. In this case, the topic was instructional technology, the setting included various technology devices to have ready for demonstrations. The sitting arrangement contributed to their learning as they sat in longer desks that do not limit how many resources fit on the table nor the proximity of their peers.

*Personal tracking and evaluation.* Another process was the use of personal evaluation methods to gauge own learning. In this case, the participants used their learning contracts to stay on target. The questionnaire also provided a means to review the process and many of its elements. The training was not a formal, one-time class, but rather on-going trainings; therefore, the evaluations were not aligned to either formative or summative assessments. They were mostly task-oriented and evaluations reflected whether the learner completed their task or felt confident to use what they learned in the classroom. The results for Question 9 were significant; 10 of 12 participants (83%) agreed the evaluations were suitable. Participant 6 specified, “The evaluation methods were suitable in that they are based on what we know and the way what we learned impacted our classes.” Participant 5 indicated, “The evaluation methods were suitable because it gave me an end goal and a product to produce to prove that I was successful in my learning.” Participant 7 confirmed, “I take this to mean completion of Atomic Learning course sequences, for which certificates were awarded for finishing courses and hours awarded that
count toward district requirements. So, from this point of view, they were suitable.” Two participants (17%) responded differently. Participant 2 wrote, “N/A” and Participant 3 commented, “Can be improved” but provided no other suggestions. Most agreed as the responses demonstrated that self-reflection and assessment is needed to gauge if learning was achieved. For example, they were responsible to add their own evaluative methods whether complete a quiz within an application, complete their lesson, or have someone else check their work. They varied depending on their learning goals; however, most all agreed that having some kind of measurement to ensure learning transpires is beneficial in this process.

*Learning is ongoing.* Time is a commodity for all employees; for teachers, it is even more scarce. Teachers who are motivated to learn, as most adult learners are, have little time to learn during one day trainings or workshops that provide an overview of new information but lack full exploration to inform implementation. “The duration of professional development must be significant and ongoing to allow time for teachers to learn a new strategy and grapple with the implementation problem” (Gulamhussein, 2013, p. 3). Knowles et al. (2015) realized that learning is a process that is ongoing rather than isolated. The results in the present study were significant for Question 17; 11 participants (92%) considered the time allotted during the research study to be sufficient. By the third cycle, the times to meet increased from 4 hours to 6 hours. This was a result of first cycle questionnaire responses. The feedback suggested a desire for more time to complete tasks. In cycle one, 3 of the 4 participants (75%) felt they needed more time. For the second and third cycles, the group decided to increase the hours to test if an additional two hours would be enough. In the second cycle, participants agreed that it was enough time. Some responses in the third cycle suggested preference for the new length of time. Participant 2 stated, “Yes, I was able to think and design something that I could use in my class.”
Participant 4 said, “Yes, the time provided was sufficient to plan, learn, and put into action the project(s).” Participant 6 wrote, “Yes, the duration of this professional development provided ample time to learn what I planned in my contract and others that were not in my original contract.” One participant of the 12 (8%) felt it was too much time and felt distracted after some time. Participant 12 wrote,

I believed it allowed more than ample time to learn what I [sic] planned in the contract. I sometimes wish that we could have been limited to a shorter period of time to maintain focus on the project and not have other distractors get in the way of learning.

The idea of time is ever challenging in the life of a teacher. This specific questions highlighted the importance of giving enough time to teachers to learn new information that is ongoing and connected rather than individually segmented each session. This is significant since the participants indicated the preference and desire to have adequate time to acquire new information or skills. This demonstrates that teachers do not desire superficial professional development, but rather deeper learning and understanding of the skills needed.

Diagnosing the needs for learning. Learning is beneficial to all who involve themselves in the process. Knowles et al. (2015) noted,

When learners understand how the acquisition of certain knowledge or skills will add to their ability to perform better in life, they enter into even didactic instructional situations with clearer sense of purpose and see what they learn as more personal. (p. 60)

Learning is personal and relevant when there is a learning need, a missing component that encumbers a learner from reaching their full potential. For andragogy, participants identify the learning need through the process model for learning via diagnosis. The learners make these
diagnoses and recognitions of needs themselves based on their own perceptions (Knowles et al., 2015).

Question 21 asked participants if the rubric was useful and 11 of 12 participants (92%) agreed. In the first cycle, participants suggested changes to the format and wording of the assessment. Three of the 4 participants (75%) in the first cycle provided suggestions for changes. Participant 5 stated, “Include a space for ‘not applicable’ because some of the questions did not apply, or could not be answered based on our experiences or situations.” Participant 7 wrote, “I’d have to look at the rubric again. As I recall it needs many changes or rewriting of choices. It was hard to respond to many of the choices plus it seemed inflexible.” Participant 8 replied,

Sometime an auditory learner I tend not to remember what things look like. But I know the rubric was overly long in some areas in excess of numbers of pages where the font could've been smaller and much easier to read on one page versus multiple multiple [sic] pages. It could also be written so that you could Have a set type of goal in mind before you go looking for your level of expertise before you start.

Using the rubric from Johnson and Mielke (2013), the researcher made adjustments based on the recommendations from the first cycle participants. First, the format of the file (i.e., the sizing) changed to condense the number of pages. In the first cycle, there were 11 pages total whereas the new version had only five pages. The font changed to alternate rows with highlights in gray to distinguish each competency. Next, the participants argued that many of the choices were not relevant and did not fit their needs. They wanted a column for not applicable added as a choice. The researcher as facilitator suggested using not yet rather than not applicable as not applicable can easily eliminate and detach the participant from that learning skill if it seems too difficult or
impractical. Dweck (2006) described ways that adults perceive their own skills or lack of skill through fixed and growth mindsets. In growth mindsets, there is an opportunity to increase the current aptitude based on what is needed. People with a fixed mindset consider their skills and lack of skills as two separate entities without trying to improve (Dweck, 2006). As participants become increasingly comfortable with technology integration, the once *not applicable* competencies may be of more interest.

The last adjustment was adding a square-shaped bullet to each competency to check off. The researcher did not want to change the content of the assessment because it was not self-created and the researcher had not garnered permission to do so from the authors. A participant in the first cycle also suggested changing *the teacher* to *the students*, which aligns to many student learning outcomes and objectives that focus on the students rather than the teacher. This was acceptable because all participants agreed and adjusted the diagnostic measurement depending on the situation. After these changes were made, participants expressed positive perceptions in the second and third cycles. The participants in the third cycle responded in the following ways:

Yes, the rubric was useful because it helped narrow down what we wanted to learn about and guide us to what might be right for us. Also, it helped us to create an end product to display and prove our learning. (Participant 5)

Another participant stated,

The rubric was very helpful in assessing learning needs. I believe the second version was much more useable than the initial rubric. Further changes could be made depending on overall goals for a learning opportunity or staff development session. (I don’t know what they’d be.) (Participant 7)
Other participants also had positive remarks. Participant 11 stated, “The rubric as solid, it allowed to look at the qualifications needed to move forward in the learning process.” Participant 4 replied, “The rubric was self explanatory and straight to the point. I had no questions on it.” One participant (8%) was unsure of the rubric. Participant 3 stated, “I’m not sure.” Aside from this last response, the other responses by the participants stressed the significance of using a rubric that is easily read, formatted for adequate length, and include appropriate rating scales and statements that are relevant and understanding of the needs of the participants. Using a rubric is significant because it allows each participant to reflect on what they known and what they want to know in order to formulate their learning goals to have a clear purpose.

**Research question 3.** What, if any, specific part of the andragogical process detract from attaining higher perceptions about traditional professional development? What specific part of the andragogical process detracted from attaining higher perceptions of traditional professional development? In reviewing all the responses, participants overwhelmingly preferred the amended design to the traditional style of professional development. No participants disagreed with the design or declared it a hinderance. They did provide suggestions regarding some areas they felt could use an adjustment in process. Five of 12 participants (42%) provided suggestions to improve the design of this professional development in response to Question 12. Participant 3 commented, “The evaluation process can be changed.” Participant 1 felt the learning needs rubric should be more explicit and commented, “A way assessing our learning needs by answering a questionnaire without knowing what target each question assessed.” Participant 10 argued, “Short term goals would be nice.” Participant 11 similarly specified,
I would implement more short term goals tied into the long term goal in order to check the process of the learning more often to make sure the teachers are on track and not putting the project in the back burner. I would also have a couple more questionnaires throughout the process to ensure that the teachers are on their path running smoothly or if they are running into any road blocks.

The last suggestion addressed the length of the training. Participant 12 indicated, “The only change that I would like to make to this project would be the timing. The project was too short for all the learning and practice that needed to be completed.” Two of the 12 participants (17%) described a challenging element that distracted them during this process in response to Question 22. Participant 4 admitted,

Formulating a plan was a bit challenging since I have no previous knowledge on what I was going to work on. But once I had a better idea, I followed it and switched it a bit to fit my learning abilities.

Likewise, Participant 7 acknowledged a bit of exhaustion and responded, “I don’t really think anything hindered my learning except perhaps making better use of the time available in some of the sessions held after school, when I was tired.” Participant 3 commented, “I’m not sure” and Participant 10 responded, “time.” For Question 22, participants answered two questions about steps that helped and hindered. Participant 10 did not specify whether time helped or hindered this process.

Summary

Chapter 4 included detailed descriptions and analyses of the findings from this research study. This chapter included discussions of the sample, methodology, analysis, summary of the findings, and a presentation of the data and results. The purpose of this study was to improve
teachers’ perceptions of traditional professional development practices by incorporating adult learning principles, specifically andragogy. This study was designed to test the implementation of andragogy within traditional professional development design. With andragogy, participants exhibited more control over their learning and became active members in the process via decision-making. Because of this, qualitative action research was the ideal methodology. The andragogy framework includes adult learning principles that establish adults as responsible and capable for their own learning with experts serving as facilitators.

The data revealed an almost unanimous consensus that andragogy enhanced traditional professional development, leading to an overall positive effect on participants. The researcher analyzed data from three cycles of action research. The final cycle yielded 12 participant questionnaires. The researcher analyzed and coded responses to reveal categories and themes in the data. Four major themes emerged from the data collected by the questionnaire: (a) positive perceptions; (b) agency; (c) personal relevance; and (d) process contributions. Additionally, the researcher determined four overarching findings. The findings related to the participants’ overall positive perceptions and satisfaction when using andragogy embedded within traditional professional development. Participants acknowledged and appreciated their feelings of agency and empowerment in their own learning. They felt empowered because they were able to make decisions about their learning to create relevant and meaningful experiences. The participants appreciated being included in the planning and evaluating of their learning process. The presentation of data and results in this chapter provide evidence from participant responses to provide rich, thick descriptions of changes in teachers’ perceptions. Throughout the research, the researcher applied validation strategies to guarantee credible, ethical, and authentic results.
Chapter 5: Discussion and Conclusion

Introduction

In every profession, the need to improve skills and knowledge is present. It is a process of continual learning to gain greater expertise (Guskey, 2014). The demands and accountability of educators demonstrate the need to ensure teachers are prepared to address the needs of students to improve learning. In this action research study, the researcher introduced the andragogy framework into traditional professional development to amend the design, changing it from a transmission of information approach to a form of transactional communication in which participants are active and control their own learning. The researcher investigated whether incorporating andragogy would improve teachers’ perceptions of traditional professional development. Analysis of the data suggested four findings: (a) improved perceptions of traditional professional development; (b) a feeling agency over learning; (c) satisfaction with relevant and meaningful experiences; and (d) satisfaction with other process contributions. The findings conveyed the perceptions of the participants as significantly positive and established a need to continue similar research with a wider scope.

In Chapter 5, the focus is to interpret, find meaning, and make connections from the data. This chapter includes an evaluation of the research results and data, expanding on current literature, to confirm whether this research had any effect. The chapter includes discussion of the results of study to establish a connection to the literature to further deduce the future of this topic. This chapter includes seven sections: (a) summary of the results; (b) discussion of the results; (c) discussion of the results in relation to the literature; (d) limitations; (e) implications of the results for practice, policy, and theory; (f) recommendations for further research; and (g) the conclusion.
Summary of the Results

This study originated from discovering previous research disparaging traditional professional development (Gulamhussein, 2013; Jacob & McGovern, 2015). In these studies, educators’ perceptions were mostly negative, revealing dissatisfaction. By continuing to learn more about traditional professional development, a theme developed that confirmed the importance and purpose of professional development. Traditional professional development is meant to help educators gain knowledge and improve skills to implement in the classroom with a strong possibility of changing student learning outcomes (Bayar, 2014; Kennedy, 2016; Patton et al., 2015). This purpose led to further examination and analysis of the literature on opposing positions.

Currently, most traditional professional development is considered ineffective (DiPaola & Hoy, 2014). It lacks teacher input or regard for teachers as learners. Siko and Hess (2014) stressed, “Teacher professional development can be poorly executed with little regard to the needs of the adult learners, and this can create barriers to successful transfer of knowledge into practice” (p. 99). This led to cross-examination of the literature identifying barriers and trends in current traditional educator professional development. A disconnect emerged between the goal of teacher professional development to improve teacher practice and, as Patton et al. (2015) noted, its inability to effectively alter teacher practice and student learning outcomes. This lack of change in teacher practice was due to teachers’ dissatisfaction with the design of traditional professional development (Jacob & McGovern, 2015). If teachers are unsatisfied and feel their professional learning opportunity is irrelevant, they will not find any value in it to apply to their teaching practices. Researchers advocated for continuing research on professional development; however, the concentration must be on understanding the ways teachers learn (Kennedy, 2016).
The way teachers learn and the way to improve teachers’ perceptions of traditional professional development require acknowledgement of the idea that teachers are adult learners. Applying andragogy, an adult learning framework designed by Knowles (Knowles et al., 2015), may be advantageous. With andragogy, adults are involved in the process; therefore, this study used qualitative, action research methodology. By using this methodology, participants undertook a specific problem to solve (Herr & Anderson, 2015).

During the qualitative action research study, participants assessed their learning needs, formulated their own learning goals, and evaluated their progress. The implementation of Knowles’ (Knowles et al., 2015) andragogy principles occurred throughout the entire research study. Using adult learning principles, specifically andragogy, allowed for such active involvement and empowerment. The focus shifted from passive, lecture style trainings that relied on a transmission mode of communication (Yurtsever, 2013) to actively disseminating information to engaged participants in a transaction model. Knowledge freely flowed between the facilitator and participants.

The findings from the third cycle indicated positive perceptions of the andragogy framework. The purpose of this study was not to replace or eliminate traditional professional development but to add andragogy as a design feature for improved delivery and organization. The participants were actively involved throughout the process. They chose the days met, determined their learning goals and resources, learned from each other or in isolation, and planned for implementation. The teachers gained knowledge and specific skills that were readily applicable to their classrooms. The knowledge or skills they sought were specific to their needs and were relevant. These traditional professional development sessions became highly teacher-driven.
The research study addressed overarching questions examining how andragogy improved teachers’ perceptions of traditional professional development and which specific parts of the andragogical process assisted in improving teachers’ perceptions or detracted from their perceptions. The results from the questionnaire proved that participants’ perceptions improved when using the andragogy framework. The researcher coded and analyzed the questionnaire data, which revealed four major themes: (a) positive perceptions; (b) agency; (c) personal relevance; and (d) process contributions.

**Discussion of the Results**

The results confirmed that teacher perceptions were significantly positive when implementing andragogy within traditional professional development. Overall, the participants preferred using andragogy in traditional professional as an amended design, which supports previous findings by Knowles et al. (2015). Teachers had more control over their learning goals and the process worked in the manner they felt was best whether alone, collaboratively, or with full support from the researcher as facilitator. This professional development focused on the learners’ needs.

Professional development should increase knowledge and professional skills; however, there are two persistent problems that this study addressed. The first problem is the design or format of traditional professional development, a content-drive transmission model (Mazur, 1997). The second problem is a direct result of the first. Teacher perceptions are low because the professional development is ineffective and does not provide relevant knowledge or skills that they can implement in a timely manner.

The findings of the present research study suggest a possible solution to these problems. Participants were significantly satisfied and perceptions improved when using andragogy
principles and the andragogy process for learning as guiding facets of traditional professional development. The results were expected and most participants found andragogy elements useful and appropriate. Teachers perceptions guide whether the design and content are important and relevant. Guskey’s (2016) five levels of evaluation for professional development signify that teachers’ perceptions are important. These levels are arranged from the simplest to the more rigorous and are in sequential order to ensure training addresses each level. Guskey (2016) emphasized the importance of starting with teachers’ perceptions to acquire necessary feedback and data on “the design and facilitation of professional learning” (p. 33). This consideration is necessary to move forward to evaluate if teachers learned and implemented newly acquired information.

The main research question pondered how the andragogy framework would improve teachers’ perceptions. This study builds on a gap identified by past research on traditional professional development and teachers’ negative perceptions. The integration and use of andragogy improved teachers’ perceptions in three significant ways. First, teachers felt a greater sense of agency and empowerment. This contrasted how they described previous traditional professional development in which their voices were not heard and ideas not considered. For example, Participant 2 detailed, “This new [sic] is an improvement from the way we used to have in our regular professional development because we were given more and sufficient time to plan, do, absorb and apply new learning and accomplish our goals.” Second, using andragogy gave teachers more relevant and meaningful experiences. This relevance allowed teachers to learn new knowledge that would directly improve their teaching practice. Participant 12 emphasized, “Yes, because the skills that we acquired by completing this project are relevant to what we can use in the classroom due to us choosing what project best fit the need of our students.” Third,
using andragogy provided the necessary setting, duration, and personal resources to track personal learning and progress. Participant 2 described, “Just the overall atmosphere. I felt comfortable and being in this type of setting allowed me to focus on something that I could get better at and use it to better help my students.” The process contributed to the teachers being more holistically involved from the beginning to end.

**Teacher agency.** Teacher agency places the teacher directly in charge of their own professional learning. That is, teachers proactively seek opportunities initiated by their needs or self-interests instead of waiting for what is intermittently offered. Calvert (2016b) delineated teachers’ motivation to learn for their own growth. Teachers want freedom and flexibility to choose learning goals that are relevant to them and their needs in the classroom. Teachers favored the new style with andragogy in traditional professional development. Additionally, there was evidence of more involvement and accountability. Boone (n.d. as cited in Calvert, 2016b) demarcated, “Teachers are in it for the autonomy and the mastery. They want to master their craft and be free to innovate” (p. 53). The teachers knew they had the time, resources, and expertise to focus on a need and worked to complete that goal. Participant 1 emphasized, “It helped set targets that I was comfortable with. It also gave me the opportunity to set goals that I felt were useful.” Likewise, Participant 3 stated, “I really enjoyed how I was able to choose what I wanted to do and I do believe that these activities were appropriate for my level of experience.” Providing this time and shifting the focus from required compliance to flexible opportunities helped teachers feel more inclined to participate for their own benefit. They decided for themselves what to learn based on teaching gaps, learning needs, or student data.

The difference between previous studies and this study is the reliance on experts or other professionals besides teacher to make decisions for teachers about what is necessary rather than
allowing teachers to decide for themselves. Darling-Hammond et al. (2017) stated, “Adults should choose their learning opportunities based on interest and their own classroom experiences/needs” (p. 7).

**Relevant and meaningful experiences.** Teachers’ experiences improved after using an andragogy design in this study. This addition provided relevant and meaningful experiences. Desimone and Garet (2015 as cited in Matherson and Windle, 2017) concluded teachers want opportunities to learn that directly connect to classroom practices. Participant 7 emphasized, I feel what I learned is very relevant. I’ve seen many changes in my field over the past 25 years, and being able to pinpoint what I need to study, either in learning new things or to update existing knowledge, is very helpful.

Teachers in this study appreciated the chance to address their skills gap and improve or align their learning to the needs of students based on data. Patton et al. (2015) found professional development to be relevant when it relates to a teacher’s work in the classroom. A few participants took advantage of the time to improve their management or overall strategies to be more efficient. The participants determined what they were going to investigate and how they would complete this task. They determined when to study individually and when to seek advice from colleagues or the researcher as facilitator. They were in control; relevant and meaningful experiences were personal. For professional development to be successful, Bernhardt (2014) suggested it must be “directly relevant to their classroom practices and provide resources to support these practices” (p. 11).

Included in this process is the facilitator who contributed to their learning. A key difference in andragogy is the idea that the expert is not considered a teacher who disseminates information but rather a facilitator who guides adult learners as they learn new information on
their own. Learning is a process in which the adult learner must be involved and conduct for themselves (Patton, Parker, & Pratt, 2013). Knowles et al. (2015) based adult learning theory on several different theories. One stressed the role of the facilitator. Carl Rogers wrote extensively on the idea that the facilitator’s role is to assist the learner. Rogers (1969 as cited in Knowles et al., 2015) described a successful facilitator’s three dispositions: (a) sincerity; (b) generous, trusting, and respectful; and (c) possessing empathy and listening skills. These dispositions support an environment that is conducive to adult learners. Facilitators for adult learners must have a heightened awareness of the experiences of learners, the knowledge they possess, and how each of those will amalgamate with the new ideas (Patton et al., 2013). Participant 8, for example, stressed, “I think the role of answering and suggesting only when asked was great. There was no pressure to conform.” In the present study, the researcher as facilitator was mindful and attentive in the following ways:

- The researcher as facilitator created a climate for learning in a safe and nurturing environment where learners were respected as adults who brought a wealth of knowledge and could contribute their knowledge to others, if needed.

- The researcher as facilitator clarified any misconceptions or doubts of the adult learners regarding their learning gaps or interests of study.

- The researcher as facilitator assisted the adult learners with further instructions, teachings, or explanations to continue the learning.

- The researcher as facilitator was flexible and understood that the role of facilitator may or may not be needed. The adult learners directed who or what resources would be used to further their learning.
• The researcher as facilitator guided discussions without imposing ideas. Each adult learner had professional wisdom to share and use. There was no oppressive behavior towards the adult learners. There was teacher empowerment (Stacy, 2013).
• The researcher as facilitator visited with each adult learner to build trust, ask about progress, and provide ideas.
• The researcher as facilitator treated all participants with equality as co-collaborators.
• The researcher as facilitator ultimately wanted each adult learner to be successful in their learning in the best way that fit for each learner.

Facilitators must conduct themselves in a careful balance, according to Patton et al. (2015). It is a balance of knowing “how teachers actively construct new meaning based on prior knowledge and experiences, recognizes the influences of others in a nonjudgmental and social environment, and emphasizes the relevance of formal knowledge in teacher growth and development” (Patton et al., 2012 as cited in Patton et al., 2015, p. 34).

Process contributions. The teachers in this study also felt highly satisfied knowing they were involved in the entire process of scheduling, planning, and making ongoing decisions. This aligned to research that championed for direct teacher involvement in their learning throughout the process, not just during attendance at trainings (Kennedy, 2016). Calvert (2016a) affirmed that teachers delight when expressing “the value of being part of a nurturing professional community, connecting to their real work, and being treated as experts and decision makers” (p. 8). Participant 3 revealed, “Prior exposure helped me learn more. I was able to share with my colleagues what learned and what issues I ran into as did they. This encourages greater teacher leadership further contributing to the overall achievement of the school.”
The participants in this study favored a longer duration of professional development sessions. The sessions were ongoing, meeting every week, to continue their learning of the same topic. Darling-Hammond et al. (2017) established that ongoing, sustained duration improves teaching practices and strategies. The amount of time is not yet defined, but 1-day sessions are ineffective.

A favorable learning environment is also essential (Knowles et al., 2015). This should reflect the physical environment and the behavioral or personality, cognitive, and affective components of learners. The facilitator should be inviting, the goals and other information should be organized, and the environment should indicate respect for all to promote a “mentally healthy” setting (Waetjen & Leeper, 1966 as cited in Knowles et al., 2015, p. 55). This should include limiting stress to complete their project in a specified amount of time. This anxiety can block learning from happening if participants worry about completion rather than learning.

Answering the second research question required applying andragogy principles and the andragogical process for learning. In answering what was most helpful, participants had varying responses; however, most fit within certain themes. First, some participants felt more freedom or flexibility. To them, that was the most helpful factor. Others noted components of the process and resources they used. Some participants stated the needs assessment tools was most helpful and others felt the planning of their learning goals was the most beneficial part. Another participant felt the general discussion about the applications and how to implement them in the classroom was most valuable. These discussions happened throughout the training and occurred organically in response to participants’ suggestions or questions. Participants cited no components that hindered their learning but there were a few recommendations to improve the process for optimal learning.
These findings reveal implications for potential change. If teachers gain agency over their learning, their motivational levels will increase to improve teacher leadership in schools. Involving teachers in all aspects of learning ensures they voice their opinions and experiences while feeling valued as members of the organization (Bayar, 2014). Teacher leadership increases the role of the teacher in making decisions while encouraging positive involvement (Smith, 1999 as cited in Cosenza, 2015). It is possible for teachers to improve teaching practices and potentially improve student achievement when there is more accountability, responsibility, and agency to make necessary personal choices for learning. Collectively, teachers can achieve success at the school organization level if everyone is unified and committed to their objectives, roles, and overall purpose.

Discussion of the Results in Relation to the Literature

The literature review revealed that teachers are dissatisfied with traditional professional development (Bill and Melinda Gates Foundation, 2014; Jacob & McGovern, 2015). Researchers tried to improve the conditions or substitute the design by developing strategies to improve learning outcomes, but successes were not statistically significant (Avens et al., 2012 as cited in Hill et al., 2013). Teachers’ negative perceptions persisted.

The findings from this study may influence the current literature on professional development. Like Calvert’s (2016a) insight that underscored “the intangible, but enormous, value teachers place on being listened to and involved meaningfully as well as the benefits the school community enjoys when teachers are intrinsically motivated to pursue their continued development,” results in the present study confirm this idea (p. 3). This section examines the findings in association with the literature, specifically as it relates to the communities of practice and scholars.
Past research studies highlighted the importance of professional development research; however, the need to add teachers’ voices and opinions was lacking. Previous studies had inconclusive results, demonstrating that there was a need to continue the research with input from teachers as adult learners. This study addressed teachers’ satisfaction with professional development and the quality of teaching that resulted from professional development.

**Teacher satisfaction.** Most importantly, the study addressed teachers’ low perceptions of irrelevant topics, shallow presentations, or feeling disregarded as a responsible learner (Gulamhussein, 2013; Smylie, 2016). In contrast to previous research findings, this study revealed higher perceptions as teachers became active learners and full participants. For example, Participant 2 stated, “I think it is important to reflect on what we learn. I was able to plan something that I can actually use and modify it if I needed to.” Few past studies had empirical data that demonstrated teachers’ perspectives on how they feel and what makes them feel better about traditional professional development. Participants should not be disregarded or directed to learn what was decided on by others; they need to have a direct role in their own learning (Knowles et al., 2015). Hargreaves and Fullan (2012) underscored the importance of transformation of the education system to provide teachers with more genuine responsibility for their learning (as cited in Patton et al., 2015). Participant 7 emphasized, “I think choosing what one is interested in makes for much more beneficial learning opportunities.” Most participants were completely satisfied and preferred the andragogy approach to the traditional process of a presenter or expert lecturing with few activities.

**Effective professional development and teaching quality.** There was a considerable amendment to how the traditional professional development sessions were conducted by employing adult learning principles. Participants exercised more autonomy in their decisions
and choice of study topics. Rather than the expert, in this case the researcher as facilitator, lecturing to transmit knowledge to the participants; andragogy principles and process for learning emphasized a learner-centered approach. This one amendment changed the quality of the teachers’ skills. Participant 1 disclosed, “It helped me explore and build on my weaknesses.” Patton et al. (2015) similarly found that effective professional development includes teachers and creates opportunities for active learning in which teachers improve their skills, gain more knowledge, reflect on their teaching, and prepare sound lessons and assessments. In alignment with Knowles et al. (2015), results in this study confirmed teachers’ preference for utilizing a process-driven model in which knowledge flows freely between all participants. Moretti et al. (2013) reported that 91% of teachers indicated they are responsible for their professional development and want complete responsibility. This study aligned with findings from Moretti et al. (2013) that participants agreed that the responsibility is theirs; they are in control, and they have agency over their learning. Participant 3 remarked, “I really enjoyed how I was able to choose what I wanted to do and I do believe that these activities were appropriate for my level of experience.”

Kennedy (2016), Bill and Melinda Gates Foundation (2014), and Jacob and McGovern (2015) reported that teachers complained and voiced concerns regarding traditional professional development. Some of the issues included the short duration of sessions, lack of content and coherence, lack of proper implementation and improvement in teaching, and the need for precise and specialized focus to improve teaching quality. Teacher involvement is necessary to align learners’ experiences and knowledge. Teachers’ perceptions improved based on the design of professional development with the addition of andragogy.
Duration. The study did not transpire in a one-day workshop or training like traditional professional development. This gave ample time to assess learning needs, decide on learning goals, and follow through on learning. During this study, participants met in the first cycle for four hours and increased to six hours during the second and third cycles to fully learn and complete their goals. During the andragogical process model for learning, the creation of a mutually planned timeline and schedule led to consensus depending on the participants’ needs. However, Yoon et al. (2007) indicated that professional development consisting of 14 hours or more is statistically beneficial to student learning outcomes. Darling-Hammond et al. (2017) defined ongoing professional development as sustained in which “effective PD provides teachers with adequate time to learn, practice, implement, and reflect upon new strategies that facilitate changes in their practice” (p. vi). Knowles et al. (2015) did not specify a time frame but considered the andragogical process for learning a process with multiple steps that occur over time. Most andragogical studies occur during a semester or long-term training. The teachers in this study wanted time to research, gather materials, and complete their task. Many used their time wisely to learn a new app or technology strategy and created a lesson based on their new skills. If this study were to continue for a full school year, completing six-hour cycles, a teacher would complete approximately 36 hours of training, well beyond the minimum number necessary for learning.

Content focused and coherence. Professional development should be content-focused and coherent (Darling-Hammond et al., 2017). That is, the specific topics must be related to the content that is taught and must be relevant to each teacher. Jacobson (2016) described professional development with high coherence as being well-timed, beneficial, and associated to teaching practice. What is relevant to one teacher may not be relevant to another. Teachers
reflect on their learning needs to identify their topic of interest, which helps alleviate this problem. This study revealed that teachers want professional development to be relevant to needs that coincide directly with problems and students in the classroom. Teachers should not be treated the same and expected to learn the exact same idea as every other teacher. Louws et al. (2017) confirmed that a teacher’s level of experience, years of practice, and student demographics/populations require diverse learning experiences rather than a uniform one.

Teachers should have flexibility to focus on content as it relates to their own instruction and organization or any topic related to their content area, learning strategy, or other classroom practice. In general, content can include specific content knowledge, pedagogical strategies, assessments, or alignment to standards. Knowles et al. (2015) differed in this respect. Whereas most researchers of traditional professional development proposed strict adherence to content-based learning, Knowles underscored a process model in which adult learners were encouraged to self-direct their learning with the help of a facilitator who provided resources to develop their understanding. Andragogy, as a process model rather than a content model, is flexible and can adapt to fit all learning needs (Knowles et al., 2015). In a content model, an instructor relays pre-determined information; in a process model, a facilitator establishes a procedure for adult learners to attain new knowledge.

Teachers in this study had differing agendas and topics of study. Some teachers learned about new strategies or applications to use as teaching tools for direct teacher instruction, such as Microsoft Sway, Edmodo, or Nearpod. Others chose to learn about content-related resources and create new and innovative lessons or activities for their students, such as game-based science instruction. The teachers in the study, through dialogue between the researcher as facilitator and each other, focused on their content but not necessarily on learning more about content like
vocabulary, specific subject matter, or pedagogy. Their topics varied and were mostly problem-based. Many searched for content-related technology resources, such as videos or augmented reality (AR) lessons. They did not choose to learn about the content itself, rather, they inquired about teaching strategies or motivating lessons for students.

Traditional professional development does not have to be content-driven with teachers in passive roles. Using a process driven or transactional model allows teachers to have control, responsibility, and flexibility to gain knowledge about learning without outside direction. It is possible to combine a content-focused training with andragogy principles and the process model.

**Learner’s experiences.** One of the main components of adult learning is the idea that adults have a considerable amount of knowledge due to past experiences. Gaining more knowledge through experience or sharing ideas because of past knowledge make this component of andragogy fundamental. The participants in this study were accurate examples. Many stated they used previous knowledge and experience to build their learning. Teachers, depending on their focus of learning, sometimes worked together if their goals were similar. The researcher as facilitator also provided a few minutes at the start of each session to let participants share what they were working on so other participants would know and could provide insights. Likewise, some participants stated appreciation for having time to openly collaborate with each other. Others enjoyed being able to share their ideas, successes, and mistakes with others in the group. Knowles et al. (2015) suggested that the best resource for learning is the adult who has time to share, discuss, and participate in “peer-helping activities” (p. 45). Collaboration is a professional development component that past researchers supported. Darling-Hammond et al. (2017) defined collaboration as
high-quality PD creates space for teachers to share ideas and collaborate in their learning, often in job-embedded contexts. By working collaboratively, teachers can create communities that positively change the culture and instruction of their entire grade level, department, school and/or district. (p. v)

In any adult learning group, participants have a variety of different experiences that benefit their learning and that may also be a source of information for others. This works best in collaborative or group activities that participants can plan during the process of designing and completing their learning experiences (Knowles et al., 2015).

**Implementation.** The literature review revealed the importance of learning new skills to improve teaching practices. Teaching practices can improve teachers’ overall instructional effectiveness, leading to better evaluations (McGovern, 2015). The purpose of the study was not to evaluate its effectiveness in improving teacher evaluations. Teachers did, however, share their ideas and intentions regarding how they planned to use their new knowledge through the self-assessment and through conversations with the researcher as facilitator. Nearly all participants’ choices of topic to study reflected a learning gap or interest in their learning contract for task completion. Many used this opportunity to focus on a specific application to use as a teacher tool for classroom management or as a student tool. Patton et al. (2015) found that teachers enjoyed professional development that relates to their instructional day. One participant learned about AR to strengthen students’ comprehension of inertia. This participant researched resources, learned how to use the application, and created a lesson with hands-on learning of the concept of inertia. The participant planned a week-long lesson full of group activities. This participant’s enthusiasm led her to purchase inexpensive AR cardboard goggles for the class.
Another participant noted a gap in their classroom management and instruction area. The participant searched for an application to use with students to monitor discussions, store assignments and other lesson files, and get parents involved. In an initial conversation with the participant, the researcher as facilitator provided application options that may suit these needs, such as Microsoft Teams, Edmodo, and Schoology. The teacher investigated the options and found an application that would fit. This participant reviewed videos on how to use the application, performed hands-on learning, and set up classes within the application with all pertinent files. Within a couple of weeks, this teacher implemented the newly acquired skill in the classroom to improve engagement and learning. Matherson and Windle (2017) expressed teachers’ desire to have professional development opportunities in which information or skills could apply to the classroom. By keeping the focus on activities or lessons created by the teachers, Stacy (2013) postulated that campus or district administrators, specialists, or other teacher leaders could monitor teachers’ learning more closely.

**Andragogy.** Using andragogy to amend the design of traditional professional development significantly improved perceptions. The goal of professional development is for teachers to learn new skills, enrich existing skills, and further their professional growth to improve teaching strategies in the classroom (Darling-Hammond et al., 2017). Using andragogy is flexible enough to meet district or campus demands while allowing teachers to have input regarding relevance and authentic learning. The lack of teacher input in the past resulted in neglect of their learning needs and skills gaps. This new approach includes increased accountability for the teacher to prove learning occurred.

The use of andragogy allows teachers to focus on learning as a process; however, they may focus on content as well, depending on the needs of the teacher. Andragogy involves a
transaction of information (Knowles et al., 2015). The researcher seamlessly applied andragogy principles and the andragogical process for learning throughout the study. Participants felt satisfied in their new roles as they were highly active in the learning process, collaborated with the researcher as facilitator, and had complete agency over their learning and implementation of new skills in the classroom. The researcher followed every principle and process for learning in the study. The principles are as follows:

1. The need to know.
2. The learners’ self-concept.
3. The role of the learners’ experiences.
4. Readiness to learn.
5. Orientation to learning.

The andragogical process for learning is as follows:

1. Preparing the learner.
2. Establishing a climate that is conducive to learning.
3. Creating a mechanism for mutual planning.
4. Diagnosing the needs for learning.
5. Formulating program objectives.
6. Designing a pattern of learning experiences.
7. Conducting the learning experiences with suitable technology and materials.
8. Evaluating the learning outcomes and rediagnosing learning needs.

Overall, teachers favored both the principles of andragogy and the andragogical process for learning. Andragogy works best when it fits the learning situation and its adult learners. At the
core are adult learning principles but individual learners have unique growth and situational components to consider as well (Knowles et al., 2015). Previous researchers promoted the andragogy principles in similar ways, but there was a lack of use of adult learning theories in general.

**Unifying andragogy and traditional professional development strategies.** This study suggested the participants had a positive connection to andragogy within traditional professional development. Past researchers of andragogy in education tested aspects of andragogy; however, none gauged teachers’ perceptions of professional development and the possibility of improving perceptions based on andragogy implementation. Most of the research on andragogy presented positive results in other career settings (Henschke, 2013). Now, there is evidence that can propel further research of andragogy use with teachers for professional development to improve existing conditions. This study extended previous findings to include the education career field for continuing professional development. Researchers that analyze existing conditions to formulate guidelines or strategies to create successful professional development may benefit from the study of andragogy when redesigning traditional professional development.

Garet et al. (2001) found five common features of effective professional development: (a) content-specific; (b) active learning; (c) coherence or alignment to goals; (d) teacher outcomes; and (e) collaboration. Eight years later, another influential researcher defined a similar set of features that promote learning; however, this study was a meta-analysis of other research studies on professional development that included both traditional and informal designs (Wei et al., 2009). These features included: (a) intensive and ongoing; (b) content-specific; (c) coherence or alignment to goals; (d) collaboration; (e) coaching; and (f) modeling. Darling-Hammond et al. (2017) followed the previous study and found that the features of professional development that
instill growth in knowledge and skills and also improve student learning include: (a) focused on content; (b) use active learning; (c) collaboration; (d) models teaching practices; (e) used coaching and expert support; (f) provides time for feedback and reflection; and (g) long-term duration. Researchers found commonality to sustain their theory of these features with current research studies on professional development.

Every aspect of the andragogy principles and andragogical process for learning are integral to traditional professional development design. Knowles et al. (2015) argued that the andragogy framework is flexible and can fit other goals, if necessary. It can be a guide to encourage learning as a process. Recent updates to the long-standing professional development guidelines prove there is some acknowledgement that teachers are adult learners; however, there are still components or principles that trainers neglect. Following the process for learning may increase learning and engagement. There was research on andragogy components in isolation but never converging with each other to unify the ideas and strengthen each framework.

The present research study follows the andragogy framework in principle to consider how adults learn and in process to implement agency, choice, and relevancy according to teachers’ learning gaps, student needs, or campus/district goals. The guidelines for effective professional development should include teacher-driven trainings, agency, and teacher inclusion in the process. There is a need to amalgamate prior research and revise guidelines to include teacher agency, design elements, and evaluation of professional development. The present findings suggest new avenues for other research. As Kennedy (2016) emphasized, adult learning should include teachers’ voices. Andragogy principles and processes are a potential solution that include those elements.
Limitations

The limitations in this study inform future research. The study was successful and there were nominal nuisances along the way. One consideration is the generalizability of the study. The results may not be generalizable because of the small sample that focused on a specific group. This section includes discussions of time constraints, sample size, and self-reported data.

The most significant limitation was the time constraint of the teachers. Initially, teachers showed interest in volunteering for the study but as the start date arrived, participants withdrew due to conflicting time schedules. The daily class schedule was extended throughout the district plus additional tutoring time was added, causing their overall work day to be longer. Each day after school, teachers completed tutorials or meetings. Teachers did have a planning period during the day. The study called for volunteers from the entire district and it was difficult finding the right time to meet. The first two cycles occurred during the summer to allowed more participation; however, but many teachers taught summer school, attended school themselves, or had other obligations. Time constraints of the regular school day schedule and summer schedule affected the sample size. Teachers seemed interested but could not add to their busy schedules. The sample size for qualitative studies should be small but still have enough participants to attain sufficient data. The data collected was saturated and sufficient.

The questionnaire used in this study included open-ended questions for teachers to complete. They provided enough information to get a solid understanding of their thoughts and perceptions. There is a limitation, however, because data was self-reported. Participants completed the questionnaire, but it is difficult to know if their responses are true.
Implications of the Results for Practice, Policy, and Theory

The purpose of this study was to investigate a novel system to improve teachers’ perceptions of traditional professional development. The researcher did not find any similar study that focused on teachers’ perceptions of traditional professional development incorporating adult learning principles, specifically andragogy, to test whether their perceptions would improve. The goal was to contribute to research and education communities by establishing a better design for teachers. The implications of this study offer practical solutions to improve traditional professional development. The connections between the study’s initial theoretical problems and the outcome are the basis for the conclusions. The implications derive from analyses of the data regarding how andragogy improved teachers’ perceptions of traditional professional development.

The study yielded mostly positive results. The findings aligned with the research questions, supporting the problem of the study. The findings have several implications for teachers’ perceptions, andragogy, and traditional professional development. Overall, the participants were satisfied and perceptions improved. The findings from this study established a need to include teachers in the professional development process and allow them to have more input as to their skill gaps and goals. It is too early to say whether this research may inform changes in legislation or policies involving traditional professional development. Andragogy studies include empirical data across many disciplines that successfully demonstrate that the principles and process for learning lead to gains in knowledge acquisition. The current findings may propel action and lead to transformation. This transformation may influence individual teachers, leaders in educational organizations and districts, and communities of practice.
Implications address the need for additional research on using andragogy as a component of traditional professional development. The present research is the first step in gathering in-depth and authentic data to substantiate the effects of andragogy in other areas that have been documented previously, but cited as anecdotal. Andragogy research exists in field studies but continued practical research would improve its empirical evidence. To improve teachers’ perceptions of traditional professional development, greater emphasis on andragogy implementation may be necessary. The study adds to the field by increasing understanding of how to conduct and plan traditional professional development. Researchers need to focus on how teachers learn while being inclusive in the role and responsibility they want to embrace (Kennedy, 2016). This should align with a greater emphasis on adult learning principles throughout the professional development process.

The participants indicated their preference for the new amended design. To achieve this on a larger scale, teachers’ roles in professional development must transform. In adult education, adult learners are highly self-motivated and self-directed having control of their learning by choosing their goals, which improves learning outcomes (Knowles et al., 2015). Patton et al. (2015) described the dilemma for professional development as the continuance of “one-size-fits-all workshops” (p. 2). Likewise, DiPaola and Hoy (2014) reported on the all too widespread practice of administrators selecting professional development topics randomly to fill the days. Researchers revealed the importance of focusing on how teachers learn and on including teachers throughout the process (Darling-Hammond et al., 2017; Stacy, 2013). In alignment with Knowles’ framework and the current findings, the focus moving forward should be to value teachers’ experiences and expertise. Professional development must place greater emphasis on the role teachers play in planning and practice.
The participants indicated satisfaction with the ability to make decisions, be self-selective, and self-directed. Most professional development uses a traditional professional development model in which teachers are passive (Yurtsever, 2013). This prevents true participation, relevance, and agency and lowers teachers’ perceptions of the design. To execute the amended design, training is necessary. Facilitators must understand adult learning principles and the guidelines of adult learning theory. This training may lead to a transformation of assumptions or frames of reference for teaching different populations. Staff development planners, curriculum specialists, trainers, and administrators should allow for open, self-directed learning rather than learning that is centered on instructors’ needs for control. Andragogy provides the means to balance the needs and non-negotiable topic for each district with each teacher’s independence. Andragogy provides considerations to follow when working with adult learners and well as a process to follow.

Currently, the standards for effective professional development remain obscure in the literature. The ideas are inconsistent regarding what exactly constitutes effective professional development (Guskey, 2014). Much like standards for student achievement, standards and guides for teacher professional development need updating. There is no fidelity or consistency as teachers’ perceptions clearly indicate (Smylie, 2014). Every district has content experts, trainers, and visiting professionals who possess their own style of teaching. Standard, consistent models are crucial and may improve accountability for those teaching adult learners to ensure the highest respect for teachers as professionals and as adult learners.

In ESSA (2015), there is no requirement to value or consider teachers as adult learners or leaders. It includes the objectives for professional development and how districts should support teachers, but there are no suggestions regarding how to implement development or what kind of
design to use. In Texas, professional development is necessary to sustain a teaching certificate. Texas adopted the Texas Teacher Evaluation and Support System (T-TESS) in 2015. T-TESS is an evaluation and support system. It does not suggest traditional professional development designs or refer to adult learning principles. Both nationally and statewide, policymakers and education agencies should corroborate to establish a set standard for teacher development that includes adult learning policies and processes. There is no direct recommendation for best practices in the state of Texas where the present research occurred. Stronger standards and a baseline process may provide support to implement more effective professional development across all districts.

**Recommendations for Further Research**

The recommendations in the following sections include ideas to expand or strengthen the study in the future. They include insights into the researcher’s reflection based on the research data. The recommendations include changes to a component of the research methodology, the needs assessment rubric, and general recommendations.

**Research methodology.** The time constraints imposed by teachers limited participation, which affected the sample size. The call for volunteers was open to all teachers in the district regardless of teaching level (elementary, middle, or high school). The site to meet was centrally located because participants were from many different campuses. This caused issues with scheduling. The first recommendation is to use keep non-probability sampling but employ convenience sampling. By using convenience sampling, the sample is derived from the population that is closest or most convenient. Another recommendation is to select one campus or several campuses at which to conduct the research. Future researchers could select participants by department or grade level, if not all members of the campus faculty were
available or permitted to participate. This may increase the number of participants and the time to collectively schedule and meet during planning time or after school without complication. By selecting volunteers from certain sites, scheduling of dates and times would be more efficient. The results from this study indicated positive results but the population was small. The recommendation is to continue research in this same manner with more participants to further demonstrate the results.

The length of meetings changed from four hours to six hours due to participants’ suggestions in the first cycle. The length of time of the research should be longer and should occur during the school year to ensure participants evaluate their needs to improve practice as it occurs. The recommendation is to meet for one hour per week for six weeks or one hour per week for the nine week grade marking period used in the secondary schools. The option to complete the research for the six- six weeks marking period or four-nine week marking period is optional. This aligns with most elementary and middle schools’ schedules of reporting grades every six weeks and high schools report every nine weeks.

Needs assessment rubric. Johnson and Mielke (2013) created a rubric to address teachers’ effective use of technology in the classroom. The needs assessment was useful as it covered several topics related to technology integration. Because of research time constraints, the researcher chose the rubric that best fit the topic; however, for future studies, teachers should participate fully and decide whether the rubric fits the needs of the professional development. The option is available to use alternative rubrics or create one that aligns with the goals of the district.

In informal conversations during the study, one participant noted that the rubric could also be stated in terms of what the students are doing, which would reflect a continuum from
teacher-centered instruction to learner-centered instruction. This may fit some situations better. It may be beneficial to focus on teacher instruction in the first cycle and then proceed to student-centered goals in subsequent cycles.

The needs assessment seemed overwhelming for some participants; it contained four domains and many competencies within each. These participants felt overwhelmed because there were too many to choose from the list. The recommendation is to focus on one domain for each cycle rather than the entire rubric at once. Again, there is flexibility in how to conduct andragogy processes. If a participant chooses to review the entire rubric, that is acceptable.

A delimitation of the study was to focus on technology integration and education; however, the topics of the professional development sessions did not need to stay within these limits. The recommendation is that other content areas are allowable; however, it is best to focus on one at a time. Therefore, the needs assessment rubric could change according to the content area that teachers selected. The needs assessment rubric should correlate to the purpose of the training and the content area.

**General recommendation.** It is vital for any individual who considers replicating this research to become familiar with andragogy principles and the andragogical process for learning, including the tools and resources. Thoughtful consideration of personal teaching style is necessary; most people have experience only in pedagogical styles using lecture-based trainings in which the expert is in complete control. Likewise, an action research methodology is an essential component of this study. The focus in action research is the participant and their perceptions, not the researcher (Herr & Anderson, 2015). This kind of research may not be appropriate for everyone as the research in done in conjunction with the participants and is dynamic.
Conclusion

The increase in educational accountability measures and concern for student achievement in the United States since the 1990s characterizes the educational system as a critical component for state and national policymakers. One such component that received scrutiny from researchers and educational agencies is educator professional development. Professional development is fundamental for educators to improve existing knowledge and instructional practices (Hargreaves & Fullan, 2012). Since its inception, however, traditional professional development has been less successful than hoped (Calvert, 2016a). Throughout its implementation, teachers continually expressed dissatisfaction; they disliked the approach presenters or expert trainers used during sessions. Teachers feel undervalued and unimportant. They expressed frustration because traditional professional development sessions lacked any relevant learning. The teacher is the single contributing factor in the classroom (Opfer & Pedder, 2011 as cited in Bayar, 2014) and receives little support, opportunities for growth, or consistent professional development (Hill et al., 2013).

The problems cited in this research study demonstrated teachers’ call for a shift in the design and implementation of traditional professional development. The impetus for this change is teachers’ negative perceptions of traditional professional development. Teachers do not feel they have any authority over their learning goals or voice in the process to plan and evaluate traditional professional development. Researchers are committed to find solutions but teachers are excluded from the process, causing a conflict. The teacher as a participant in professional development should be distinguished as an adult learner. This distinction delineates the teacher as the primary source of self-learning using a set of principles established for adult learners who intend to be fully responsible and proactive in their own learning.
One such adult learning framework, andragogy (Knowles et al., 2015), suggests teachers control their learning through active involvement in the process of planning and evaluating traditional professional development. The participants in the present study learned new skills and learned how to sustain their own learning rather than relying on others. Andragogy allows teachers to exercise more control in their own learning through various instructional strategies, both individually or collaboratively. By using andragogy, teacher input and participation increases. In this study, participation in learning improved teacher perceptions.

The purpose of this study was to improve teachers’ perceptions of traditional professional development by implementing andragogy as the primary design feature. By adding andragogy to traditional professional development, teachers are valued as adult learners rather than passive participants and gain control and flexibility to decide their learning goals. This study was qualitative, action research focusing on teachers in pre-Kindergarten through 12th grade. The researcher collected data using one open-ended questionnaire that participants completed at the end of each action research cycle. The researcher analyzed data using coding strategies and themes emerged. The data revealed a unified consensus that andragogy enhanced traditional professional development, leading to positive perceptions of participants. Further analysis of the data determined overarching themes: (a) positive perceptions; (b) agency; (c) personal relevance; and (d) process contributions.

This chapter included interpretations of the data to form connections between the findings and past research. Participants were satisfied with the implementation of an adult learning framework, andragogy, within traditional professional development and it changed their perceptions of it. This research study provided a possible solution to an ongoing problem. This study filled a gap in understanding of traditional professional development and teachers’
perceptions. The perceptions were negative because professional development lacked a fundamental ideal: teachers are adult learners. By using andragogy, teachers felt more empowered and motivated to learn. They had more agency, which led to having more relevant experiences as they exercised control over their decisions and learning. To facilitate this, several process contributions were necessary, such as each teacher becoming more involved.

The implications of the findings suggest a potential for real transformation of professional development practices. The results suggest practical solutions that contribute to knowledge to advance traditional professional development. With more agency, teachers have more motivation to create a stronger community of learners and teacher leaders. The results call for more research on the use of the andragogy framework within traditional professional development. The participants indicated a preference for the amended design that emphasized teachers’ active roles. To advance this idea, facilitators must learn the andragogy framework to ensure that the principles and processes are internalized while shifting from a pedagogical transmission model to a transactional, andragogical model. Last, there is a need for a collective and unified set of standards that include professional development guidelines with andragogy principles and the process model in all school districts.

The teachers who participated in this study reported feeling energized and satisfied when choosing their learning goals, having flexibility to work with others, and concentrating on a specific need. Teachers are adult learners who want to be valued members of their campus and school district. They are experienced professionals who are capable of determining what is best for themselves. As Participant 7 shared,
I created steps that helped me to be successful in my learning, based on what I understood from the instructor and the philosophy of andragogy. I guess that is part of the process, adapting what's available to one's abilities and goals.

The participants, overall, felt successful and empowered. Traditional professional development is meant to support teachers by improving their skills. The researcher designed the present study to discover a solution to the long-standing problem of teachers’ low satisfaction and negative perceptions of traditional professional development by introducing Malcolm Knowles’ andragogy framework of adult learners (Knowles et al., 2015). Combining andragogy and traditional professional development may improve teachers’ satisfaction with their learning as experience greater agency, improved relevant and meaningful experiences, and elevated involvement through the process contribution. This may translate to increased knowledge and skills and improved teaching practices in the classroom that benefit all students.
References


Henschke, J. A. (2013). *A 2013 update of research in andragogy has revealed* some new dimensions and another era as we looked toward andragogy's future [PDF file]. Retrieved from http://trace.tennessee.edu/cgi/viewcontent.cgi?article=1414&context=utk_IACE-browseall


Appendix A: IRB Approval Letter

DATE: May 5, 2017

TO: Cynthia Pina
FROM: Concordia University - Portland IRB (CU IRB)

PROJECT TITLE: [1020524-1] Changing Perceptions About Professional Development: An Action Research Study Using Andragogy For Educator’s Professional Development

REFERENCE #: EDD-20170228-Kamm-Pina

SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: April 12, 2017
EXPIRATION DATE: April 12, 2018
REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The Concordia University - Portland IRB (CU IRB) has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission. Attached is a stamped copy of the approved consent form. You must use this stamped consent form.

This submission has received Expedited Review based on the applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure. Please see www.cu-portland.edu/irb/forms.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSoS) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

- 1 -
This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of April 12, 2018.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Dr. OraLee Branch at 503-493-6390 or irb@cu-portland.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Concordia University - Portland IRB (CU IRB)'s records. May 5, 2017
Appendix B: Recruitment Email

VOLUNTEERS WANTED FOR A RESEARCH STUDY

RESEARCH STUDY TITLE
Changing Perceptions in Professional Development: An Action Research Study Using Andragogy for Educators’ Professional Development

ATTENTION ALL PRE-K THROUGH 12TH GRADE TEACHERS

A research study will be conducted about professional development and seek input for change!

PURPOSE
The purpose of this action research study will be to improve teachers’ perceptions of traditional professional development through the implementation of Andragogy, an adult learning theory. In this study, all participants will attend professional development sessions over a 13-week period. During this time, the participants will create learning goals, undergo self-study and inquiry, and complete an established activity. The participants will provide feedback through a questionnaire to determine if they are satisfied with the new design.

BENEFITS
Increased knowledge and skills
Platform to voice your concerns and opinions for change
Be included in the process; gain confidence and professionally grow as a teacher leader

RISKS
Risks will not be greater than normal during traditional professional development participation
There may be low risk involving scheduling and possible added “work” causing emotional stress

COMPENSATION
Participants will receive technology professional development credit.

Click HERE to sign-up for the voluntary research study on professional development. You will receive a follow-up email with more details.

This research is conducted under the direction of Cynthia L. Pina, [Job title redacted] in the Instructional Technology Department [Phone # redacted]
(IRB number: #000-000-000)
Appendix C: e-Mail to Administrators

Good morning administrators,

I want to take a small moment of your time to ask for your assistance. I have started my dissertation's research study that will transpire over the summer months. Briefly, the action research study is about investigating traditional professional development and teachers’ perceptions to improve it. It is supported in theory by andragogy, an adult learning framework. Teachers who participate in this study will have the opportunity to amend the current traditional professional development design while contributing their earnest feedback. For action research, the participants in the study will take an active role in finding a solution to a known problem.

I opened the recruitment window last week and have received responses from many teacher across the district. I have one more week left to recruit any Pre-K through 12th grade teachers. The study, using action research, may last between 4 and 13 weeks depending on participant feedback. Teachers who participate will be get technology professional development credit. Any teacher that is interested but needs clarification may call me directly to assist them. Once a teacher submits an online registration form, I will send a follow-up email with more details.

I am requesting your support in announcing my research study to the teachers at your respective campuses. It will be a wonderful opportunity for teachers to voice their opinions and, possibly, assist in transforming professional development. I appreciate your support as a member of the educator community here at this district.

Sincerely,

Cynthia L. Piña
Appendix D: Follow-up e-Mail to Interested Volunteers

Dear colleague,

I am a doctoral candidate with Concordia University–Portland. My doctorate is in Transformation Leadership. I began the journey to complete my doctorate a few years ago and now invite you to participate in my research, which is part of my dissertation. To begin, let me say, your participation in this study is voluntary. There is no requirement to register nor is there any consequence if not doing so.

The action research study is about investigating traditional professional development and teachers’ perceptions to improve it. It is supported in theory by andragogy, an adult learning framework. Participating in this study will allow you an opportunity to amend the current traditional professional development design while contributing your earnest feedback. For action research, the participants in the study will take an active role in finding a solution to a known problem along with the researcher.

Additionally, the professional development sessions will concentrate on technology integrated topics. As with other technology focused professional development, you will attain credit for attendance throughout the duration of the research study as you will be continuing your professional development. There is no other compensation.

The study will be approximately thirteen (13) weeks, meeting on alternating weeks for two (2) hours after school. As a group, we will decide the exact dates in the initial meeting. Similarly, in the initial meeting, more details will be given and a consent form will be provided if you choose to join the study.

Thank you in advance for taking the time to participate in this research. I appreciate your support as a member of the educator community here at this district. If you have any questions, you may reach me through email at [email redacted] or my office number at [phone # redacted].

Sincerely,

Cynthia L. Piña
Appendix E: Questionnaire

Teacher Demographics
Please state your gender.
Please state your age.
Please state your years of experience in teaching.
Please state your years of experience in teaching at this district.
Please state your level/grade of teaching (elementary/secondary) and the content area(s).
Please state the highest level of education you have completed.
Please state your level of technology use/skill.

Section 1: Andragogy principles
This section consists of 6 questions about the addition of andragogy into professional development. Please write your answers in detail.

• How would you describe your motivation level during the professional development experience? Explain in detail.
• Describe how you feel about the amount of control you had over your own learning and choices. Were you able to make decisions? Were the activities appropriate for each participant’s level of experience? Provide examples.
• Explain, in detail, if there were opportunities to use prior life experiences and work expertise to help you learn. Describe if you were able to share your knowledge with others.
• How do you feel about getting clear reasons to participate and explicit details on what you will study? Provide examples.
• Describe how the timing of this opportunity may fit your situation, changes, or expectations at work. Do you feel it was relevant?
• How would you describe your readiness to learn at this time? Were the activities flexible and customized to your learning ability?

Section 2: Andragogical process model for learning
For each question in this section (7), consider the process for learning and design of each cycle.

• Describe how you feel about the opportunity and ability to set your own learning goals.
• In your opinion, describe if the setting assisted in your learning.
• In what ways, if any, were the evaluations methods suitable?
• In your opinion, do you feel you were prepared for this professional development process? Please explain.
• How would you describe your involvement in the design process? Describe how, if at all, you were allowed to assist in the planning.
• What is your opinion on the facilitator’s participation and teaching style? Did it contribute/hinder your learning?
• What changes would you make to the design/process (assessing learning needs, creating a learning contract, implementing goals, and evaluating them)?
Section 3: General professional development
For each question in this section (9), think about the general professional development questions about the duration, learning needs assessment rubric, and usefulness.

- Describe, in detail, how this professional development process differed from previous professional development sessions.
- Do you feel this new way is an improvement from the way you are used to? Why or why not?
- Describe, in detail, if andragogy was flexible to focus on any content/topic. Were you able to make connections to any initiatives, requirements, or other goals needed by the state or district?
- In your opinion, did the duration of this professional development allow you to learn and use the information in your teaching recently?
- On the days, we did not meet, did you feel motivated to study or work on your own? Explain.
- Describe, in detail, if andragogy allowed for extensive active learning, self-directed inquiry, and collaboration. In what ways?
- How was the rubric to assess your learning needs useful? What changes would you like to make to the rubric for technology use?
- What specific steps in the process were most helpful to your learning? Is there anything that hindered your learning? Provide details and examples.
- Overall, what are your perceptions of the design for traditional professional development?
Appendix F: Consent Form

Research Study Title: Changing Perceptions about Professional Development: An Action Research Study Using Andragogy for Educator’s Professional Development
Principal Investigator: Cynthia L. Pina
Research Institution: Concordia University–Portland
Faculty Advisor: Brandy Kamm, Ed.D.

Purpose and what you will be doing:
The purpose of this survey is to apply a style of adult learning principles called andragogy to traditional professional development sessions (technology-based). The study aims to improve teacher’s perceptions about traditional professional development through qualitative action research. I expect approximately 20 volunteers. No one will be paid to be in the study. However, participants will receive technology professional development credit for their time as they normally would when attending a training session. We will begin enrollment on (or around) March 1, 2017 and end enrollment on (or around) August, 2017.

To be in the study, you will need to be 1) the teacher of record for pre-Kinder through 12th grade students or a teacher who services students in small group settings and 2) an employee of the district where the research will take place. Participants will attend professional development sessions over the course of 13 weeks, meeting for 2 hours every other week. You may also study on the days/week we do not meet but is not necessary. During the sessions, participants will be guided in fulfilling their own learning goals, time to complete them, and in the and evaluate their own learning. Participants will complete an open-ended questionnaire with varying questions aligned to the purpose of the study and their perceptions. The questionnaire will take approximately an hour to complete to allow for in-depth responses.

Action research transpires through a cyclical process. Therefore, during the 13 weeks, the cycle will transpire 3 times (4 weeks each) or less depending on if the problem is resolved. During the study, you will begin with a learning needs assessment survey. This survey is personal to you to determine your learning needs and goals. Once you establish those needs, you will complete a learning contract that will outline your goals, resources, and activities to be completed during the first cycle. After, you will implement the learning contract and learn. During this time, you will collaborate with others, share your ideas, or do self-study. On the fourth week of the cycle, you will complete an online, open-ended questionnaire. The questionnaire will ask questions about the design and process of the cycle. If, based on the data, the feedback stipulates dissatisfied views, a discussion will begin on what changes can be made for the next cycle. Once decisions are made, the cycle begins again with the learning contract.
Risks:
I do not anticipate any risks to you participating in this study other than those encountered in day-to-day life. Additionally, there are no risks to participating in this study other than providing your information. However, I will protect your information. Any personal information you provide will be coded so it cannot be linked to you. Any name or identifying information you give will be kept securely via electronic encryption stored in a cloud based service. When I look at the data, none of the data will have your name or identifying information. We will only use a secret code to analyze the data. We will not identify you in any publication or report. Your information will be kept private at all times and then all study documents will be destroyed 3 years after we conclude this study.

Benefits:
Your input is important and valuable. Information you provide will help in changing the design of traditional professional development. You could benefit by understanding how you learn. Likewise, you will receive technology professional development credit for your attendance and participation as usual.

Confidentiality:
This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell us abuse or neglect that makes us seriously concerned for your immediate health and safety.

Right to Withdraw:
Your participation is greatly appreciated, but I acknowledge the questions I am asking may be personal in nature. You are free, at any point, to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, I will stop asking you questions.

Contact Information:
You will receive a copy of this consent form. If you have questions you can talk to or write the principal investigator, Cynthia Pina at [email redacted]. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390).
Your Statement of Consent:
I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

Participant Name ___________________________ Date __________

Participant Signature ________________________ Date __________

Investigator Name ____________________________ Date __________

Investigator Signature _________________________ Date __________

Investigator: Cynthia L. Pina; email: [email redacted]
c/o: Professor Brandy Kamm;
Concordia University–Portland
2811 NE Holman Street
Portland, Oregon 97221
<table>
<thead>
<tr>
<th>Competency of Technology Usage</th>
<th>Not Yet</th>
<th>Basic</th>
<th>Proficient</th>
<th>Distinguished</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> The teacher uses online resources, including professional social networking sites, to stay current on the latest research and best practices in his or her field.</td>
<td>□</td>
<td>□ The teacher reviews information online, discusses it with colleagues, but practice is minimally affected.</td>
<td>□ The teacher interacts in online networks with professionals. Teaching reflects what has been learned from those interactions.</td>
<td>□ The teacher creates and shares innovative content and teaching practices with other professionals online.</td>
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<tr>
<td><strong>2.</strong> The teacher is aware of the characteristics of “net generation” learners and their relationship with technology and uses this information to design engaging activities.</td>
<td>□</td>
<td>□ The teacher uses technology to present information in a one-to-many learning environment.</td>
<td>□ The teacher uses technologies to offer students a variety of resources to learn and solve problems.</td>
<td>□ The teacher asks students to use technology resources of their choosing to learn and solve problems every day in class.</td>
</tr>
<tr>
<td><strong>3.</strong> The teacher determines the technology skill level of students, knows the expected competencies for productivity and research, and finds means of remediation of individual students when needed.</td>
<td>□</td>
<td>□ The teacher knows individual skill levels, but moves on according to re-determined lesson plans.</td>
<td>□ The teacher has appropriate expectations of students based on their technology skill levels. Creates separate predetermined pathways for low and high skilled students.</td>
<td>□ The teacher uses formative assessments to gauge student skill development and provides flexible pathways, including student choice, for all learners.</td>
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<td><strong>4.</strong> The teacher uses adaptive and adoptive technologies with students with special needs.</td>
<td>□</td>
<td>□ The teacher uses technologies based on IEP requirements.</td>
<td>□ The teacher uses technologies to meet the special needs of students with and without IEP requirements.</td>
<td>□ The teacher empowers students with special needs to be independent.</td>
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<tr>
<td><strong>5.</strong> The teacher establishes appropriate goals for technology applications for students.</td>
<td>□</td>
<td>□ The teacher establishes technology goals that are not related to curricular content.</td>
<td>□ The teacher establishes quality criteria and expectations for technology created products.</td>
<td>□ The teacher asks students to create quality criteria related to technology use.</td>
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</table>

**Domain 1: Planning and Preparation**
6. The teacher knows, accesses, and uses digital resources provided by the state and district, including productivity tools, online teaching and reference materials, and textbook supplemental materials.

7. The teacher designs learning activities that use the technology resources available.

8. The teacher uses online resources to provide instructional materials at differing levels and subjects to meet individual student abilities, needs and interests.

9. Assessment criteria of student work include qualitative indicators of effective technology production.

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<th>Domain 2: The Classroom Environment</th>
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<tr>
<td>Competency of Technology Usage</td>
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<tr>
<td>1. The teacher interactions online follow the same guidelines as face-to-face interactions.</td>
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<tr>
<td>2. The teacher uses school provided technology for learning specific to technology class/lab during the school year.</td>
</tr>
<tr>
<td>3. The teacher uses school- provided technology for learning in all units during the school year and complements school-provided resources with carefully chosen external resources.</td>
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<tr>
<td>4. The teacher provides leadership in the use of school-provided technologies.</td>
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<tr>
<td>5. The teacher uses school-provided technology for learning in all units during the school year and complements school-provided resources with carefully chosen external resources.</td>
</tr>
<tr>
<td>6. The teacher uses school- provided technology for learning in all units during the school year and complements school-provided resources with carefully chosen external resources.</td>
</tr>
<tr>
<td>7. The teacher provides leadership in the use of school-provided technologies.</td>
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</tr>
<tr>
<td>9. Assessment criteria of student work include qualitative indicators of effective technology production.</td>
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The teacher uses some online resources that meet the needs of students with special needs.

The teacher creates learning activities with technology that focus on lower-order thinking skills.

The teacher creates learning activities with technology that enable students to learn independently, be creative, and think critically.

The teacher provides leadership in the use of school-provided technologies.

The teacher uses school provided technology for learning specific to technology class/lab during the school year.

The teacher uses school- provided technology for learning in all units during the school year and complements school-provided resources with carefully chosen external resources.

The teacher provides leadership in the use of school-provided technologies.

The teacher uses online resources to provide instructional materials at differing levels and subjects to meet individual student abilities, needs and interests.

The teacher uses some online resources that meet the needs of students with special needs.

The teacher creates learning activities with technology that focus on lower-order thinking skills.

The teacher creates learning activities with technology that enable students to learn independently, be creative, and think critically.

The teacher provides leadership in the use of school-provided technologies.
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<td>2. The teacher demonstrates an enthusiasm for educational technology and its uses.</td>
<td>□ The teacher participates in the required educational application of digital tools.</td>
<td>□ The teacher speaks positively to students and fellow staff about educational technology use with students.</td>
<td>□ The teacher, in addition to demonstrating district-offered and district-trained digital technologies, finds resources to use, seeks ideas to use, and participates in the required educational application of digital tools.</td>
</tr>
<tr>
<td>3. The teacher uses technology to provide a wider audience for student work. Appropriate safety and privacy efforts are made.</td>
<td>□ The teacher periodically publishes student work according to district guidelines.</td>
<td>□ The teacher regularly publishes student work according to district guidelines and actively elicits feedback from readers/viewers outside the school.</td>
<td>□ The teacher helps students build portfolios of published work and understand digital reputation management.</td>
</tr>
<tr>
<td>4. The teacher helps students use technology in the revision process of their creative efforts.</td>
<td>□ The teacher allows students to revise digital versions of their work, adding suggestions for improvement in comments.</td>
<td>□ The teacher asks students to revise digital versions of their work on the basis of the teacher’s online review and comments.</td>
<td>□ The teacher requires students to revise digital versions of their work on the basis of the teacher’s online review and comments.</td>
</tr>
<tr>
<td>5. The teacher uses technology to facilitate peer editing of student work.</td>
<td>□ The teacher allows students to revise digital versions of their work on the basis of online peer review and comments.</td>
<td>□ The teacher asks students to revise digital versions of their work on the basis of online peer review and comments and provides clear guidelines for online peer-editing.</td>
<td>□ The teacher encourages students to find ways to help improve each other’s work.</td>
</tr>
<tr>
<td>6. The teacher has rules and expectations for productive technology use in the classroom, including the use of personally owned technology devices.</td>
<td>□ The teacher’s expectations of technology use in the classroom is stated.</td>
<td>□ The teacher has clear guidelines for appropriate use of technology in the classroom. Lessons leverage technology available, reducing inappropriate use.</td>
<td>□ The teacher gives students input into classroom technology rules.</td>
</tr>
</tbody>
</table>
7. The teacher uses the student information system efficiently, resulting in minimum use of class time for management tasks.

8. The teacher monitors student technology use and responds to misbehavior if it occurs.

9. The teacher arranges the technology in the classroom for ease of monitoring and flexible use.

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**Domain 3: Instruction**

<table>
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<tr>
<th>Competency of Technology Usage</th>
<th>Not Yet</th>
<th>Basic</th>
<th>Proficient</th>
<th>Distinguished</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The teacher gives students alternate means of discussion and asking questions using technologies to bring out the ideas of all students.</td>
<td>☐</td>
<td>☐ The teacher allows students to e-mail or post comments and questions related to classroom content from outside class.</td>
<td>☐ The teacher occasionally uses student response systems, online polls, back-channel tools, and other technology tools during class to stimulate discussion and feedback.</td>
<td>☐ The teacher regularly uses technology tools during class to stimulate discussion and feedback and encourages students to use these tools in presentations to the class.</td>
</tr>
</tbody>
</table>
| 2. The teacher allows students to initiate | ☐ | ☐ The teacher allows students to use | ☐ The teacher encourages | ☐ The teacher requires students to use teacher-
<table>
<thead>
<tr>
<th>Discussions in online forums such as classroom blogs, discussion lists, and social networking sites.</th>
<th>Teacher-created online forums (website, blog, wiki, Facebook group) as an option for reflection and discussion.</th>
<th>Students to use teacher-created online forums for reflection and discussion.</th>
<th>Created online forums for reflection and discussion. Students initiate thoughtful discussions with their peers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. The teacher expects and reinforces appropriate student interaction when using online tools.</td>
<td>□ The teacher establishes basic guidelines for online interactions on the basis of the school’s acceptable use policy and shares these with students.</td>
<td>□ The teacher establishes basic guidelines for online interactions, shares these with students, regularly discusses the guidelines, and responds when the guidelines are not followed.</td>
<td>□ The teacher works to create online environments in which are self-regulating and develop personal standards of appropriate use.</td>
</tr>
<tr>
<td>4. The teacher uses technology to create and project visual and auditory data that help explain content and concepts.</td>
<td>□ The teacher uses a LCD/LED projector to show slideshows with images.</td>
<td>□ The teacher uses a LCD/LED projector to show slideshows with self-created or modified images and sound that enhance connections among the content and concepts.</td>
<td>□ The teacher demonstrates sound theories of visual and auditory design in lessons that use these media.</td>
</tr>
<tr>
<td>5. The teacher uses technologies such as interactive whiteboards, student response systems, and computer games to engage students.</td>
<td>□ The teacher uses technologies to passively disseminate information, to ask low-level questions, to practice only low-level skills or for rewards.</td>
<td>□ The teacher uses the interactive whiteboard in ways that engage students, including student use of the board, gaming applications, actions based on student responses, and polling.</td>
<td>□ The teacher uses a range of technologies to engage students by asking for student responses and differentiated self-directed activities.</td>
</tr>
<tr>
<td>6. The teacher encourages students to use online resources to answer questions and explore concepts during class and teaches search and information evaluation strategies.</td>
<td>□ The teacher allows students to use online resources without providing guidance on effective searching and evaluation techniques.</td>
<td>□ The teacher encourages students to use online resources and helps build online research skills, resulting in quality information obtained.</td>
<td>□ The teacher requires students to use online resources and asks for student self-reflection on the efficacy of their research.</td>
</tr>
<tr>
<td>7. The teacher uses technology in ways that make students</td>
<td>□ The teacher asks students to use technology to</td>
<td>□ The teacher asks students to use technology to</td>
<td>□ The teacher asks students to use technology to</td>
</tr>
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</table>
productive and meet the instructional goals of the lesson.

<table>
<thead>
<tr>
<th>Domain 4: Professional Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency of Technology Usage</td>
</tr>
<tr>
<td>1. The teacher uses online grading and reporting system to maintain information on student completion rates and shares this information through student and parent portals in real time.</td>
</tr>
<tr>
<td>2. The teacher uses online grading system portal to inform students and parents of upcoming assignments, projects, and assessments.</td>
</tr>
<tr>
<td>3. The teacher uses the district website to provide a wide range of up-to-date information to students and parents.</td>
</tr>
<tr>
<td>4. The teacher uses online communication tools such as e-mail, blogging, and social networking to keep students and parents informed on a regular basis.</td>
</tr>
<tr>
<td></td>
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<tr>
<td>---</td>
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<tr>
<td>5. The teacher uses collaborative online tools to communicate and work with colleagues.</td>
</tr>
<tr>
<td>6. The teacher volunteers to share effective uses of technology at staff meetings and in-service trainings, through professional writings and presentations, and through demonstrations to parent-teacher and community organizations.</td>
</tr>
<tr>
<td>7. The teacher participates in both organized and personal learning opportunities online.</td>
</tr>
<tr>
<td>8. The teacher honors and learns from students who have technology competencies and knowledge.</td>
</tr>
<tr>
<td>9. The teacher keeps an open but critical mind about technology uses.</td>
</tr>
</tbody>
</table>

*Organized by the Four Domains of Danielson’s Framework for Teaching, Danielson, C. (2007). Enhancing professional practice: A Framework for teaching (2nd ed.). Alexandria, VA: ASCD. Rubric coauthored by Doug Johnson (doug0077@gmail.com), Director of Media and Technology, Mankato Area Public Schools, Mankato, Minnesota, and Nathan Mielke (ntmielke@gmail.com), Data Coordinator and Instructional Technology Integrator, Germantown Public Schools, Germantown, Wisconsin.*
### Appendix H: The Learning Contract

**Andragogy Learning Contract**

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Learning Resources &amp; Strategies</th>
<th>Completion Date</th>
<th>Evidence of Accomplishment of Objectives</th>
<th>Criteria &amp; Means for Validating Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are you going to learn?</td>
<td>How are you going to learn it?</td>
<td>What is your completion date?</td>
<td>How are you going to know that you learned it?</td>
<td>How are you going to prove that you learned it?</td>
</tr>
</tbody>
</table>

(Knowles, 1995)
Appendix I: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does “fraudulent” mean?
“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

What is “unauthorized” assistance?
“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

• Use of unauthorized notes or another’s work during an online test
• Use of unauthorized notes or personal assistance in an online exam setting
• Inappropriate collaboration in preparation and/or completion of a project
• Unauthorized solicitation of professional resources for the completion of the work.

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.

2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the Publication Manual of The American Psychological Association.

Cynthia L. Piña

Digital Signature

Cynthia L. Piña