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Action Research and Teacher Voice: A Pathway for Transforming our Schools Into Learning Organizations

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ACTION RESEARCH AND TEACHER VOICE:
A PATHWAY FOR TRANSFORMING OUR SCHOOLS
INTO LEARNING ORGANIZATIONS

A DISSERTATION

Submitted by

Susan S. Inman

In partial fulfillment of the requirements
for the degree of
Doctor of Philosophy
School of Education

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ABSTRACT

Our PreK-12 schools face increasing complexities such as accountability, diversity, closing the achievement gap, and working in an era of standards-based reform (Drago-Severson, 2009). The purpose of this inquiry was to understand teachers’ experiences with one type of learning experience, action research, and to investigate the impact of this experience on the teachers’ practice and voice. Three research questions guided this inquiry:

• What are the experiences teachers have as they utilize the action research process?
• How do teachers find that their experiences with action research impact their practice?
• What connections are there between the action research process and teacher voice?

A narrative inquiry stance, a form of qualitative research, provided the overall design for the study. The voice-centered relational method (Gilligan, Spencer, Weinberg, & Bertsch, 2003), Drago-Severson’s (2009) learning-oriented model of leadership and the analytic memo method (Center for Evaluation and Research, 2012) were used to support the narrative inquiry stance. Data were gathered through the use of two semi-structured interviews, field notes and the teachers’ final research reports.

The research involved a purposeful sample of five K-12 teachers in public school systems in Maine and Ohio. The teachers completed a final research report and participated in monthly data share meetings over a five-month period.

Knowledge generation, teacher voice and an awareness of contextual factors and school structures were the major findings from my study. By conducting action research, the teachers generated knowledge. The teachers also experienced voice, which was through decision-making
processes. Within these processes, the teachers had two experiences: included as experts, and being replaced by top-down decision-makers. Contextual factors and school structures were also found to both hinder and support the action research process. Additionally, I applied Drago-Severson’s (2009) pillar practices and “ways of knowing” (p. 39) to simulate possible solutions for myself and other educational administrators to implement in our practice. These findings and application can provide possible solutions to transform our schools into learning organizations.
ACKNOWLEDGEMENTS

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Additionally, I want to extend my heartfelt gratitude to the teacher researchers in both my pilot study and my dissertation study for sharing their time and expertise – Georgia, Caroline, Juanita, Melinda, Kurt, Mary and Amanda. Your work and passion for ensuring our classrooms and schools are places for learning are inspiring.
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Chapter 1: Introduction

Throughout my twenty-eight years as an educator, I have experienced the increasing complexities of our public PreK-12 school systems where demands such as accountability, student diversity, closing the achievement gap, and working in an era of standards-based reform exist (Drago-Severson, 2009). In order to respond to these complexities, schools need to become learning organizations that cultivate growth and develop opportunities for adults.

I contend that teacher growth can occur when space is provided to create knowledge through the action research process. “Teachers are knowers, and a primary source for generating knowledge about teaching, and learning for themselves and others” (Lytle & Cochran-Smith, 1992, p. 447). Since teacher research, a form of action research, is rooted in practice, teachers have the authority to know and to construct knowledge (Lytle & Cochran-Smith, 1992).

In its most basic form, action research analyzes a practical problem with an aim toward developing a solution to a problem (Creswell, 2008). Lewin (1948) believed that solving problems within the actual context could create knowledge. Action research is value laden and creates a shift from academic researchers to practitioner researchers (Herr & Anderson, 2015), which are defined as insiders in the research setting (Herr & Anderson, 2015).

Additionally, when teachers create their own knowledge through the action research process, an opportunity to utilize their voice may occur. Teacher voice has two defining conditions, which include a belief by teachers that the audience including principals, superintendents, and school boards gives fair and respectful consideration of their ideas and suggestions during the decision-making process (Allen, 2004). The second condition ensures that the audience has influence in the decision-making process in order for the teachers’ input to
become a reality (Allen, 2004). Both defining conditions for teacher voice are important for adult development and learning.

Creating knowledge through the action research process and having opportunities to experience teacher voice can support Drago-Severson’s (2008) definition of adult development, which includes increasing an individual’s cognitive, affective, interpersonal and intrapersonal abilities. These abilities allow individuals to navigate the multifaceted demands of teaching and learning (Drago-Severson, 2008).

As a researcher and an educational administrator, I believe that examining ways for teachers to create knowledge through the action research process and experiencing the conditions for teacher voice can support individual growth and learning organizations. I maintain this investigation can support Hargreaves and Shirley’s (2011) sentiments regarding organizational reform where teachers are the subject of change and develop systems of excellence in partnership with administrators and policymakers.

The discussion that follows includes the background, context and overview of the study, definitions of key terms, and an overview of the dissertation.

**Background and Context**

The background and context for this study are grounded in adult learning and developmental theories and educational research topics, which include action research and teacher research, teacher practice, and teacher voice.

**Constructive Developmental Theory**

Constructive developmental theory consists of two overarching constructs: individuals actively construct meaning of their experiences and the way we make meaning changes over
time (Kegan, 1982). In addition, the theory includes the notion that there are two types of learning: informational and transformational.

Transformational learning (Kegan, 2000) concerns itself with how an adult knows. For example, when an individual has the ability to pause, reflect, and make a decision in a given situation, this process may create the conditions for transformational learning. Adaptive challenges (Heifetz, 1994), such as implementing standards-based reform, require solutions while in the process of implementation. Therefore, transformational learning is required to meet these challenges since it changes the “structure of a person’s meaning-making system,” (Kegan, 2000, p. 52), and may provide opportunities to manage life’s complexities more effectively. In order to support transformational learning, one must “meet a person where he or she is” (Kegan, 2000, p. 52), which means to understand one’s meaning-making system. Kegan’s (1994) order of consciousness or stages of development refer to an individual’s meaning-making system, and include six stages of development: incorporative, impulsive, imperial, interpersonal, institutional, and interindividual.

**Learning-oriented model of leadership.** Kegan’s (1982, 1994, 2000) constructive developmental theory provides the foundation for Drago-Severson’s (2009) learning-oriented model of leadership. Similar to Kegan’s (1982, 1994, 2000) order of consciousness, Drago-Severson’s identifies four ways of knowing, which include the instrumental knower, the socializing knower, the self-authoring knower, and the self-transforming knower. These ways of knowing are essential to consider when thinking about how to support and challenge adult development in schools.
Experiential Learning Theory

Kolb (1984) defined learning as a “process whereby knowledge is created through the transformation of experience, and knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p. 41). According to Kolb (1984), experience is attained at four cyclic stages, which include concrete experience, abstract conceptualization, reflective observation, and active experimentation. These four cyclic stages are also organized into grasping and transforming experiences (Kolb, Boyatzis & Mainemeils, 2001). The grasping experience includes two opposing approaches, concrete experience and abstract conceptualization while the transforming experience has two opposing approaches, which include reflective observation and active experimentation (Kolb et al., 2001).

Kolb et al., (2001) contended that learning requires the use of opposite abilities, and that an individual continually chooses which abilities to use in each learning experience. Individuals develop a preferred way of choosing, which are shaped by our “hereditary equipment, our past life experiences, and the demands of the present environment” (Kolb et al., 2001, p. 4). Kolb et al., (2001) refers to these preferred ways of choosing as learning styles. The four learning styles include divergent, assimilating, convergent, and accommodating (Kolb, 1984).

Action Research and Teacher Research

Within the field of education, action research has become prevalent as a means for professional and organizational change (Herr & Anderson, 2015). Theoretically, the foundations of action research are grounded in John Dewey’s (1916) democratization of education where experiences and active participation in the creation of knowledge are essential for individual growth (Herr & Anderson, 2015). In its most basic form, action research analyzes a practical problem with an aim toward developing a solution (Creswell, 2008) while utilizing a cycle of
plan-act-observe-reflect (Herr & Anderson, 2015). Action research strives to go beyond knowledge generation to knowledge implementation, which can lead to an increase in expertise and individual growth as well as “organizational and community empowerment” (Herr & Anderson, 2015, p. 1).

**Teacher research.** Teacher research, a form of action research, is defined as intentional self-inquiry about one’s work in formal educational settings such as the K-12 context (Cochran-Smith & Lytle, 1999). It also includes teachers as knowers and agents of change in the classroom where research is initiated and sustained by teachers and others such as university faculty (Cochran-Smith & Lytle, 1999).

Teacher research has become prominent in teacher education, professional development, and school reform at all levels including local, state, and national. Cochran-Smith and Lytle (1999) depict teacher research as an analytical framework, which includes “inquiry as stance,” and seeks to understand the relationships between “inquiry, professional knowledge, and practice” (Cochran-Smith & Lytle, 1999, p.18).

**Teacher Practice**

Defining teacher practice is complex (Marzano, 2007; Kington, Reed & Sammons, 2014). With that in mind, this study reviewed the teacher practice literature from the perspective of teachers’ experiences conducting action research and how teacher voice factors into the discussion of teacher practice.

A recent study suggests teacher effectiveness and effective teaching practices are interrelated both having an impact on student outcomes (Ko & Sammons, 2013). Some of the practices identified in educational research include teacher-student relationships, praise, and feedback to students, and creativity and flexibility (McBer, 2000; Hattie & Timperley, 2007). Additionally, 81
teachers involved in a two-year study in the United Kingdom identified the practices listed above as effective (Kington et al., 2014). These practices were also examined at three career phases: early-career (0-7 years), mid-career (8-23 years) and late career (24+ years).

Student perceptions of teacher practice are also prevalent in the literature. For example, students identified traits such as enthusiasm, group interaction, and individual rapport as indicators of effective practice (Ko & Sammons, 2013). They also rated the interpersonal skills of teachers higher in effectiveness than management skills or content knowledge (Abbott-Chapman, Hughes, Holloway & Wyld, 1990; Hughes, 1994).

Organizational traits were also found to support teaching practices, and include establishing a professional culture grounded in self-reflection, peer review and observation, and a structure for continuous feedback about teaching practices (Ko & Sammons, 2013).

**Teacher voice and teacher practice.** The notion that “teaching as scholarship” (Chiseri-Strater & Sunstein, 2006) is examined in a study where the authors consider how a school is a place that “must encourage, and support everyone’s learning” (Wiggins & McTighe, 2006, p. 26). One way to support teacher learning is to involve them in the process of defining teacher practice. This process involves creating space and opportunities such as peer review and self-assessment for teachers to research and decide what teaching practices are professional and consistent with the school’s mission and state standards (Wiggins & McTighe, 2006).

Additionally, the field of education has continuously pursued what constitutes effective instructional practice and in some instances strived to find a one-size-fits-all model for instructional practices (Marzano, 2007). Marzano (2007) proposed that educators interpret the educational research in a way that best supports school and district missions and goals thereby creating their own knowledge base for effective instructional practices. One way to create this
knowledge base is by implementing action research (Marzano, 2007). Through the action research process, a model of instruction can be created to further explore teaching practices for schools and districts (Marzano, 2007).

**Teacher Voice**

The topic of teacher voice covers a wide area of study in educational research. Therefore, my study reviewed literature topics, which included definitions of teacher voice, democratic principles, the evolution of teacher voice and its current state, and how teachers experience voice.

**Definitions.** Hargreaves (1996) asked, “What say do teachers have in educational reform and how well or poorly are their perspectives represented in the discourse of policy and research on education?” (p.12). In order to ensure that teacher voice remains a central component to educational practice and research to “re-present them critically and contextually,” (Hargreaves, 1996, p. 16) Hargreaves (1996) proposes defining teacher voice across a variety of contexts. This perspective enables researchers to understand what contextual elements support good teaching and to understand both positive and disillusioned voices of teachers (Hargreaves, 1996).

Allen (2004), on the other hand, specified that there are four kinds of voice one being the dialogical voice. The dialogical voice requires teachers to be part of the decision-making process where they engage in meaningful dialogue with colleagues (Allen, 2004). This experience can be transformational for teachers where changes in classroom practices can occur and new ways of thinking can be applied (Allen, 2004).

Contrary to Allen’s (2004) dialogical voice, teachers in general have little to no decision-making opportunities in matters that influence the instructional program (Ingersoll, 2007). Ingersoll’s (2007) research regarding “power, control, and accountability” (p. 21) in schools...
illustrates that accountability measures, particularly top-down decision-making, may interfere with teacher performance, and student outcomes. Since schools have a prominent position in society to educate and socialize youth, it is understandable why the top-down decision-making model is widely used (Ingersoll, 2007).

**Democratic principles.** Teacher voice is connected to democratic principles of education (Friedman, Galligan, Albano & O’Connor, 2009). Dewey (1966) viewed education and democracy as interrelated where inclusion, diverse beliefs, sharing of ideas, and working together are needed to implement democratic values on a daily basis. Unfortunately, high-stakes testing and corporate interests drive most school and district agendas, which impede the implementation of a democratic education (Friedman et al., 2009). These top-down approaches require teachers to respond to mandates rather than being part of the decision-making process (Nichols & Parsons, 2010).

Creating a subculture of democratic inquiry, which includes implementing systemic and comparative examination into required and individual practice, (Friedman et al., 2009) can provide opportunities for teacher voice. Teachers and their colleagues make decisions such as when to implement and modify practice, which positively impacts their learning and their students’ learning. In this subculture, teachers become the experts in their learning organizations.

**Evolution of teacher voice to its current state.** A study of school systems around the world portrays the evolution of teacher voice (Hargreaves & Shirley, 2011). For example, teachers experienced academic freedom and created student-centered learning opportunities during the 1960s and 1970s. This perspective led to the ushering in of common standards throughout the 1980s, the use of standardized testing, and a heightened awareness regarding literacy and mathematical abilities (Hargreaves & Shirley, 2011).
During the 1990s and leading into the 21st century, schools focused on performance targets which created an increased awareness in the community (Hargreaves & Shirley, 2011). Currently, teacher voice is absent during the development of national, and international policy leaving teachers “voicelessness” as a profession (Bangs & Frost, 2012, p. 23). This voicelessness leads teachers to experience a “sense of despair due to the gap between policy, and what teachers know and experience as practitioners” (Bangs & Frost, 2012, p. 23).

**How teachers experience voice.** Action research is one way that teachers experience voice in our schools today. Through the research process, the teachers in one study experienced empowerment and transformation as they chose their action research topic and “problematized issues rather than fixing them” (Razfar, 2011, pp. 26 and 41). However, there are also instances of teachers conducting action research and silenced for their efforts (Dana, 1995). In one study, their colleagues and principal silenced the teacher researchers as they conducted research regarding the impact of small group sharing at faculty meetings (Dana, 1995).

**Overview of the Study**

The study is comprised of the research problem, its purpose, the research questions, the rationale and significance of the study, and the research design.

**Research Problem and Purpose**

The research problem evolved from my experiences as an educator and occurs within the PreK-12 school systems where demands such as accountability, student diversity, closing the achievement gap, and working in an era of standards-based reform exist (Drago-Severson, 2009). In order to respond to these complexities, our schools need to become learning organizations, which cultivate growth and develop opportunities for students and adults. Therefore, the purpose of the study was to understand teachers’ experiences with one type of learning experience, action
research, and to investigate the impact of this action research experience on the teachers’ practice and voice.

**Research Questions**

In order to guide my research, I developed and utilized the following research questions:

- What are the experiences teachers have as they utilize the action research process?
- How do teachers find that their experiences with action research impact their practice?
- What connections are there between the action research process and teacher voice?

**Rationale and Significance of the Study**

The rationale for the study is grounded in the research problem, and purpose. In addition, my study affirms and highlights the role action research plays in changing teacher practice, providing opportunities for teacher voice, and creating systems for organizational changes to occur, which can offer a solution to meet the adaptive challenges in PreK-12 schools.

**Research Design**

A narrative inquiry stance, a form of qualitative research, provided the overall design for the study. The voice-centered relational method (Gilligan, Spencer, Weinberg, & Bertsch, 2003), Drago-Severson’s (2009) learning-oriented model of leadership and the analytic memo method (Center for Evaluation and Research, 2012) were used to support the narrative inquiry stance. The voice-centered relational method—the listening guide is a series of steps the researcher utilizes to “tune into the voices of the participants in the study” (Gilligan et al., 2003, p. 12). "Ways of knowing" (p.39), a part of Drago-Severson's (2009) learning-oriented model of leadership, includes developmental levels that impact how individuals make meaning of
experiences and determine “how they make sense of reality” (p. 39). The analytic memo method (Center for Evaluation and Research, 2012), which allows a researcher to step back and write about the process of collecting data, was utilized to capture teachers’ experiences. Data were gathered through the use of two, semi-structured interviews, field notes, and the teachers’ final research reports.

The research involved a purposeful sample of five teachers who were all K-12 teachers in public school systems in Maine and Ohio. The teachers completed a final research report and participated in monthly data share meetings over a five-month period.

**Definitions of Key Terms**

**Teacher Researchers.** I use the term teacher researchers to describe the five teachers in my study. Teacher researchers as defined by Cochran-Smith and Lytle (1999) conduct intentional, self-inquiry about one’s work in formal educational settings such as the K-12 context.

**Data Share Meetings** (Murphy, 2013b). These meetings were scheduled as one-on-one meetings with the teacher researcher and myself and included each teacher sharing their data, any reflections concerning the data, any changes to their research plan, and a general check-in about the process.

**Ways of Knowing.** Drago-Severson (2009) uses this term to identify the four ways of knowing in her learning-oriented model of leadership. These ways of knowing include the instrumental knower, the socializing knower, the self-authoring knower, and the self-transforming knower. Drago-Severson's (2009) ways of knowing are based on Kegan's (1994) order of consciousness.
**Teacher Voice.** I identify with Allen’s (2004) definition of teacher voice. Allen (2004) specifies that there are four kinds of voice one being the dialogical voice. The dialogical voice, for example, requires teachers to be part of the decision-making process where they engage in meaningful dialogue with colleagues (Allen, 2004). This experience can be transformational for teachers where changes in classroom practices can occur and a new way of thinking can be applied (Allen, 2004).

**Organization of the Dissertation**

The dissertation is comprised of five chapters. Chapter 1 provides the background and context of the study, the overview of the study, definition of key terms, and an overview of the dissertation. Chapter 2 is the review of adult learning and developmental theories, the literature that informs the processes, and experiences of the teacher researchers, which include Kegan’s (1982) constructive developmental theory, and Kolb’s (1984) experiential learning theory. Included in Kegan’s (1982) theory is a discussion of Drago-Severson’s (2009) learning-Oriented model of leadership. Additionally, action research, its traditions and a review of the literature are discussed along with a review of the literature for teacher practice and voice. Chapter 3 describes the study’s design including the methodology, data collection, and analysis. Chapter 4 provides the findings of the study, which include answers to my research questions, and a profile for each teacher. Chapter 5 offers a discussion about the findings and their implications, an application of the findings and their implications to my practice, and further research.
Summary

This chapter provided the background, and context of the study, the overview of the study, definition of key terms, and an overview of the dissertation. Chapter 2 provides a review of the literature regarding adult and learning developmental theories and educational research topics, which include action research and teacher research, teacher practice, and teacher voice.
Chapter 2: Literature Review

Chapter two, the literature review, is guided by the following research questions:

- What are the experiences teachers have as they utilize the action research process?
- How do teachers find that their experiences with action research impact their practice?
- What connections are there between the action research process and teacher voice?

The review begins with a discussion of the applicable learning and developmental theories, the literature that inform the processes, and the experiences of the teacher researchers. These theories consist of Kegan’s (1982) constructive developmental theory and Kolb’s (1984) experiential learning theory. Included in Kegan’s (1982) theory is a discussion of Drago- Severson’s (2009) learning-oriented model of leadership. Additionally, action research and related traditions are discussed. This includes a review of the literature and how it corresponds to key terms within my research questions. These terms include experiences, practice, and teacher voice. Table 1 depicts the research questions and the literature review topics.
Table 1

*Research Questions and Literature Review Topics*

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**Constructive Developmental Theory**

Constructive developmental theory consists of two overarching constructs; individuals actively construct meaning of their experiences, and the way they make meaning changes over time (Kegan, 1982). In addition, the theory includes the notion that there are two types of learning: informational and transformational. Informational learning includes increasing adult knowledge and skills, such as learning how to use data to inform decisions about a student’s academic progress (Kegan, 2000). Transformational learning concerns itself with how an adult knows (Kegan, 2000). For example, when an individual has the ability to pause, reflect, and make a decision in a given situation, this process may create the conditions for transformational learning. Adaptive challenges such as implementing standards-based reform require solutions while in the process of implementation (Heifetz, 1994). Therefore, transformational learning is required to meet these challenges for it changes the “structure of a person’s meaning-making
system,” (Kegan, 2000, p. 52) and may provide opportunities to manage life's complexities more effectively.

In order to support transformational learning, one must “meet a person where he or she is” (Kegan, 2000, p. 52), which means to understand one's meaning-making system. Kegan's (1994) order of consciousness or stages of development refer to an individual's meaning-making system, and include six stages of development. Kegan (1994) labels these stages as incorporative, impulsive, imperial, interpersonal, institutional, and interindividual. Adults transition from one way of knowing to the next in a progressive manner (Kegan, 1982). These transitions from one way of knowing to the next move in a linear, hierarchical order (Kegan, 1982). The rate of growth is dependent upon the individual and the supports, and challenges provided in the environment (Kegan, 1982).

**Drago-Severson's Learning-Oriented Model of Leadership**

Kegan's (1982, 1994, 2000) constructive developmental theory provides the foundation for Drago-Severson's (2009) learning-oriented model of leadership. The model also includes Drago-Severson's (2009) definition of adult development, which includes “increasing an individual's cognitive, affective, interpersonal and intrapersonal abilities” (p.19). These abilities allow individuals to navigate the multifaceted demands of “teaching, learning and life” (Drago-Severson's, 2009, p. 4). To meet these demands, Drago-Severson (2009) believes opportunities for transformational learning and development need to occur for educators where they must understand the individual's current way of knowing.

**Ways of knowing.** Drago-Severson (2009) adapts Kegan's (1994) order of consciousness to the learning-oriented model of leadership by identifying four ways of knowers. These include the instrumental knower, the socializing knower, the self-authoring knower, and the self-
transforming knower. Instrumental knowers view their world through a concrete lens and are unable to completely understand another person’s viewpoint (Kegan, 2009). Socializing knowers make meaning in a social context, have a capacity to reflect, and consider other individuals’ perspectives. However, these perspectives and the approval of others shape the socializing knower’s self-concept (Kegan, 2009).

Self-authoring knowers develop the capability to generate an inner value system and take ownership of this internal system (Drago-Severson, 2009). However, self-authoring knowers are unable to recognize that individuals who hold opposite viewpoints can actually inform their way of knowing (Drago-Severson, 2009). Self-transforming knowers are less invested in their identity and realize their viewpoints are limited (Drago-Severson, 2009). Self-transforming knowers understand that the interaction with diverse groups and organizations within society provide opportunities for them to learn, develop, and self-explore (Drago-Severson, 2009). Self-transforming knowers use their self-systems as a “way of seeing” (Kegan, 1982, p. 225).

However, self-transforming knowers acknowledge a sense of “loneliness, and dissatisfaction with their self-systems” (Drago-Severson, 2009, p. 49), which can prove to be a “challenging developmental shift.”

**Research in Constructive Developmental Theory**


**Teachers’ transformational learning and development.** Kegan (1994) contends that transformation can occur when teachers “redefine and reposition their viewpoints, and
affiliations” (p.275) or become “architects of their own transformation” (Chapman & Heater, 2010, p.456). Vetter’s (2012) research question, “What was the change process of one teacher researcher as she engaged in a yearlong practitioner researcher group?” guided the study.

Vetter (2012) identified four stages that emerged for the teacher researcher, which included “contemplating and imagining new positions, enacting, and solidifying a new position, maintaining a new position in spite of resistance, and realizing the results of her new position” (p. 34). Vetter (2012) also applied Kegan’s constructive developmental theory and research on practitioner research groups. Kegan (1994) states that one of the difficulties of teacher change is the expectation that professional development requires the acquisition of skills while simultaneously “changing the way teachers understand themselves, their world, and the relationship between the two” (Kegan, 1994, p. 275).

There were four outcomes for the teacher researcher in Vetter’s (2012) study: an evolution into a teacher leader by providing and leading professional development work for colleagues; an ability to maintain this position by trying out new behaviors; persevering at this position by modify expectations; and being motivated by successes to stick with this new position.

The practitioner research group helped the teacher researcher with each of these outcomes by providing validation and offering challenge and support, and possible solutions (Vetter, 2012). Vetter (2012) concludes that teachers can become architects of their own transformation when supportive space is provided, which allows them to make meaning from their experiences and safely work through “tensions of self and practice” (Vetter, 2012, p. 44).

Educational leadership: transformational learning and development. Heifetz (1994) suggests educational leaders should acquire certain “psychological capacities” (Helsing, Howell,
Kegan, & Lahey, 2008, p. 438) in order to take on the demands of adaptive challenges. This includes changes in “values, beliefs, habits, ways of working, and ways of life” (Heiftez & Linsky, 2004, p. 35). Creating professional development opportunities that are explicitly developmental is one way to develop the psychological capacities needed to respond to the adaptive challenges in schools (Helsing et al., 2008).

In addition, Helsing et al., (2008) suggests that the “capacity for self-authorship” is a “psychological requirement” (p. 440) for effectively implementing the adaptive work of change leadership. A self-authoring individual creates an internal belief system, which is utilized to make meaning and see one’s work in new ways (Kegan, 1994).

With these tenets in mind, Kegan and Lahey (2009) created a professional development framework, Immunities to Change. This framework provides opportunities that increase individuals’ effectiveness in their position by clearly naming the inconsistencies between intended goals and behaviors, to help an individual identify hidden assumptions and beliefs about the inconsistencies, and to provide opportunities to imagine and try out new behaviors, which can lead to an increase in effectiveness (Kegan & Lahey, 2009). Individuals complete an “immunity map” (Kegan & Lahey, 2009, p. 440), a four-column template, which includes an improvement goal, behaviors that work against the goal, hidden competing commitments, and big assumptions. The work typically occurs over a four to six month cycle, which includes interactions with a coach and colleagues (Kegan & Lahey, 2009).

The educational leader in this case study, Selma, described her new role as change coach in an urban district as “helping schools articulate their vision, set goals, work with teams to develop an action plan, and use their data to inform school change” (Helsing et al., 2008, p. 446). One of Selma’s goals was to ensure her work with principals would fulfill her job description as
change coach. At the same time, one of Selma’s big assumptions was that she needed to be “masterful” on all aspects of her job to be successful (Helsing et al., 2008, p. 452). The Immunities to Change process helped Selma realize that in her new role as change coach she was learning to be successful, and that this realization “better equipped her to help others in the change roles and work” (Helsing et al., 2008, p. 461). Selma’s realization reflects self-authorship where she developed an ability to increase her reliance on her own learning process, which produced positive outcomes for principals and schools (Kegan, 1994).

**Teachers’ experiences and meaning making.** Another tenet of constructive developmental theory, meaning making, was explored in Smith’s (2011) narrative inquiry. Twenty-one experienced and exemplary teachers from Pennsylvania participated in this inquiry, which was guided by several research questions. These questions included: *Which, if any, of Kegan’s (1982, 1994) developmental plateaus can be identified as current or prior meaning-making systems for these teachers? What are the current meanings of teaching for these teachers, if these meanings have changed? What was the process of change throughout their career? Was this process of change developmental? What contextual influences have supported or hindered the teachers’ meaning making?*

The analysis of two interviews and application documents were utilized to identify the teachers’ developmental plateau, and also revealed five meanings of teaching (Kegan, 1982, 1994). The developmental plateaus included two at the socialized plateau, two at the middle region between socialized, and self-authoring, fourteen at the self-authoring plateau, two at the self-authoring with a hint of self-transforming plateau, and one unclear (Kegan, 1982, 1994). Additionally, the author did not find evidence of the instrumental meaning-making plateau (Smith, 2011). Also, the terms *enthusiastic or resolute* were applied to teachers in the self-
authoring plateau (Smith, 2011). The five meanings of teaching consisted of making a difference, learning within a community, learning for a lifetime, finding challenges in constraints and receiving from teaching (Smith, 2011).

The analysis showed that the teachers experienced the meanings of teaching at their developmental plateau (Kegan, 1982, 1994). For example, all teachers believed that learning within a community included establishing relationships with students, colleagues, and the community. Also, receiving from teaching included teachers have an internal satisfaction that supports perseverance of their mission and purpose regardless of frustrations within and outside the classroom (Smith, 2011).

However, the analysis also showed that teachers experienced the other meanings of teaching in different ways. For example, making a difference for all teachers in the study meant they changed behaviors and student skills increased. However teachers at the self-authoring plateau demonstrated that they were not “bound by standardized curriculum, and created their own content” (Smith, 2011, p. 226).

Teachers believed in lifelong learning and also saw evidence of this in their students. At the same time, socialized with a hint of self-authoring and self-authoring teachers developed their own voice and viewed growth as a true measure for learning (Smith, 2011). Most teachers shared that teaching was hard and complex and also full of opportunity and hope (Smith, 2011). For example, the self-authoring with a hint of self-transforming teachers found challenge in the constraints of the school structures and worked to change these structures by advocating for students.

Although the inquiry demonstrated that the form of meaning-making or developmental plateau could be determined, the study was not able to explain the process of change in the five
meanings of teaching or the change in the meaning-making structure (Smith, 2011). Another finding includes the impact (or lack thereof) of the context on the developmental plateaus. Within this finding were two elements – the characteristics of the professional context and the fit of expectations in the professional context with the developmental plateaus (Smith, 2011). The professional context was defined as the day-to-day classroom environment, which included expectations from the school, the local community, and state (Smith, 2011). This environment for all teachers within the study was depicted as a place where building relationships with students was intentional, and despite what was happening outside their classrooms, all teachers felt they were developing (Smith, 2011).

The inquiry also identified differences in what teachers found were supports or hindrances within the different developmental plateaus (Smith, 2011). For example, self-authoring and self-authors with a hint of self-transforming found their internal voice guided their decision-making despite the context and were able to find a way to adapt to an imposed change by constantly reflecting upon their practice (Smith, 2011).

**Experiential Learning Theory**

David Kolb’s experiential learning theory has its origins in Dewey’s philosophical pragmatism, Lewin’s social psychology, and Piaget’s cognitive, developmental epistemology (Kolb, 1984). Within this theory, Kolb (1984) defined learning as a “process whereby knowledge is created through the transformation of experience, and knowledge results from the combination of grasping and transforming experience” (p. 41). It is perceived as a holistic model for adult learning, which supports, and challenges growth (Kolb et al., 2001).

According to Kolb (1984), experience is attained at four cyclic stages, which include concrete experience, abstract conceptualization, reflective observation, and active
experimentation. A concrete experience occurs when individuals directly engage with their subject or object of interest. An abstract conceptualization occurs when individuals attempt to make meaning of their concrete experience (Kolb, 1984). Meaning making occurs through interpretation, connections and discussions of consequences, and implications of the subject or object of the engagement (Kolb, 1984).

Reflective observation occurs when individuals step back from direct involvement with the engaged object or subject and reflect on the experience (Kolb, 1984). Active experimentation occurs as individuals attempt to test what they have learned (Kolb, 1984). Kolb’s (1984) cyclic stages are similar to the steps teachers use during the action research process.

Table 2

*Four Cyclic Stages and the Action Research Process*

<table>
<thead>
<tr>
<th>Four cyclic stages</th>
<th>Action research process</th>
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<tbody>
<tr>
<td>Concrete Experience</td>
<td>Creating the Research Question</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>Developing Strategies &amp; Collecting Data</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>Analyzing the Data Collected</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>Conducting Another Cycle of Research</td>
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For example, creating the research question is a concrete experience for teachers who are aware of classroom and school-wide issues that could be researched. Developing strategies and collecting data are an abstract conceptualization for meaning making occurs during these experiences. Additionally, developing strategies such as background reading and creating a research timeline are utilized to help answer the research question. Likewise, collecting data also provides opportunities to interpret and make connections to the research question.
As teachers interpret their data, they experience reflective observation while examining their data to make meaning and determine if changes are needed to the action research plan. Active experimentation occurs for teachers as they conclude one data collection cycle, and begin another. This also applies to teachers who share their findings with colleagues or apply them in other settings.

These four cyclic stages are also organized into grasping and transforming experiences (Kolb, et al., 2001). The grasping experience includes two opposing approaches, concrete experience, and abstract conceptualization while the transforming experience has two opposing approaches, which include reflective observation and active experimentation (Kolb, et al., 2001).

Kolb et al., (2001) contended learning requires the use of opposite abilities, and that an individual continually chooses which abilities to use in each learning experience. Individuals develop a preferred way of choosing, which is shaped by our “hereditary equipment, our past life experiences, and the demands of the present environment” (Kolb et al., 2001, p. 4). Kolb et al., (2001) referred to these preferred ways of choosing as learning styles.

There are four learning styles–divergent, assimilating, convergent, and accommodating (Kolb, 1984). Divergent learners like to “gather information, have broad cultural interests and like working in groups” (Kolb et al., 2001, p. 5). These learners also tend to use concrete experience and reflective observation approaches (Kolb et al., 2001). Assimilating learners believe that theory is more important than practical value and have a tendency to use abstract conceptualization and reflective observation approaches (Kolb et al., 2001). Convergent learners are problem solvers, prefer to use their learning to address an issue, and tend to use abstract conceptualization and active experimentation approaches (Kolb et al., 2001). An accommodating learner learns best from hands-on experiences and enjoys implementing plans (Kolb et al., 2001).
A review of the literature affirms experiential learning theory’s holistic nature, which supports research in interdisciplinary areas. In the case of education, experiential learning theory research is limited to the following area: teacher education

**Teacher Education and Experiential Learning Theory**

The application of Kolb’s (1984) experiential learning theory is prominent in teacher education research. In a study of graduate secondary student teachers in Dublin, Ireland, Heywood (1997) used Kolb’s experiential learning theory to analyze specific methods and theories regarding teaching, and learning as part of their classroom practice. The student teachers applied Kolb’s learning style inventory to reflect upon the premise that a variety of teaching styles should be implemented in the sequence of a lesson.

The student teachers created lesson plans, which exposed their students to each learning style–divergent, assimilating, convergent, and accommodating (Kolb, 1984). In addition, the student teachers created a test, which answered the following question, “Should learning styles be matched to teaching styles (Heywood, 1997, p. 6)?” The test also examined how the students’ reacted to the different learning cycles within each lesson. The findings for Heywood’s (1997) study included an appreciation for the integration of theory and practice. Other results included the impact of the experiential learning theory on the student teachers. For example, 56% stated they would be intentional about creating lesson plans using the learning style inventory experiences, and 29% stated they would use the Learning Style Inventory in the future.

Kabugo, Masaazi and Mugagga (2015) in their study regarding teacher education applied Kolb’s (1984) abstract conceptualizations as a lens to examine how teachers used Emerging Technologies (ETs) in their teaching of the Luganda language. The Luganda language is one of the indigenous languages spoken by the people of Uganda (Kabugo et al., 2015). Its study and
use are declining amongst pre-service teachers, which is cause for concern. In addition, teacher graduates were found to use little or no integration of technology into their teaching practices. Therefore, this study was developed to analyze how emerging technologies (ETs) might ensure the revitalization and sustainability of the language.

The study included designing a blended learning course for pre-service teachers that integrated the components of abstract conceptualization (Kolb, 1984). These components included creating opportunities for the learner to make sense of experiences. Some of these experiences were learning and implementing emergent technologies such as Wikispaces, Google Docs, blogs, etc., within the context of teaching the Luganda language.

The findings indicate that the blended class did provide an opportunity for the pre-service teachers to experience abstract conceptualization (Kolb, 1984) and thereby begin to see the value of using emergent technologies in teaching the Luganda language (Kabugo et al., 2015).

**Action Research and its Traditions**

Within the field of education, action research has become prevalent as a means for professional and organizational change (Herr & Anderson, 2015). Theoretically, the foundations of action research are grounded in John Dewey’s (1916) democratization of education where experiences and active participation in the creation of knowledge are essential for individual growth (Herr & Anderson, 2015). In addition, Schon’s (1983) work regarding the reflective practitioner also contributes to action research. Donald Schon (1983) called reflective practice a response to “technical rationality” (p.3), which Schon (1987) defines as an “epistemology of practice derived from positivist philosophy (p. 3).” Positivist philosophy, which views knowledge creation through scientific methods only, runs counter to Dewey’s (1916) belief that experiences create knowledge and contribute to individual growth.
Reflective practice is experienced in two ways: reflection-on-action, and reflection-in-action (Schon, 1983, 1987). Reflection-on-action occurs after an experience and can be revisited; it is a process whereby upon reflection a practitioner may decide to continue with the same practice or change strategies (Merriam & Bierema, 2014). Reflection-in-action or “thinking on our feet” (Schon, 1987, p. 26) transpires within the experience, takes into account our emotions and ideas in use as well as creates a new understanding, which will be applied to the setting. The action research cycle, plan-act-observe-reflect (Herr & Anderson, 2015), requires teacher researchers to use both reflection-on-action and reflection-in-action.

Kurt Lewin (1948) was the first to develop a theory for action research, which established it as a credible form of research in the social sciences. Lewin (1948) believed that solving problems within an actual context could create knowledge. Action research is value laden and creates a shift from academic researchers to practitioner researchers (Herr & Anderson, 2015), which are defined as insiders in the research setting (Herr & Anderson, 2015).

In its most basic form, action research analyzes a practical problem with an aim toward developing a solution to that problem (Creswell, 2008) while utilizing a cycle of plan-act-observe-reflect (Herr & Anderson, 2015). Action research strives to go beyond knowledge generation to knowledge implementation, which can lead to an increase in expertise and individual growth as well as “organizational and community empowerment” (Herr & Anderson, 2015, p. 1). It also requires a systemic and reflective process in collaboration with others (Herr & Anderson, 2015).

**Teacher Research as a Tradition of Action Research**

Action research is an overarching term for a variety of approaches and traditions, which include teacher research (Herr & Anderson, 2015). Teacher research as defined by Cochran-
Smith and Lytle (1999) includes an intentional and self-inquiry about one’s work in formal educational settings, such as the K-12 context (Cochran-Smith & Lytle, 1999). It also includes teachers as knowers and agents of change in the classroom where research is initiated and sustained by teachers and others, such as university faculty (Cochran-Smith & Lytle, 1999).

Teacher research has become prominent in teacher education, professional development, and school reform at all levels–local, state, and national. Cochran-Smith and Lytle (1999) depict teacher research as an analytical framework, which includes “inquiry as stance,” (p. 18) and seeks to understand the relationships between “inquiry, professional knowledge, and practice” (p. 18).

Within this stance is an opportunity to examine “what kind of knowledge is produced through inquiry, how inquiry relates to practice, and what teachers learn from inquiry” (Cochran-Smith & Lytle, 1999, p. 18) throughout their professional lives and within several contexts. Another tenet of inquiry as stance is realized through inquiry in communities, which utilizes a social and political lens (Cochran-Smith & Lytle, 1999). In these communities, teachers are acknowledged individually and collectively as bringing about change in classrooms and schools (Cochran-Smith & Lytle, 1999).

Inquiry as stance “repositions the intellectual capacity of practitioners, and proposes a framework that aligns with other social reform movements with a goal of radical transformation of teaching, learning, and schooling” (Cochran-Smith & Lytle, 2009, p. 4). It is a habit or worldview, which uses a cyclical process to delve into real problems that exist within classrooms and schools (Cochran-Smith & Lytle, 2009). Referred to as an “organic and democratic theory of action, it positions the practitioners’ knowledge, practitioners, and their interactions with
students, and other stakeholders at the center of educational transformation” (Cochran-Smith & Lytle, 2009, pp. 123-124).

There are four dimensions of inquiry, which include a perspective on knowledge that puts forward a conception of local knowledge in global contexts; an expanded view of practice as the interplay of teaching, learning, and leading; an understanding that practitioner communities are an essential context for enacting inquiry of stance as a theory of action; and a perspective that practitioner inquiry is to provide education for a more just, and democratic society (Cochran-Smith & Lytle 2009).

**Action Research and Teacher Research Literature**

A review of the literature regarding action research, and teacher research encompasses key terms within each of my research questions, and they include experiences, practice, and teacher voice. The articles and studies in this section highlight the experiences teachers have while conducting research, which includes generating knowledge, changing practice, and feeling empowered. Figure 1 below connects the key terms with the article and study topics.

*Figure 1*

*Action Research and Teacher Research*

- **Generating knowledge.** Lytle and Cochran-Smith (1992) assert that, “teacher researchers are knowers, and a primary source for generating knowledge about teaching, and learning for themselves and others” (Lytle & Cochran-Smith, 1992, p. 447). Since teacher
research is rooted in practice, teachers have the authority to know, and to construct knowledge (Lytle & Cochran-Smith, 1992). Teachers often inquire with their students so that students then become empowered as knowers (Cone, 1990; Branscombe, Goswami & Schwartz, 1992). The authors also contend that teacher research is a systematic inquiry, which encompasses intentional inquiry about their classrooms and schools (Stenhouse, 1985).

With these assertions in mind, the authors affirm the contributions of teacher research to an existing theory of knowledge about teaching; the existing theory of knowledge is defined as generated by university researchers, only (Lytle & Cochran-Smith, 1992). Teacher research, the authors contend, is a way of generating both local, and global knowledge (Lytle & Cochran-Smith, 1992). “Local knowledge is developed by teachers for themselves and their immediate communities where as global knowledge is generated for the larger school, and university communities” (Lytle & Cochran-Smith, 1992, p. 450).

Teachers use four formats to write about their research: journals, essays, oral formats (audio recorded transcriptions), and research documents (Lytle & Cochran-Smith, 1992). Journals are used to record the teachers’ experiences and thoughts, essays are utilized to analyze classroom, and school issues related to “learners, curricula, and school organization” (Lytle & Cochran-Smith, 1992, p. 450). The oral formats include inquiries and dialogue that targets reflection, and questioning (Lytle & Cochran-Smith, 1992). Field notes, interviews, and classroom documents are examples of research documents teachers use to write about their inquiry (Lytle & Cochran-Smith, 1992).

In order to illustrate how teachers are knowers of knowledge and how they develop this knowledge, the authors examined published and unpublished writings from teacher researchers that spanned grades K-12 (Lytle & Cochran-Smith, 1992). The writings included contributions to
local and global knowledge (Lytle & Cochran-Smith, 1992). Local knowledge can be generated in two ways: individually by teachers to support their own practice and in communities to support classroom and school-wide practices (Lytle & Cochran-Smith, 1992). One teacher remarked about her research experience on her practice, “I began to realize that teaching is the art of finding the right balance between providing a clear structure that facilitates student learning, and giving students the freedom to construct their own knowledge” (Lytle & Cochran-Smith, 1992, p. 453).

Teachers create knowledge in communities as an effort to change teaching, learning and education (Lytle & Cochran-Smith, 1992). These communities can be within one organization or across several organizations (Lytle & Cochran-Smith, 1992). For example, in one school, the teachers viewed curriculum development as a way to create knowledge because they were making connections between classroom decision-making and school goals (Lytle & Cochran-Smith, 1992). On the other hand, teachers from different schools with a goal of improving literacy assessments in their classrooms observed each other, and then shared what they learned, and created multiple ways to assess literacy (Lytle & Cochran-Smith, 1992).

Generally speaking, the authors note that teacher research is a way to generate global knowledge because it contributes both theoretical frameworks and essential evidence about some of the “central domains of the knowledge base” (Lytle & Cochran-Smith, 1992, p. 467).

Teacher research, the authors conclude, is “concerned with the questions that arise from the lived experiences of teachers and the everyday life of teaching expressed in a language that emanates from practice” (Lytle & Cochran-Smith, 1992, p. 466). By engaging in research, and generating knowledge teachers are empowered and re-positioned to be part of the decision-making process and to be agents of universal change (Lytle & Cochran-Smith, 1992).
**Empowerment and generating knowledge.** Similar to Lytle and Cochran-Smith’s (1992) article, this study presents reflections from four urban teachers (kindergarten to adult education) and their experiences with action research. The teachers’ reflections indicate development in the following areas: “teacher knowledge, confidence, personal empowerment, and enhanced professional leadership” (Furtado & Anderson, 2012, p. 531). Schon’s (1987) work is featured in the study as a guide for the teacher researchers’ journals, specifically their experiences with reflection-on-action, and reflection-in-action. Creating knowledge regarding classroom events is an outcome of continuous reflection (Schon, 1987).

Three research questions guided this study, however questions two and three are pertinent for this review. Research question two asked, *In what way does the teachers’ use of reflection-in-action and reflection-on-action facilitate a more flexible approach to teaching innovations?* Research question three asked, *In what way does participation in systematic reflection and action research lead to future teacher endeavors in teacher leadership?* (Furtado & Anderson, 2012).

The findings for research question two included positive comments from the teachers as they reflected both within the moment and after the fact about their action research experiences (Furtado & Anderson, 2012). For example, one of the teachers commented that she used guiding questions to plan and guide her lessons. These included: What am I doing? Why am I doing it? How will this change my class? (Furtado & Anderson, 2012). Also, positive comments from the teachers were noted after they completed their action research projects and included reflections about their professional growth (Furtado & Anderson, 2012). One of the teachers commented that “by doing reflection on a regular basis” (Furtado & Anderson, p. 554) it allowed her to grow
professionally,” and that she believed she has a “wealth of knowledge to share” (Furtado & Anderson, p. 554).

The findings for research question three centered on empowerment and leadership. One teacher said, “I feel that I am full of pride. I actually completed my own research project. I thought I would never do something like that” (Furtado & Anderson, 2012, p. 556). Another teacher expressed how pleased she was to share her action research findings with colleagues because she “thought the strategies were so important for all grade levels” (Furtado & Anderson, 2012, p. 555).

In addition to the findings above, the authors discovered that the teachers experienced empowerment in the following ways: “they had autonomy to decide which strategies they could use; and they had the freedom to experiment with those strategies” (Wasley, 1991, p. 171). Additionally, the authors found that their study supported general features about teachers conducting action research (Furtado & Anderson, 2012). For example, one feature involves how teachers who examine and reflect on their own practice become life-longer learners and inspire their colleagues to do the same and teachers who volunteer to conduct their own action research projects can improve student outcomes (Furtado & Anderson, 2012).

Classroom practice. Goodnough’s (2011) study, unlike Furtado and Anderson’s (2012) study, examined the experiences of 10 teachers before, during, and after participating in action research. Three outcomes emerged from the study; two of these led to a change in “teacher identity and classroom practice” (Goodnough, 2011, p. 73). The research questions that guided this study were: How have teacher identity, and self-knowledge been impacted by being involved in collaborative, action research? How has teacher participation in collaborative, action
research impacted professional practice? How has teacher engagement in collaborative, action research affected the broader context of education?

For the purposes of this study, Goodnough (2011) defines teacher identity as a “teacher’s beliefs, values, and emotions about many facets of teaching and becoming teachers” (Goodnough, 2011, p.76). Additionally, the research was conducted within a larger project called “Science Across the Curriculum,” (Goodnough, 2011, p.77), which was “teacher driven” (Goodnough, 2011, p. 77) and comprised of teacher meetings that offered participants opportunities to share practice, support, and challenge each other (Goodnough, 2011).

One of the outcomes of Goodnough’s (2011) study, teacher identity, was articulated by two themes: “confidence in teaching science and viewing students differently” (Goodnough, 2011, p. 78). As a result of their action research experiences, most teachers felt more confident with new science content and their ability to communicate it to students effectively (Goodnough, 2011). A teacher remarked, “One thing I learned is that you don’t have to have a science degree to do research in your classroom. I’m not afraid to teach science now” (Goodnough, 2011, p. 79). Furthermore, after three years, these same teachers viewed themselves as “critical learners, which encompasses learning as being both individual, and collaborative” (Goodnough, 2011, p. 79).

Viewing students differently, the second theme articulating teacher identity, involved developing a deeper appreciation to attend to the varied learning needs of the students and seeing the students “holistically” (Goodnough, 2011, p. 79). As a result of her research experience, one teacher said, “I think I am more reflective and more aware of who’s in front of me who I’m working with, and what their needs are. The process [action research] has really helped” (Goodnough, 2011, p. 80).
Another outcome of Goodnough’s (2011) study, classroom practice, changed as a result of teachers’ experiences with action research. Teachers commented that they continued to use strategies and ideas they experimented with during the action research project such as concept mapping, integrating art, and science, etc. (Goodnough, 2011). They also reported that they were more reflective about their practice, and named this “inquiry-oriented” (Goodnough, 2011, p. 81). One teacher said, “Action research, to me, is looking at what you do in the classroom, and asking yourself why is this working, why isn’t this working, how do I know, and what can I do to make it better” (Goodnough, 2011, p. 81).

**Empowerment and teacher research.** Comparable to Goodnough’s (2011) study, a high school teacher examines the experiences of PreK-12 teachers in his district-based teacher research professional development course (Martell, 2014). Martell’s (2014) study occurs in an urban district in New England, and includes 13 teachers – two elementary teachers, one middle school teacher, and 10 high school teachers. Acting as instructor, Martell’s (2014) purpose for the course was to inform teachers about teacher research, to have teachers integrate research into their practice, and to invite teachers to use inquiry as stance, which offers a “sense of deliberating about what to get done, why to get it done, who decides, and whose interests are served” (Cochran-Smith & Lytle, 2009, p. 121).

As researcher, Martell (2014) used inquiry as stance (Cochran-Smith & Lytle, 2009) and critical constructivism, which is a learning theory that contends individuals make meaning based on their interactions between prior knowledge and new ideas (Kincheloe, 2005). Critical constructivists promote “self-reflection in relation to social power” (Kincheloe, 2005, p. 33) as a way to make meaning and underscore organizations that “ privilege some people while marginalizing others” (Martell, 2014, p. 3). As teacher researchers make meaning through their
inquiry experiences, they develop a sense of empowerment (Martel, 2014). This sense of empowerment is particularly important for urban school populations, which include the working poor, and minorities (Martel, 2014).

Martell (2014) used the following research questions to guide his study: *Did my course help teachers develop their action research skills and inquiry stance? Did my course lead to increase critical awareness of the course participants and myself? Did my course empower the teachers who took it? If so, how, and to what extent did it empower the teachers?* Seven data collection sources were used by Martell (2014), which included interviews of five teacher volunteers, course artifacts, and an instructor journal.

The findings of Martell’s (2014) study included three outcomes: course experience, empowerment, and the development of critical awareness. Relatively speaking, the teachers had positive experiences with the course and developed the research skills needed to plan and implement their inquiries (Martel, 2014). Martell (2014) stated that the teachers believed this work changed their practice or view of teaching their students. The second finding, empowerment, was defined by the teachers in three ways: being able to do something that would change their practice; showing themselves the importance and value of their knowledge as teachers; and showing outsiders, and peers that teachers are intellectuals, which will lead to more professional respect (Martel, 2014). One teacher felt more respect than she had previously and knew that she had been “doing something for everybody, and that she was trying to either prove or disprove some sort of theory. She felt like people were coming in, and saying, ‘Look at this really cool thing Stacy is doing’” (Martel, 2014, p.16)

Kincheloe (2003) described teacher empowerment as a process where teachers become “active producers of knowledge, not simply consumers” (p. 56) acquiring a sense of authority
over their work, which is often lost in a top-down education system. Martell (2014) observed that the teachers recognized the importance of using their teacher research to “elevate the voices of their students” (p. 18). One teacher said:

   It’s not often that we ask the students what they think. I feel like... teachers always do what they think is obviously best for the student, but we never really think about what they [students] think is best for them (p. 18).

   Developing critical awareness, the third finding in Martell’s (2014) study, was characterized as teachers implementing many of the principles of critical theory while maintaining the “language, and practices of PreK-12 teaching” (p. 20). Although the language of critical theorists was not used by the teacher researchers, their projects were critical in nature for they examined positions of power such as supporting English Language Learners (ELL) in science and using the bullying curriculum to empower students with emotional and behavioral issues (Martel, 2014).

   After two years, Martell (2014) found that several teacher researchers continued to use the tools they designed to collect informal data from students or used the data to restructure courses or change their practice; however one teacher stated that she continued to conduct teacher research. Martell (2014) reasons that these findings are due to barriers that exist for teachers to integrate research into their regular practice. These barriers are time and lack of district support (Martel, 2014). Even though many of the teachers had daily or weekly collaborative time in their schedules, this was often used to address school or district-wide agendas, such as discussing standardized test results (Martel, 2014).

   Additionally, instead of utilizing funds to develop teacher researchers, the district allocated funds to support district-wide needs for professional development, such as
implementing a new curriculum (Martell, 2014). One teacher captured her experiences with professional development and teacher research by saying, “I think the professional development that I’ve experienced... (is) generally pretty worthless... Teacher research is the first time that I feel professional development is directly improving my teaching. I wish the district supported it more” (Martel, 2014, p. 24).

Teacher Practice

Defining teacher practice is complex (Kington, Reed & Sammons, 2014; Marzano, 2007). Therefore, I used my second research question, How do teachers find that their experiences with action research impact their practice? as a guide to inform this section of the literature review. This section is organized into two parts: what does research have to say about teacher practice, and how does teacher voice factor into the discussion of teaching practice? Additionally, this section offers how action research and effective teaching practice share similar traits.

Research

This recent study suggests teacher effectiveness and effective teaching practices are interrelated – both having an impact on student outcomes (Ko & Sammons, 2013). For example, student cognitive and affective outcomes are impacted by teacher behaviors and classroom practices (Ko & Sammons, 2013). Some of these behaviors and practices include applying content knowledge, understanding students’ learning needs, adapting instructional practices, providing consistent feedback to students, and accepting responsibility for student outcomes (Ko & Sammons, 2013).

In addition, organizational traits support teaching practices, and include establishing a professional culture grounded in self-reflection, peer review, and observation as well as a
structure for continuous feedback about teaching practices (Ko & Sammons, 2013). This professional culture is similar to a community of practice (Wenger & Trayner, 2011), which includes three components: the domain, shared practices, and the community.

Other educational studies identify a variety of effective teacher practices. These practices include maintaining high levels of engagement, providing responsibility and independence, creating a positive classroom environment, and providing challenging work, consistent praise and encouragement (Mortimore, Sammons, Stoll, Lewis & Ecob, 1988). Other practices were identified in educational research and include teacher-student relationships, praise and feedback to students, and creativity and flexibility (McBer, 2000; Hattie & Timperley, 2007).

In addition, 81 teachers involved in a two-year study in the United Kingdom, identified the practices listed above as effective (Kington et al., 2014). These practices were also examined at three career phases: early-career (0-7 years), mid-career (8-23 years) and late career (24+ years).

Student perspectives regarding effective teaching practices are also evident in the educational research. For example, students believe the interpersonal skills of teachers rate higher in effectiveness than management skills or content knowledge (Abbott-Chapman, Hughes, Holloway & Wyld, 1990; Hughes, 1994). In addition, students identified traits such as enthusiasm, group interaction, and individual rapport as indicators of effective practice through surveys and focus groups, (Ko & Sammons, 2013).

**Teacher voice and teacher practice.** According to Marzano (2007), the field of education has continuously pursued what constitutes effective instructional practice. In addition, a single one formula or model for instructional practices will never be achieved (Marzano, 2007). Therefore, Marzano (2007) proposes that educators interpret the educational research in a way that best supports school and district missions and goals thereby creating their own knowledge base for
effective instructional practices. One way to create this knowledge base is by implementing action research (Marzano, 2007).

Action research “connects ideas with actions in order to understand that teaching is scholarship and requires teachers to take time to ask what works and why” (Chiseri-Strater & Sunstein, 2006, p. xxii). Marzano (2007) suggests beginning the action research process by selecting an effective instructional practice such as cooperative learning, teacher-student relationships or questioning techniques. These research-backed practices can provide the topic for the action research study (Marzano, 2007). A model of instruction can be created to further explore teaching practices through the research (Marzano, 2007). Essential to this process are two factors: the model is used as a vehicle of communication and as a method for creating a common language that schools and districts agree constitute effective teaching practices (Marzano, 2007).

Teaching as scholarship (Chiseri-Strater & Sunstein, 2006) is also examined in this study. The authors consider how school is a place that “must encourage and support everyone’s learning” (Wiggins & McTighe, 2006, p. 26). One way to support teacher learning is to involve teachers in the process of defining teacher practice. This process involves creating space and opportunities for peer review and self-assessment for teachers to research and decide what teaching practices are professional and consistent with the school’s mission and state standards (Wiggins & McTighe, 2006).

In order to support this process four generalized professional criteria and nine learning principles are offered as a framework (Wiggins & McTighe, 2006). These criteria include implementing recent knowledge from the field, centering on clients and outcomes, adapting to individual needs, and adhering to professional standards in their “own practice, and through peer
review” (Wiggins & McTighe, 2006, p.27). The authors highlight two of the learning principles essential to defining teacher practice. They include personalized learning where the learners’ interests, strengths and prior knowledge are honored and learning is “flexible, and fluent” (Wiggins & McTighe, 2006, p. 28) with an ability to transfer individual knowledge and skills to real-life situations.

Utilizing the framework to support the process of defining teacher practice helps schools avoid the habit of personalizing feedback about teaching and supporting the school’s mission (Wiggins & McTighe, 2006). Depersonalizing feedback is productive and clears the way for teachers to have dialogue about best practices and how they align with the school’s mission (Wiggins & McTighe, 2006). The framework also provides a venue for intentional and continual learning for teachers (Wiggins & McTighe, 2006).

Teacher Voice

The topic of teacher voice covers a wide area of study in educational research. For the purposes of this study, I used my third research question, What connections are there between the action research process and teacher voice? to guide this section of the literature review. As a result, four subsections evolved, which included definitions of teacher voice, democratic principles and teacher voice, the evolution of teacher voice and its current state, and how teachers experience voice.

Definitions of Teacher Voice

In his study about teacher voice, Hargreaves (1996) examined questions such as “What say do teachers have in educational reform, and how well or poorly are their perspectives represented in the discourse of policy and research on education” (p.12)? Educational researchers examining teacher voice have a tendency to select teachers for their studies with
similar passions, and interests (Hargreaves, 1996). This leads to narrowing the definition of
teacher voice to include only those selected teachers rather than including the voice, and
knowledge of all teachers (Hargreaves, 1996).

In order to ensure that teacher voice remains a central component to educational practice
and research, to “re-present them critically and contextually” (p. 16), Hargreaves (1996)
proposes defining teacher voice across a variety of contexts. Examining teacher voices across a
variety of contexts enables researchers to understand what contextual elements support good
teaching and to understand the positive and disillusioned voices of teachers (Hargreaves, 1996).
Additionally, the voices of marginalized and alienated teachers must be included to provide
opportunities to expand knowledge about ourselves and our organizations (Hargreaves, 1996).

Allen (2004) contends that there are two conditions for defining teacher voice in an
educational setting. First, teachers must believe that the audience (such as the principal,
superintendent, school board, etc.) gives fair and respectful consideration of their ideas and
suggestions during the decision-making process (Allen, 2004). Second, the audience must have
influence in the decision-making process in order for the teachers’ input to become a reality
(Allen, 2004).

Within these conditions, there are four kinds of voice, which include a voting voice, an
advisory voice, a delegated voice, and a dialogical voice (Allen, 2004). In addition, teachers
utilizing these voices need to understand that more will be required of them in the way of time,
responsibility and risks (Allen, 2004). A voting voice depicts teachers voting on a meaningful
topic, the results are honored, and little time, responsibility, and risk are involved (Allen, 2004).
An advisory voice provides teachers with input into the decision-making process and requires
more time, responsibility, and risks (Allen, 2004). Teachers utilizing delegated voices represent
their colleagues on the leadership team where decisions are made and experience an increase in
time, responsibility, and risks (Allen, 2004).

The dialogical voice requires teachers to be part of the decision-making process where they engage in meaningful dialogue with colleagues (Allen, 2004). This experience can be transformational for teachers where changes in classroom practices can occur, and a new way of thinking can be applied (Allen, 2004).

Similar to Allen’s article (2004), this article discusses the impact of teacher decision-making in schools and the effects on teacher performance and student outcomes (Ingersoll, 2007). Ingersoll’s (2007) research regarding “power, control, and accountability” (p. 21) in schools illustrates that accountability measures, particularly top-down decision-making, may interfere with teacher performance and student outcomes. Teachers, in general, have little to no decision-making opportunities in matters that influence the instructional program. Some examples include purchasing textbooks or other curriculum materials, class schedules, curriculum decisions, space, decisions about grouping and promoting students, evaluation, professional development, and student discipline (Ingersoll, 2007).

The amount of power and control that experts hold over organizational decisions is an essential standard for a profession (Freidson, 1986). Since schools have a prominent position in society to educate and socialize youth, it is understandable why the top-down decision-making model is widely used (Ingersoll, 2007). However, teachers have much responsibility, and little power even though they are entrusted to educate and socialize children (Ingersoll, 2007).

Increased collaboration with colleagues and administration, a committed and engaged staff, and a higher teacher retention rate occurs in schools where teachers are part of the decision-making process (Ingersoll, 2007). In some instances, teachers believe the decisions
made regarding student behavior issues are more important than instructional matters (Ingersoll, 2007).

**Democratic Principles and Teacher Voice**

Teacher voice is connected to democratic principles of education (Friedman et al., 2009). Dewey (1966) viewed education and democracy as interrelated where inclusion, diverse beliefs, sharing of ideas, and working together are needed to implement democratic values on a daily basis. He articulated:

> Until the public-school system is organized in such a way that every teacher has some regular and representative way in which he or she can register judgment upon matters of educational importance, with the assurance that this judgment will somehow affect the school system, the assertion that the present system is not, from the internal standpoint, democratic seems to be justified (Dewey, 1903 p. 195).

Schools can be places of democracy where teachers feel empowered, students are involved in decision-making, and all stakeholders have a say in the educational process (Kincheloe, 1999). Unfortunately, high-stakes testing and corporate interests drive most school and district agendas, which impede the implementation of a democratic education (Friedman et al., 2009). These top-down approaches require teachers to respond to mandates rather than being part of the decision-making process (Nichols & Parsons, 2010).

At the same time, educators strive to implement democratic principles within their classrooms, schools, and districts. The study conducted by Friedman et al., (2009) examined how do teachers “negotiate the philosophical rift between mandated pedagogy, and their personal beliefs about teaching and learning” (p. 252).
The participants in this study included nine urban teachers from grades one through five, eight suburban teachers from grades one through five and two student teachers from a suburban setting (Friedman et al., 2009). The findings include four subcultures of democratic practice one being the subculture of democratic inquiry and practice (Friedman et al., 2009). This subculture best illustrates how teacher voice and democratic educational principles work in classrooms, schools, and districts.

A subculture of democratic practice includes implementing systemic and comparative examination into required and individual practice (Friedman et al., 2009). Through this process, teachers decide with their colleagues to implement the practice, to modify it, or to not implement it (Friedman et al., 2009). This process also improves teachers’ own learning, which positively influences their students’ learning (Friedman et al., 2009). In addition, modeling democratic principles includes “collaboration, contributes to unity, and serves the greater mission of acting for social justice” (Friedman et al., 2009, p. 255).

In order to implement a subculture of democratic inquiry for teachers, school, and districts, action needs to occur (Friedman et al., 2009). In schools, administrators must bring teachers into the decision-making processes where teachers feel “valued and experience a sense of expertise and competence” (Friedman et al., 2009, p. 270). Additionally, teachers must share their ideas and opinions even if they are different or controversial; this ensures that actual transformation can occur (Friedman et al., 2009). At the district level, transformational leadership must be in place, which acknowledges the need for all stakeholders to be involved (Friedman et al., 2009).

Similar to the study conducted by Friedman et al., (2009), this study (Nichols & Parsons, 2010) examined trends and obstacles believed to interfere with teacher voice and limit decision-
making power. According to the authors (Nichols & Parsons, 2010), there are several factors that limit teacher voice and interfere with a role in the decision-making processes within schools. These factors include “increased teacher responsibilities, a shift towards a technical approach to teaching and the negative, public image of teachers” (Nichols & Parsons, 2010, p.1).

Attending to the social and emotional needs of students is an example of increased teacher responsibility (Nichols & Parsons, 2010). The social and emotional needs of students are essential factors for student success. However structural supports, such as intentional time for collegial dialogue, are needed in order for teachers to adequately respond to student needs (Nichols & Parsons, 2010).

The transformation of teaching from a “professional vocation to a technical job” (Nichols & Parsons, 2010, p. 5) is another factor that limits teacher voice. Teachers believe their knowledge is an essential component to the teaching profession (Nichols & Parsons, 2010). However, top-down decision-making and other hierarchical structures limit opportunities for professional dialogue (Nichols & Parsons, 2010). Additionally, curriculum materials created by outside experts and providing a cookbook approach to teaching contributes to transforming teaching into a technical job or “deskilling” (Nichols & Parsons, 2010, p. 6).

The public image of teachers is another factor that interferes with teacher voice (Nichols & Parsons, 2010). Policy makers and media promote uncertainty about teachers’ abilities, and importance to the decision-making process (Nichols & Parsons, 2010). This perception causes teachers to question their role in the decision-making process (Nichols & Parsons, 2010).

In order to reverse these trends and achieve Dewey’s (1903) democratic principles, the authors suggest teachers must promote their profession by engaging in action research and opportunities for leadership (Nichols & Parsons, 2010). In addition, policy makers must value
teacher voice and the role it plays in the decision-making process in order to emulate Dewey’s (1903) democratic principles (Nichols & Parsons, 2010).

**Evolution of Teacher Voice to its Current State**

How did teachers become “the object of reform rather than the subjects of reform” (Hargreaves & Shirley, 2011, p.1) is a guiding question for this article. In order to answer this question, the authors examined school systems across the world, which included Canada, the United States, the United Kingdom, and Australia.

The first way, which occurred during the 1960s and 1970s, was defined as a time when teachers experienced academic freedom and created student-centered learning opportunities (Hargreaves & Shirley, 2011). This academic freedom led to inconsistencies across school systems; therefore attempts were made to create more consistency while keeping the student-centered focus (Hargreaves & Shirley, 2011). These attempts included creating common standards while allowing room for professional judgment (Hargreaves & Shirley, 2011). Creating common standards and including room for professional judgment did not persevere in school systems for a few reasons—one, being a lack of leadership at the school and district levels (Hargreaves & Shirley, 2011). In some cases, this leadership took the form of not understanding that changes to curriculum and agreement on standards required intentional time for dialogue, experimentation, and reflection (Hargreaves & Shirley, 2011).

The second way, occurring in the 1980s, ushered in charter schools and the growth of private schools, where principles such as performance standards, teaching for pre-determined results, standardized testing, and a focus on literacy and mathematical ability guided school policy (Hargreaves & Shirley, 2011). These principles stifled creativity, showed insensitivity to diverse learners, and discouraged teachers (Hargreaves & Shirley, 2011). Discouraged teachers
left the profession; teachers who remained experienced a decline in collegiality and lost their
desire to teach (Hargreaves & Shirley, 2011).

The third way, occurring in the 1990s, and leading into the 21st century, established a
middle ground between the first and second ways (Hargreaves & Shirley, 2011). This way was
characterized by an “increase in autonomy and accountability through performance targets,
providing resources, and support to teachers while increasing expectations, and pressure for
results, and an intensified awareness in the community regarding performance targets”
(Hargreaves & Shirley, 2011, p. 6).

Currently, teacher voice is absent during the development of national and international
policy where organizations such as the World Bank and the United Nations Educational
Scientific and Cultural Organization (UNESCO) influence policy through the lens of
“competitiveness in a global arena” (Bangs & Frost, 2012, p.1). In this same international study,
which examined teacher self-efficacy, voice, and leadership, teachers experience “voicelessness”
as a profession (Bangs & Frost, 2012, p. 23). This voicelessness leads teachers to experience a
“sense of despair due to the gap between policy and what teachers know and experience as
practitioners” (Bangs & Frost, 2012, p. 23).

In addition, in a survey that included 20,000 teachers, 69% indicated that their opinions
were valued at the school level, 30% at the district level, 5% at the state level and 1% at the
national level (Scholastic & the Gates Foundation, 2014).

In order to ensure that teachers become the subject of change, a fourth way is proposed,
which includes many elements (Hargreaves & Shirley, 2011). For example, responsibility would
become the driving force and accountability the foolproof mechanism when responsibility fails
(Hargreaves & Shirley, 2011). Also, teachers would be involved with developing a system of
excellence and professional principles for all teachers throughout every aspect of their careers (Hargreaves & Shirley, 2011). Some examples include professional inquiry, creating consistent, professional learning opportunities, viewing teachers as adult learners, and partnering with administrators and policy makers regarding curriculum, and assessment decisions (Hargreaves & Shirley, 2011).

**How Teachers Experience Voice**

Razfar (2011) examined teacher empowerment in an action research study. Three case studies were developed from seven urban educators enrolled in a master’s program. The action research projects involved developing an after school-program, literacy development for English Language Learners (ELL), and nutrition and health (Razfar, 2011).

The author of the study used questions from an issue of the *Teacher Education Quarterly* devoted to action research. These questions were used to examine empowerment and transformation, an additional theme within this study (Razfar, 2011). Also, these questions included, *In what ways has engagement with action research empowered you and/or your constituents?* and *In what ways has action research become a transformative undertaking for you and/or your constituents?*

The teacher researchers identified empowerment and transformation in several ways (Razfar, 2011). These included “problematizing issues rather than fixing them, appreciating complexity over simplicity, becoming comfortable with uncertainty, being supported and challenged within their community, having choice for their action research topic, collecting systematic data, and reflection” (Razfar, 2011, pp.26 and 41). One of the teacher researchers shared his experience of empowerment as “The ability to guide, initiate, and direct methods necessary to implement the project” (p. 36). This sense supports Freire’s (1970) view where
individuals view themselves as people who can change the world rather than be passive and silenced by the dominant group. Other findings from this study show empowered teachers are likely to ask critical questions, trust themselves to take risks, and recognize their ability to create their own knowledge (Razfar, 2011).

Contrary to the other action research studies in this section and their connection to providing opportunities for teacher voice, this study found that collaborative, action research efforts silenced teacher voice (Dana, 1995). This collaborative action research project, guided by a faculty member from a local university, studied the process of educational change introduced by teachers in one elementary school (Dana, 1995). The format provided opportunities for teachers and the university researcher to collaborate on the research design and document the change process, which supports teacher empowerment (Dana, 1995).

Specifically, the study follows two teachers and their research efforts to answer the following research question: “In what ways can a culture of collegiality be created and sustained at their school” (Dana, 1995, p. 60)? In order to create more collegiality, the teachers created time at faculty meetings for small group sharing. These heterogeneous grade-level groups consisted of four faculty members (Dana, 1995).

The new structure for faculty meetings provided two outcomes. The first outcome was that colleagues and the principal silenced teacher voices. The second outcome was that collaborative action research groups appeared to support structural changes throughout the process (Dana, 1995). Colleagues viewed the group sharing in a negative way and shared their feelings, which caused the teacher researchers to question their research efforts (Dana, 1995). Through the support of the collaborative action research group, the teacher researchers worked through these “silencing efforts” (Dana, 1995, p. 64) by reflecting why their colleagues had
negative comments, and how would they respond to them (Dana, 1995). For example, one of the teacher researchers used this response, “I like to share because I learn, and meet new people” (Dana, 1995, p. 64). As a result of this effort, both teacher researchers began to experience their colleagues’ shift in thinking about the small group sharing at faculty meetings. For example, this comment was heard during a group share, “Why don’t we look at it like this” (Dana, 1995, p. 65)?

Also, faculty recognized that the principal was a proponent of teacher development and site-based decision-making. However, his beliefs about faculty meetings would impede these efforts (Dana, 1995). For example, the meetings were traditionally long and facilitated solely by the principal (Dana, 1995). As faculty embraced the small group sharing, the meetings grew even longer. By the end of the project, faculty realized they preferred the small group sharing as the only agenda item for meetings (Dana, 1995).

Summary

This chapter provided a discussion of the literature review and was organized according to the study’s three research questions:

- What are the experiences teachers have as they utilize the action research process?
- How do teachers find that their experiences with action research impact their practice?
- What connections are there between the action research process and teacher voice?

Additionally, the literature review included a discussion of the adult learning and developmental theories and literature that informed the processes, and experiences of the teacher researchers. The theories included Kegan’s (1982) constructive developmental theory and Kolb’s (1984)
experiential learning theory. Included in Kegan’s (1982) theory was a discussion of Drago-Severson’s (2009) learning-oriented model of leadership. Furthermore, action research and its traditions were discussed, which included a review of the literature, and how it corresponds to key terms within my research questions. These terms included experiences, practice, and teacher voice.

My study also affirms and highlights the role action research plays in changing teacher practice, providing opportunities for teacher voice, and creating systems for organizational changes to occur, which can offer a solution to meet the adaptive challenges in PreK-12 schools. The next chapter presents the methodology for the study.
Chapter 3: Methodology

This study sought to understand teachers’ experiences with action research, and its impact on their practice and voice. The researcher utilized a narrative inquiry stance, a form of qualitative research, and the voice-centered relational method—the listening guide (Gilligan et al., 2003). In addition, the application of Drago-Severson’s (2009) learning-oriented model of leadership, which includes “ways of knowing” (p.39) and the analytic memo method (Center for Evaluation and Research, 2012) were utilized to capture teachers’ experiences. Data were gathered through the use of semi-structured interviews, field notes and teacher researcher final reports in order to address the following research questions:

1. What are the experiences teachers have as they utilize the action research process?
2. How do teachers find that their experiences with action research impact their practice?
3. What connections are there between the action research process and teacher voice?

This chapter describes the methodology, which includes the rationale for the research design, the setting of the study, the participants and their projects, the data collection (interviews, field notes, and the teachers' final reports), the data analysis, and the ethical considerations, trustworthiness, and limitations of the study.

Rationale for Research Design

My study is based on my epistemological stance as a social constructivist and applying the lens of a radical educator (Brookfield & Holst, 2011). Social constructivists construct knowledge (Au, 1998) and make meaning through their own experiences and the contributions from peers (Vygotsky, 1978). Radical educators conduct research in order to improve societal
conditions and utilize the daily realities of societies oppressed as their research agenda (Brookfield & Holst, 2011, p. 171).

As a social constructivist and radical educator, it was appropriate for me to utilize a qualitative approach to this study. Qualitative researchers choose data collection, analysis, and procedures from a wide variety of perspectives such as holistic, personal experience and engagement (Patton, 2002). Qualitative researchers utilize the personal experience and engagement perspective when the inquiry requires direct interaction between the researcher and participants and the phenomenon within the inquiry takes into account the importance of the researcher’s experiences and insights in understanding the phenomenon (Patton, 2002). A holistic perspective calls for the researcher to see the phenomenon as a “complex system, which is more than the sum of its parts” (Patton, 2002, p. 41).

The purpose and characteristics of narrative inquiry, a form of qualitative research, honors my epistemological stance, supports the lens of a radical educator, and provided a design for my study, which was to understand teachers’ experiences with one type of learning – action research – and to investigate the impact of this action research experience on their practice and voice.

Narrative inquiry is the “study of experience as story” (Clandinin, Pushor, Murray- Orr, 2007, p. 22) and provides an opportunity for “teachers and researchers to become storytellers and characters in their own and other’s stories” (Connelly & Clandinin, 1990, p. 2). A narrative inquiry stance is a way for teachers to examine and refine their own practices (Clandinin et al., 2007). Therefore, the narrative inquiry stance provided the framework I needed to tell the stories of the teacher researchers as they conducted and experienced their action research projects.
In order to support this narrative inquiry stance, I utilized the voice-centered relational method, the listening guide (Gilligan et al., 2003). The listening guide includes a sequence of “listenings” each designed to “bring the researcher into relationship” (Gilligan et al., 2003, p. 255) with the participant’s individual and multidimensional voice by listening to the participant’s unique expression of his or her experience within a specific relational context (Gilligan et al., 2003). This analysis supported my epistemological stance as social constructivist and radical educator. One outcome of the action research process is that teachers generate their own knowledge (Au, 1998) about an area of interest and/or concern. This tenet is essential in the field of education for “syntheses of the literature regarding teacher research states that it is discounted and ignored because it does not meet standards for rigor or it is considered to have very little value in terms of generalizations across contexts” (Cochran-Smith, 2005, p. 224). Therefore, my research provided the teacher researchers an opportunity to improve their “societal conditions” and provided a venue to utilize the daily realities of society’s oppressed as my research agenda (Brookfield & Holst, 2011, p. 171).

Clandinin and Connelly state, “narrative inquiry has found its way into the action research process” (as cited in Herr & Anderson, 2015, p. 31). Action research in its most basic form analyzes a practical problem with an aim toward developing a solution to that problem (Creswell, 2008) while utilizing a cycle of plan-act-observe-reflect (Herr & Anderson, 2015, p. xv). In this study, my participants, whom I refer to as teacher researchers, began their story by creating a research plan based on the problem they chose to analyze in their classrooms or schools. Their stories evolved through the course of the research process and were collected through the data collection method process, which included interviews, field notes, and teacher researcher final reports.
The narrative inquiry process also provides an opportunity for participants and researchers to share their “research relationship,” which can lead to a sense of empowerment (Connelly & Clandinin, 1990, p. 4). This collaboration provides an opportunity for the researcher to use an “advocacy and/or participatory” lens in order to actively involve participants as co-researchers in their inquiries (Creswell, 2009, p. 10). It also provides an opportunity for the researcher and participants to influence the dialogue regarding practice and policy (Clandinin et al., 2007). Similarly, the action research process, which seeks to generate new knowledge for implementation, can lead to an increase in expertise and individual growth as well as “organizational and community empowerment” (Herr & Anderson, 2015, p. 1).

A narrative inquiry stance also requires an emergent design, which embraces an understanding and tolerance for changes in the initial research plan (Creswell, 2009). These changes occur when the researcher “enters the field and begins to collect data,” which supports the goal of understanding the problem from the participants’ perspective (Creswell, 2009, p. 176). In addition, an understanding of “temporality, where people and events are always in transition” (Clandinin, et al., 2007, p. 23) is needed as researchers conduct a narrative inquiry. For example, the cyclic process of action research, which includes plan-act-observe-reflect (Herr & Anderson, 2015, p. xv) requires transitions and the tolerance of an emergent design as teacher researchers implement their plans, reflect upon their data collection and apply changes to their research plans. In my case as researcher, I was required to accept the changes in my research plan each time I interacted with the teacher researchers. For example, each data share meeting with the teacher researchers revealed new findings and revelations about their research plans and processes. Also, collecting the stories of each teacher researcher through these data share

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meetings allowed me to construct a core set of interview questions for my second interviews as well as to design specific questions tailored for each teacher researcher.

Each story within a narrative inquiry continues to change due to incoming data and collaboration from participants (Connelly & Clandishn, 1990). This collaboration between researcher and participants is another trait of narrative inquiry (Creswell, 2013) and adds a level of complexity to the inquiry process (Connelly & Clandishn, 1990). Narrative inquirers are intimately involved with their participants and are attentive to “personal and social conditions” of the researcher and participant (Clandinin, et al., 2007, p. 23). Personal conditions include feelings, hope and moral outlooks while social conditions include two elements (Clandinin, et al., 2007). First, the social conditions draw attention to the contexts that form each individual’s environment and second, it pays attention to the relationship between researcher and participant (Clandinin, et al., 2007). The action research process has similar complexities for the topic of inquiry, which is frequently a topic the researcher is personally involved in as well as influenced by the realities of the environment (Herr & Anderson, 2015).

The level of complexity for narrative inquirers also includes the portrayal of the evolving stories of the participants and researcher; it engages all in a “reflective research process,” (Connelly & Clandinin, 1990, p. 9). This reflective process includes participants and the researcher sharing stories, then sharing their meaning of what they heard or a “giving back” (Connelly & Clandinin, 1990, p.9) and in some cases, causing transformation. Ultimately, the final narrative includes a collaboration of participants’ and researcher’s stories (Creswell, 2009), which are “constructed and reconstructed” through this process (Connelly & Clandinin, 1990, p. 5). The action research process also engages participants to reflect at each stage of their research project and it is through this reflection that their story evolves. In addition, the final write-up,
story or presentation of an action research project is a compilation of “constructed and reconstructed” (Connelly & Clandinin, 1990, p. 5) stories that reflect the research process.

**Setting**

A narrative inquirer must consider the circumstances of the place or setting for it impacts the experiences of the researcher through the research process (Clandinin, et al., 2007). In the case of my research, the teacher researchers conducted their research in different settings. Four of the five researchers are public school teachers in Maine; the fifth teacher researcher’s setting is in a public school located in Ohio. Two of the teacher researchers conducted their research in an elementary setting, kindergarten and grade five; one teacher researcher conducted research in a middle school setting, grades six through eight; and two teacher researchers conducted their research at the high school level, grades nine through twelve. The four schools in Maine represented in this narrative inquiry include three rural and one urban school. Likewise, the Ohio school represented in this inquiry is an urban school. The student populations in the Maine schools range from 300 to 500 students, while the school in Ohio has a student body of 300. The staff populations in the Maine schools range from 40 to 100, while the school in Ohio has 40.

**Participants**

I began my search for participants by utilizing purposeful sampling, which calls for cases of study (i.e., people) that are information-rich, and enlightening, and provide useful and insightful manifestations of the phenomenon of interest (Patton, 2002). This purposeful lens also included recruiting participants from the greater Portland, Maine area in order to have face-to-face meetings with them regarding their research. These face-to-face interactions, I believed, would support the development of a “research relationship,” which can lead to a sense of empowerment for researcher and participants (Connelly & Clandinin 1990, p. 4). Using this lens,
I emailed five teachers an overview for teacher researchers (Appendix A) and steps to guide action research (Appendix B). Two of these teachers declined and three decided to join me after having a conversation regarding how the research project might support both their own goals and my research goals. This same recruitment process occurred with each potential teacher researcher.

In order to reach my goal of obtaining five teacher researchers, I also contacted two administrative colleagues and a faculty member from the local university and shared the overview for teacher researchers (Appendix A). One administrator shared the overview for teacher researchers (Appendix A) via email with faculty and did a follow-up conversation with faculty members; no faculty were interested. The other administrator contacted me to have a further conversation about the overview for teacher researchers, and as a result of our conversation, he asked two teachers if they wished to participate. The administrator introduced me to one teacher who was interested in learning more about my research project. I used the same recruitment process as mentioned earlier.

Likewise, I emailed the overview for teacher researchers (Appendix A) to my colleague from the local university, and after a few email exchanges she agreed to contact former teachers who had taken her graduate level class, Teacher Research in Literacy. These teachers had indicated that they would like to continue with an action research project in their school settings. My colleague introduced me to three of these teachers via email and one teacher contacted me to learn more about my research project. Again, the same recruitment process mentioned earlier was used.

As a result of this recruitment process, I was able to ascertain five teachers for my research study. Four of the teachers are from Maine, and teach in urban, and rural districts. The
fifth teacher is from an urban district in Ohio. In addition to representing a variety of settings, these teacher researchers are all female and Caucasian, except for one who identifies herself as Hispanic. Table 3 represents the variety of experiences, and backgrounds of the teacher researchers in this study.

Similarly, the primary role, other roles and degree work beyond a Bachelor’s degree, provided a scope of experiences that contributed to each teacher researcher’s project.

Table 3

*Overview of Participants*

<table>
<thead>
<tr>
<th>Teacher Researcher &amp; School Information</th>
<th>Primary Role</th>
<th>Other Roles</th>
<th>Degree</th>
<th>Age</th>
<th>Number of Years Teaching</th>
<th>Number of Years at Current School</th>
</tr>
</thead>
<tbody>
<tr>
<td>GV Rural Maine Population: Staff – 85 Students – 500</td>
<td>Teaches 1 wellness class &amp; 2 Early childhood classes</td>
<td>Class advisor</td>
<td>Masters in Literacy + 30</td>
<td>48</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Stella Rural Maine Population: Staff – 100 Students – 500</td>
<td>RTI (Response to Intervention) Coordinator/ Instructional Strategist Senior English Teacher Coordinator, Learning Center</td>
<td>Member of Staff PD committee Teaching online special education law class, Spring 2016</td>
<td>Masters in Education Certificate in Advanced Graduate Study (CAGS) in Leadership</td>
<td>45</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>MLK Rural Maine Population: Staff – 40 Students – 300</td>
<td>5th grade teacher</td>
<td>Science Resource Partner</td>
<td>Working towards Masters - Technology Integration</td>
<td>30</td>
<td>8</td>
<td>7</td>
</tr>
</tbody>
</table>
The teacher researchers completed a research project by utilizing an action research template to guide their inquiry. In order to honor the teacher researcher’s learning style, experiences and success for their research, I provided template options to guide their research process. The teacher researchers could choose from among the following options: utilizing the template *Steps for Action Research* (Appendix B), utilizing the template *Teacher Research Planning Form* (Appendix C), utilizing a combination of the two templates, or creating a template that contained a minimum of all the components listed in the *Overview for Teacher Researchers* (Appendix A). These steps included creating a research plan, developing a research question(s), data collection methods, analysis, and a way to share results (Rust & Clark, 2003).

One teacher researcher created a template, three utilized the teacher research planning form...
Data share meetings (Murphy, 2013 b) were another way to provide support to the teachers in their research journey as well as to continue to cultivate a “research relationship” (Connelly & Clandinin, 1990, p.4). These meetings were scheduled as one-on-one meetings with the teacher researcher and me and included the teacher researcher sharing their data, any reflections concerning the data, any changes to their research plan and a general check in about the process. In order to provide another level of support and affirmation for their research, I organized an optional collaborative call for the teacher researchers, which I believed would both affirm their own research process, and provide new ideas and insights for their research project. I emailed each teacher separately and included the reason for the call and details, such as the fact that their participation in the call would waive their anonymity with each other. Four of the five teachers agreed to participate in the collaborative call.

**Teacher Researcher Projects**

Each teacher researcher’s project is depicted below and includes components such as the setting, research question(s) and forms of data collection (Murphy, 2013 a). The projects spanned a variety of topics, which included dual enrollment classes at the high school level, conversational and other techniques in an instructional coaching relationship, student engagement and its connection to a new science program and argument writing, positive phone calls to parents and strategies teachers use to increase student agency.

GV’s study was conducted in a rural high school in Maine. Her research question, *Can high school students successfully complete college level courses?* guided her study. This project also included five sub-questions and one longitudinal question. One of the sub-questions was, *How does enrollment in such courses affect students’ college and career aspirations?* The data
collected for this project included interviews with adults and students, surveys of students and adults, field notes and student grades.

Stella’s study was conducted in a rural high school in Maine. Her research question, *How can the use of effective conversational techniques in a peer coaching relationship build a teacher’s capacity for success, thereby increasing student performance on identified learning targets?* guided her study. This project also included two sub-questions, one of which asked, *How does a coach determine which facilitative coaching stance to employ to best elicit desired results?* The data collected for this project included teacher surveys, journaling about the type of questions asked, and responses given in a coaching session in addition to recording student data results.

MLK’s study was conducted in an elementary school in rural Maine. Her research question, *How does STEM Scopes (science program) support student engagement and improve argument writing?* guided her study. Argument writing is a process whereby students participate “in the language of science, through talking and writing; students make sense of ideas and explain phenomena as they negotiate coherence among claims and evidence” (Zembal-Saul, McNeill & Hershberger, 2012, p. 6). The data collected for this project included pre and post surveys regarding science instruction, recording student C-E-R (Claim + Evidence + Reasoning) responses, and recording reflections three times a week.

JR’s study was conducted in an elementary school in an urban center of Ohio. JR’s research question, *Will making positive phone calls home to parents of students in my class improve participation/communication/engagement among parents?* guided her study. The data collected for this project included keeping a phone log, having a sign-up sheet for parent/teacher conferences and creating a tracking sheet for the communication homework folder.
Casey’s study was conducted in a middle school in an urban center of Maine. Casey’s research question, *What strategies are teachers currently using to increase student agency (learner voice and choice)?* guided her study. The project also included one sub-question, *What strategies would teachers like to be using to increase student agency?* The data collected for this project included interviews of students and staff, recorded coaching notes and written reflections.

**Data Collection**

Narrative inquirers utilize data collection methods that support participants’ and researchers’ stories throughout the course of the inquiry. Individuals both live their stories in an “ongoing experiential text and tell their stories in words as they reflect upon life and explain themselves to others” (Connelly & Clandinin, 1990, p. 4). These narrative inquiry elements provided the framework for my data collection methods, which included three sources of data: interviews with each teacher researcher, field notes from the interactions between the teacher researchers and me, and final reports from each teacher researcher. Table 4 depicts the connections between the research questions and data collection methods.

Table 4

*Data Collection Methods and Research Questions*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the experiences teachers have as they utilize the action research process?</td>
<td>Teacher researcher final reports</td>
</tr>
<tr>
<td>2. How do teachers find that their experiences with action research impact their practice?</td>
<td>Teacher researcher final reports and Interviews</td>
</tr>
<tr>
<td>3. What connections are there between the action research process and teacher voice?</td>
<td>Interviews</td>
</tr>
</tbody>
</table>
The alignment of each research question to a particular data collection method does not preclude data from being used to answer other research questions. For example, it was my intent to use the field notes to provide supporting evidence for research question two; however this did not occur. Therefore, research question two was supported by evidence from the other data collection methods, which included interviews and final research reports.

Through the field note analysis process, I discovered that one of the purposes for field notes is to make meaning of an aspect of a study (Cohen & Crabtree, 2006). The aspect of my study was to use the data share meetings and email exchanges as a means to support each teacher researcher’s action research process, which helped to create relationships with each teacher researcher.

**Interviews**

Interviews are a tool for narrative inquiry and become an element of the evolving narrative story (Connelly & Clandinin, 1990). In order to support the narrative, interviews are viewed as a form of discourse between two individuals whose responses are stories rather than answers to questions (Mishler, 1986). This perspective empowers the respondent to become an informant and collaborator in the interview experience (Misher, 1986). It is this collaboration that also actively engages the construction of meaning during the interview experience (Silverman, 2011). In addition, Byrne (as cited in Silverman, 2011) indicates that interviews are attractive for qualitative researchers who seek to capture voices of the suppressed or ignored. These elements and perspectives shaped both interviews with the teacher researchers.

The first interviews began the conversations regarding how the teacher researchers learned and what they knew about action research and teacher voice (Appendix D). The second interviews provided space for the teachers to reflect on their action research experiences, and any
opportunities to use their voice. The questions for the second interview were crafted as the data collection cycle ended for the teacher researchers and included a specific question relating to their final reports and/or reflecting the field notes (Appendix E). For example, MLK’s question was inspired by a common theme found in my field notes and in her final report:

I have been intrigued to hear you talk about how teachers believe they do not have time to teach science. Through this action research process, what evidence, if any, do you have to confront this notion of ‘no time to teach science?’

Also, how could student voice be part of confronting the notion of ‘no time to teach science?’

Both interviews averaged an hour to 45 minutes and were semi-structured. This format allowed for questions to be prepared in advance and provided an opportunity for the teachers to openly share their views and ideas (Cohen & Crabtree, 2006). Also, both sets of interview questions were emailed to each teacher researcher prior to our scheduled interview in order to accommodate each individual’s learning style and comfort. Each interview was taped and transcribed to ensure accuracy of each teacher researcher’s story (Patton, 2002).

Field Notes

In general, field notes provide a process for the researcher to record observations of a particular context or social situation and make meaning of an aspect of the study (Cohen & Crabtree, 2006). In addition, field notes can be used as a tool for narrative inquiry and provide an opportunity for the researcher to reconstruct the events that occurred in a given situation (Connelly & Clandinim, 1990). In the case of this study, the situations were the interactions between the teacher researchers and me in the form of data share meetings (Murphy, 2013 b) and
email exchanges. These interactions between the teacher researchers and me began when each teacher joined my research project and concluded with our final interaction.

In these field notes, researchers “actively record” their insights based on their interpretations of the situation (Connelly & Clandinin, 1990, p.5). I utilized the analytic memo method (Center for Evaluation and Research, 2012) to actively record my insights prior to and after each interaction with the teacher researchers. The analytic memo method is a qualitative method, which allows a researcher to step back and write about the process of collecting data as well as what the researcher is seeing or not seeing in the data (Center for Evaluation and Research, 2012). Utilizing the analytic memo method supported my narrative inquiry stance for it required me to be alert for the untold stories (Connelly & Clandinin, 1990).

**Teacher Researcher Final Report**

As noted, teachers sometimes use a narrative inquiry stance to examine and refine their own practices (Clandinin, et al., 2007). The teacher researchers utilized a narrative stance through their final reports. Each teacher researcher wrote a report, which compiled their action research process, reflections and findings. Each report required these sections: the context of the research; the research question(s); the literature review; the data collected; the analysis of the data; and the findings, reflections and conclusions (Appendix F). Similar to the process used when planning their inquiry, the teacher researchers were provided with three sample action research reports to inform their choice in formatting their final reports (Appendices G, H, I).

**Data Analysis**

An inductive mode of analysis is one way to conduct a narrative inquiry where the data tells its own story (Connelly & Clandinin, 1990). At the same time, patterns and themes are constructed from the “bottom up” (Creswell, 2009, p. 175) through the inductive data analysis
process where they evolve into “abstract units of information” (Creswell, 2009, p. 175). These tenets were applied in the analysis of each data collection method.

**Interviews**

The listening guide (Gilligan et al., 2003) was developed to provide social scientists with a way to interpret narratives. It includes a sequence of “listenings” each designed to “bring the researcher into relationship” (Gilligan et al., 2003, p. 255) with the participants’ individual and multidimensional voice by listening to the participants’ unique expression of their experience within a specific relational context (Gilligan et al., 2003). The listening guide includes four steps, which were utilized for each interview. The first step involved writing the plot described by the teacher researchers, and then reacting to it. Essential questions such as *What are the participant stories?* and *What are the societal and cultural contexts of the stories?* (Gilligan et al., 2003) were used to develop the plot. Creating I-poems was the second step, which required the researcher to listen for the participant’s first person voice as well as to hear how the participant speaks about herself. Every first-person “I,” the verb that followed, and any important accompanying words were color-coded within the interview transcript (Gilligan et al., 2003). Next, each color-coded statement was cut and pasted into a separate Word document, retaining their order within the transcript. Then each statement was placed on a separate line in a similar fashion to the phrasing one might find in a poem (Gilligan et al., 2003).

The third step required the researcher to listen for contrapuntal or different voices throughout the interview and how they related to the research question (Gilligan et al., 2003). The interviews were constructed to provide data for research question three, *What connections are there between the action research process and teacher voice?*
Choosing contrapuntal voices begins with specifying the voices researchers will listen for and determining how these voices will be known when heard (Gilligan et al., 2003). I chose to listen for voices that reflected empowerment and confidence and their opposites—uncertainty and powerless. These choices were based on Allen’s (2004) two defining conditions for teacher voice. The first condition includes a belief by teachers that the audience (such as the principal, superintendent, school board) gives fair and respectful consideration to their ideas and suggestions during the decision-making process (Allen, 2004). The second condition ensures the audience has influence in the decision-making process in order for the teachers’ input to become a reality (Allen, 2004). I constructed a table (5) for each teacher researcher with the contrapuntal voices listed and chose statements from the I poems and plot that supported each voice.

Table 5

*Casey’s First Interview*

<table>
<thead>
<tr>
<th>Voices</th>
<th>I Poems</th>
<th>Plot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td>I can help, I’ve worked, I’m in the trenches, I try to advocate for them</td>
<td>it is a natural way to learn, referring to action research</td>
</tr>
<tr>
<td></td>
<td>I feel really strongly</td>
<td>I’ve been in a lot of study groups over the years … coach with coaches, and literacy specialist groups where we had a shared text … we would come up with questions that we wanted to explore as specialists</td>
</tr>
<tr>
<td></td>
<td>I feel (repeated 3X)</td>
<td>I kind of feel like I’m very self-reflective as a practitioner</td>
</tr>
<tr>
<td>Confidence</td>
<td>I like to jump right in, I like to be prepared</td>
<td>Casey is describing how she learns in all contexts; doing research which she calls “digging in” and collaborating with others – she describes this as “watching and learning from other people.”</td>
</tr>
<tr>
<td></td>
<td>I’ll kind of do my own research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel like I can be that voice for teachers</td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>I think we are doing some of that</td>
<td>I feel like in my last district, they knew I was supporting the teachers but they weren’t seeking … my</td>
</tr>
<tr>
<td></td>
<td>I also think, like, if you’re respected</td>
<td></td>
</tr>
</tbody>
</table>
Creating a final essay is the fourth step, which encompassed notes from each step in an effort to learn about the participant in relation to the research question (Gilligan et al., 2003).

The listening guide analysis can be utilized with several interviews in order to capture similarities, differences and evolving themes (Gilligan et al., 2003). In order to capture the teacher researchers’ stories and their evolving voices, I made a final analysis of the four steps utilized for each interview. This analysis is depicted in a data summary table (Bloomberg & Volpe, 2012) and provided some supporting evidence for my third research question, *What connections are there between the action research process and teacher voice?*

Table 6

*Final Analysis, Interview*

<table>
<thead>
<tr>
<th>Teacher researcher</th>
<th>Plot</th>
<th>1 Poems</th>
<th>Contrapuntal voices</th>
<th>Essay statements/phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powerless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Field Notes**

The field notes were analyzed by utilizing the analytic memo method (Center for Evaluation and Research, 2012) as a means to create data summary charts for each teacher researcher. Each chart represented a segment of the field notes; the data share meetings (Murphy, 2013 b) and the email exchanges. Table 7 depicts the information gathered during each of these exchanges.
Table 7
*Field Notes*

Data Share Meetings (Murphy, 2013 b)

<table>
<thead>
<tr>
<th>TR</th>
<th>Frequency</th>
<th>Dates</th>
<th>Data collected by TR</th>
<th>Reflection of TR</th>
<th>Changes made to research project</th>
<th>Other</th>
<th>My takeaways</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Emails

<table>
<thead>
<tr>
<th>TR</th>
<th>Frequency</th>
<th>Dates</th>
<th>Phrases/ Statements</th>
<th>Other</th>
<th>My takeaways</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to maintain the “research relationship” (Connelly & Clandinin, 1990, p.4), data share meetings (Murphy, 2013 b) were established with each teacher researcher. Keeping in mind the time each teacher researcher had devoted to this project, I ensured each call was meaningful and supportive by utilizing the categories depicted in table 7, data share meetings (Murphy, 2013 b). Likewise, email exchanges were kept to a minimum and utilized as reminders of upcoming data share meetings (Murphy, 2013 b), to request information or to respond to a request from a teacher researcher. The phrases and statements depicted in table 7 were utilized as evidence to support each teacher researcher’s profile and as part of chapter five’s discussion and recommendations.

**Teacher Researcher Final Reports**

Likewise, the teacher researcher final reports were analyzed by utilizing the analytic memo method (Center for Evaluation and Research, 2012) as a means to create a data summary chart for each teacher researcher. Table 8 depicts the sections required in the final reports.
These sections were required as part of the final report formats for they supported the action research cycle, plan-act-observe-reflect (Herr & Anderson, 2015). In addition, I chose to listen for two voices in each report to hear how each teacher researcher spoke about herself as learner and practitioner. The researcher selected learner voice statements that reflected the teacher researchers’ learning experiences. Likewise, the researcher selected practitioner voice statements that reflected the teacher researchers’ experiences with pedagogy and classroom practices. In addition, an analysis of each teacher researcher chart yielded themes or patterns, which were applied to research question one, *What are the experiences teachers have as they utilize the action research process?*

**Culminating all Data Points**

All data summary charts (interview, field notes and final reports) were utilized to identify the “ways of knowing” for each teacher researcher (Drago-Severson’s, 2009, p. 39). This final analysis of the data is presented in chapter four under teacher researcher profiles. Drago-Severson’s “ways of knowing” (Drago-Severson, 2009, p. 39) are based on Kegan’s constructive developmental theory and include the following: the instrumental knower, the socializing knower, the self-authoring knower, and the self-transforming knower.

Each of the data analysis methods provided an opportunity for the data to tell its own story (Connelly & Clandinin, 1990). By applying Drago-Severson’s (2009) “ways of knowing” (p.39) to this process, I created a venue to tell my story, which was to begin to understand and
practice how to identify teachers’ ways of knowing in order to support and challenge their learning and development. In addition, once a teacher’s ways of knowing are identified the pillars of practice (Drago-Severson, 2009) can be applied to support teacher learning and development.

Although the intent of Drago-Severson’s “ways of knowing” (2009, p. 39) is to illustrate an educator’s experiences over time, I applied the ways of knowing to the teacher researcher as a baseline to understand what they learned and how they made sense of their experiences throughout their action research journey. Each profile was shared with the teacher researchers in order to provide them an opportunity to comment on how the profile reflected or did not reflect their experiences throughout the action research project.

**Ethical Considerations, Trustworthiness and Limitations**

Utilizing a narrative inquiry stance required me to have a “particular kind of wakefulness” (Clandinin et al., 2007, p. 21), which included ethical considerations, trustworthiness, limitations and action research aspects of this study. For example, I have a biased position in this study for I believe action research can have a positive impact on teacher practices and empower teachers to use their voice to learn and grow. This belief is based on my past experiences, which were in my pilot study and with two former teacher researchers. In both instances, I experienced the positive impact action research played in their learning, classroom practices and interaction with colleagues.

In this study, every effort was made to follow ethical practice in all phases of the study. I utilized member checking, which is a process that invites participants to check the text for accuracy, to ensure complete descriptions are included, and to ascertain that explanations are
correct (Creswell, 2008). In chapter four, the teacher researchers were asked to review and comment on their profiles as described in the teacher researcher profile section.

Although there was a potential for the teacher researchers to experience interviewer effect (Denscombe, 2003) – a reticence to report negative feelings – this did not occur. This effect states participants may not report negative findings due to the relationship they have with the researcher (Denscombe, 2003). Each final report and second interview contained candid responses such as this excerpt from GV’s second interview:

One thing that I learned is that I am not savvy with statistics … all of that kind of stuff is very overwhelming to me, and that I find myself going toward the summaries and the findings and whatnot in articles.

Trustworthiness of the study is integral during the research process and it can be supported through reliability, validity and believability. Reliability denotes the idea that a study can be repeated, while validity pertains to the data being collected regarding the topic and whether or not the findings truly represent the phenomenon being measured (Colorado State University Writing Studio, 2015). In the qualitative realm, reliability and validity are hard to achieve; therefore, qualitative researchers strive for believability or credibility, which asks a question such as, how probable are the findings? (Trochim, 2006). Guba and Lincoln (as cited in Connelly & Clandinin, 1990, p. 7) take this one step further and use the term “transferability.” In a narrative inquiry, this transferability can be used as an “invitation to participate and live vicariously by others” (Connelly & Clandinin, 1990, p. 8).

Keeping these factors in mind, my study sought to support transferability in the following ways. First, teachers became researchers and followed steps, which determined, examined, and solved an important issue in their classrooms and schools. Second, the very nature of action
research requires teacher researchers to share their findings with colleagues and other audiences such as parents and community members. Regardless, conventional researchers worry about objectivity and control while action researchers concern themselves with “relevance, social change and validity tests in action by the most at-risk stakeholders” (Brydon-Miller, Greenwood, & Maguire, 2003, p. 25).

Triangulation was used in order to support the trustworthiness of the study. This technique involves utilizing multiple sources of data collection. In this study, data collection methods such as interviews and final reports for each teacher researcher were used. In addition, field notes were created to reflect each interaction between me, and the teacher researchers. These interactions included data share meetings, emails, and phone calls.

Each research study has limitations and this study revealed several. The sample was small and with one exception, all of the teacher researchers were Caucasian. Also, all the teacher researchers were women. These limitations, I believe, will have minimal impact on the overall purpose of this study, which was to understand teachers’ experiences with one type of learning experience–action research–and to investigate the impact of this action research experience on their practice and voice.

**Summary**

This chapter described the research design and its rationale, analysis techniques and methodology for my study. The design allowed me to explore the purpose of the study, which is to understand teachers’ experiences with one type of learning experience–action research–and to investigate the impact of this action research experience on their practice and voice. Multiple sources of data, which included semi-structured interviews, field notes and teacher researcher final reports, were collected to analyze the study.
The analysis included creating data summary charts (Bloomberg & Volpe, 2012) for the field notes and teacher researcher final reports. These charts captured evidence to support each teacher researcher’s “ways of knowing (Drago-Severson, 2009, p. 39). In addition, the interviews were analyzed by using the four steps of the listening guide (Gilligan et al., 2003), a voice-centered approach. Also, elements such as the setting and details about the participants and their projects were also discussed.

This chapter also described the methodology for my study, which included research design, data collection and analysis, ethical considerations, trustworthiness and limitations. The next chapter presents the study’s findings.
Chapter 4: Analysis

Chapter four depicts my analysis of the study’s data collection methods and its connection to each of my research questions. Supporting evidence to answer each research question is included. The data collection methods included the teacher researcher’s final research report, my field notes, and interviews. Also, a profile for each teacher researcher was created that synthesized the analysis of the data collection methods. This synthesis included identifying the teacher researcher’s “ways of knowing” (Drago-Severson’s, 2009, p. 39) throughout their action research journey.

Although the intent was to align the research questions with a data collection method, this did not occur. During the analysis process of my field notes, I realized that they were for me, the researcher, to make meaning of an aspect of my study. Therefore, I did not find evidence in the field notes to support research question two, *How do teachers find that their experiences with action research impact their practice?* However, I did find evidence related to this question through the analysis of the other data collection methods.

**Final Research Reports**

The final research report analysis consisted of how teachers answered their research question(s) and what themes surfaced after several readings of their final reports. In addition, statements and phrases within each report were examined to support the learner and practitioner voices within the report. This analysis provided some evidence to support research question one, what are the experiences teachers have as they utilize the action research process?

**Field Notes**

In general, field notes provide a process for a researcher to record observations of a particular context or social situation and make meaning of an aspect of the study (Cohen &
As I began to analyze the first set of field notes for one of my teacher researchers, I realized that the field notes allowed me to make meaning of an aspect of my study. The aspect in my study was to use the data share meetings and email exchanges as a means to support the teacher researcher’s action research process; this helped me to create relationships with each teacher researcher. These relationships led to many opportunities for me to learn from the teacher researchers – experts in their field of research. These relationships also provided inspiration and validation for me as researcher in knowing that the action research process could be one way for teacher researchers to share their voices about classroom and school-wide practices.

**Interviews**

Interviews were conducted with five, teacher researchers. The interview analysis consisted of using the four steps in the voice-centered relational method (Gilligan et al., 2003). The fourth step requires a final analysis or essay, which synthesizes steps one – three. It also requires the researchers to ask what has been learned about the interviewee in relation to the research question. The interview questions used in this study were designed to provide some of the supporting evidence for my third research question, what connections are there between the action research process and teacher voice?

In addition, the listening guide analysis can be utilized with several interviews in order to capture similarities, differences and evolving themes (Gilligan et al., 2003). Since my study included two interviews for each teacher researcher, I conducted a comparison of each final essay.
Research Questions

Each research question is organized by themes. In addition, my analyses included teachers’ experiences and connections that did not align with the emerging themes; I refer to these as outliers. I believe these outliers are important to share, that they contributed evidence for each research question and may emerge as themes in a larger study. Table 9 provides a summary of evidence for each research question.

Table 9
Summary of Research Evidence

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>What are the experiences teachers have as they utilize the action research process?</th>
<th>How do teachers find that their experiences with action research impact their practice?</th>
<th>What connections are there between the action research process and teacher voice?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Themes</td>
<td>Learners</td>
<td>Communities of Practice</td>
<td>Decision-Making Processes – 2 experiences</td>
</tr>
<tr>
<td></td>
<td>Context Matters</td>
<td>Action Research &amp; School Structures</td>
<td>1. Teacher Expertise</td>
</tr>
<tr>
<td></td>
<td>Action Research Leads to Action</td>
<td>Empowering Students</td>
<td>2. Top-Down</td>
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Research Question 1

Based on the analyses of interviews and final reports, I identified three experiences, which provided support for research question one, *What are the experiences teachers have as they utilize the action research process?* These experiences were: how they identified themselves as learners, context matters, and action research leads to action. In addition, the outlier for this
research question was that two of the teacher researchers identified themselves as action researchers.

Learners. The teacher researchers experienced an awareness of their learning process throughout their action research project. For example, three of the teacher researchers’ learning processes resembled some or all of the aspects of the action research cycle – planning, acting, observing and reflecting (Herr & Anderson, 2015). MLK shared, “As a learner and also as a teacher, turning that (Do-Talk-Write) process into my teaching practice.” The Do provides hands-on learning experiences, the Talk facilitates a productive talk session around a concept, and the Write provides the students with an opportunity to write about their thinking. Casey found that her learning was from the perspective of coach and student where “… Doing research or digging in as well as collaborating with others.”

JR described herself as a multisensory learner where it is important to set a goal, make a plan that can be revaluated and to share this plan with people. She explained, “The action research process helped guide me to achieve that goal, and it kind of served as a map to achieve that.”

Two of the teacher researchers experienced a shift in their learning process as a result of their action research experiences. For example, Stella described her learning process as first thinking on her own, and then sharing ideas with people. She reported this collaborative process as, “how you involve people and give them ownership and voice.” At the end of her project, Stella reflected, “So I learned that I must have a clear sense of purpose, and that it has to be organized and sequential.”

GV began her project as a confident learner. She learned the content in order to teach it well, created anchors for learning and collaborated with colleagues. At the conclusion of this
action research project, GV’s learning process had changed dramatically to reflect insecurity, conflict and justification:

I learned that I am not savvy with statistics… it’s overwhelming… I feel badly … because I’m a literacy specialist and I tell kids that there is often important information in those graphs … So that’s kind of how I rationalize it away.

Context matters. The second experience the teacher researchers encountered as a result of their action research project was the impact of the context on their project. For example, all of the teacher researchers identified an aspect of the context as challenging in conducting their action research projects. These aspects included structural supports, collegial and administrator perspectives, and parental involvement. MLK identified few structural supports in conducting her action research project. “In my mind there aren’t any (supports for action research), if you want to do it, you do it on your own …”

Two of the teacher researchers, GV and Casey, identified collegial perspectives as a contextual element that challenged their projects. For example, GV shared this statement made by a colleague, “She was like, ‘Well, why are you doing this? We know dual enrollment is a good thing to do, why are you going to waste your time doing this research project?’ Her attitude was a challenge … I had to get some of my information from her.” Likewise, Casey described her colleagues as feeling overwhelmed where “Teachers are barely staying one step ahead of the kiddos.” She also shared “We’re still seeing at all three grade levels, some level of apathy, even with increased voice and choice … and it might not be the trust, it might be ‘I’m going to do my own thing.’”

Stella identified administrative perspectives as a contextual element that both supported and challenged action research. For example, she shared, “I think that anybody who wants to do
something like this (action research) is going to be supported … action research is a little outside of the box … I’ve been 100% supported.” She also shared that administrators hold true to the essential principles of the school, one being collaboration. Collaboration is associated with excellence and “Some teachers don’t feel that they measure up to that.”

JR identified parental involvement as a contextual element that challenged her action research project, “...I think the challenge comes with the track record of parental involvement because they have had bad experiences … And I think we still have more work to do in that area [public perception].”

**Action research leads to action.** The third experience the teacher researchers had was drawing conclusions about their research projects. For example, two of the teacher researchers generated next steps as a result of their projects. Stella generated three action steps, which included seeing if results remain consistent over a full coaching cycle, expanding strategies for teachers at all stages in the continuum of professional development and awareness (Hall and Simeral, 2008), and determining whether the assertion that particular strategies should be employed with coaches at different developmental stages is accurate (Hall & Simeral, 2008).

Based on the data collected in her action research project, Casey outlined nine ideas to implement. Casey shared, “The data gathered and analyzed in this action research project provides me with invaluable information to use moving forward … next steps in supporting staff on our journey toward a personalized, proficiency-based learning system.”

Other conclusions based on their research projects spanned the following topics: investigating Career Technical education, the impact of positive parent calls on student behavior and relationships, the impact of STEMScopes and argument writing in science, and findings about student voice in a Proficiency Based Learning System. GV concluded, “It would be
interesting to investigate what other Career Technical Education (CTE) oriented opportunities we could offer to students through dual enrollment offerings.” JR shared “I was able to understand that taking the time to make positive phone calls home to the parents of students in my class could have a positive impact on student behavior.” JR also mentioned that the phone calls allowed her to establish relationships with the parents of her students and learn about their children’s lives. She shared the following example: “I learned that three of my male students were in the custody of their fathers and their mothers were not in their lives.”

MLK shared that her findings indicated that implementing the STEMScopes and argument-writing lessons increased her students’ engagement within the science lessons as well as improving their writing skills. Within these findings were two themes: what is great science, and the impact of the Do-Talk-Writing process on argument writing.

Casey also had additional conclusions regarding her project, which included insights about the staff interview data. For example, the interview and survey data indicated that the staff had “made steady progress toward their goal of creating a student-centered, proficiency-based learning system.” Many of the strategies that were part of our initial training with our Reinventing Schools Coach are currently being used in classrooms.” At the same time, Casey reflected, “Noticeably absent from most conversations was the topic of student voice in the classroom … we spent most of 2014-15 using a process that actively included students in developing our shared vision for learning.”

**Self-identification as action researchers.** The outlier for this research question was the self-identification by two of the teacher researchers as action researchers. MLK and GV had both had positive experiences with past action research practices. For example, MLK’s previous action research project impacted her practice by “ingraining” the way she teaches and handles
boys differently than girls. For GV, her previous action research project helped to change the culture in a way that quantified some of the data collected, which helped the teachers to see “Ok, this isn’t so bad, and you know we can do this and ok, I do have time for that.”

These positive experiences continued with the current action research projects. For example, MLK felt affirmed for her data collection methods by an outside expert who shared, “I think this is the most valuable data that we’ve been given.” MLK was also inspired by the findings of her project and eager to share the process and results with colleagues. She shared, “I really want them to see this as a really easy way to find their own data.”

Similarly, GV’s findings were supportive of her school’s guidance department efforts regarding dual enrollment, which was to dispel some of the myths concerning dual enrollment and provide “a variety of opportunities for a variety of students.” However, GV also shared that if she only taught her content area and “didn’t do anything else, like being class advisor, and all those kinds of things,” she would have time within “network meeting time to conduct action research.”

**Research Question 2**

Through my analyses, I identified three experiences that impacted the teacher researchers’ practice during the action research process. These experiences included: identifying elements within a community of practice, identifying the action research process in established school structures, and empowering students. The outlier for this research question was that one of the teacher researchers experienced the impact of educating parents on her practice. These experiences provided evidence for research question two, *How do teachers find that their experiences with action research impact their practice?*
Communities of practice. Learning is at the heart of a community of practice (Wenger & Trayner, 2011). Communities of practice are comprised of three components: the domain, shared practices and the community (Wenger & Trayner, 2011). The teachers experienced shared practices and community during their research, which impacted their practice.

Shared practices are developed when members share a repertoire of resources (Wenger & Trayner, 2011). These resources are developed over time and through sustained interaction amongst the members (Wenger & Trayner, 2011). Two of the teacher researchers experienced variations of shared practices. For example, MLK felt inspired by her action research project and wondered how she could show her colleagues “that a huge piece of great science instruction is writing about science. She also encouraged “teachers who think they don’t have time to teach science” to explore her results.

Casey affirmed that knowing the content is important and that some of the things she knows to be good practice were “echoed by teachers” in her conversations. One of these practices was an analogy Casey made, “I always go back to the literacy, getting the right book into the readers hand for that hook…to be intentional about the right type of support for teachers.”

The community provides members with intentional opportunities to engage in joint activities and discussions to support and challenge each other (Wenger & Trayner, 2011). In addition, these intentional opportunities build relationships and offer members the space to interact and learn together (Wenger & Trayner, 2011). Two of the teacher researchers experienced variations of community. For example, MLK talked about the “beauty of collaboration” and how her colleague has the greatest ideas, which she “steals from him.” She also talked about her experience with professional learning communities in her graduate classes.
and how it brought back memories of the time she experienced a Olympics project where she worked with the PE, special education and art teachers. “It was such a cool collaboration.”

Stella learned the value of community by establishing coaching relationships based upon trust, confidentiality, empathy and compassion. She reflected “teachers know the solutions to their problems if they dig deep enough, and it is important (although time intensive) to guide them to come to their own conclusions rather than prescribe.”

**Action research and school structures.** Two of the teacher researchers identified the action research process in established school structures such as goal setting, implementing new initiatives and having the space to conduct action research. This awareness impacted their practice in the following ways: Stella related the action research process to the goal setting process where “all faculty need to develop professional development goals and student learning goals.” She remarked “So in some ways that really is action research.”

GV confirmed that teacher research is a positive practice for her and colleagues and that she likes doing teacher research. “There are so many naysayers, whatever initiative comes around colleagues always complain about it…if teachers can understand why it needs to be done, then you build capacity and more practices get changed.” GV also reflected that she could see structurally how it could happen in a space called network meeting time. “I would have time within network meeting time (common planning time) to be able to say, ‘Hey, let’s kind of investigate this a little more.’

**Empowering students.** As a result of their action research projects, three teacher researchers experienced empowering students, which impacted their practice in several ways. For example, GV shared, “Dual enrollment courses appear to positively affect student
engagement” and “by simply increasing awareness of jobs available in the career and technical fields, this may increase student aspirations.”

JR made the connection between formative assessment processes and empowering her students to play a more active role in their learning process; “we adopted the formative instructional practices…part of that is the students understanding their learning targets…anybody should be able to walk into my class and ask ‘What are you learning?’ They should be able to answer that question.”

Casey experienced through her conversations with teachers during her project that “giving kids more choice is essentially that teachers are honoring student voice as well.” She also added, “But I’m not sure the teachers are seeing it that way.” This uncertainty expressed by teachers affirmed for Casey the need to continue to create structures and opportunities as an instructional coach to “keep having those conversations.”

Educating parents. The outlier for this research question was one teacher researcher’s experience with educating parents. The outcome of JR’s project impacted her practice in a variety of ways. She concluded that, “many of the parents need to be educated in regard to the responsibility of being a parent of a school aged child and need to receive positive reinforcement and told they are doing a good job.”

In order to support parents in their role as “first educator” JR learned that utilizing different types of communication was essential. For example, she used videos to reinforce lessons and practices saying “I thought it would be a good way to…get parents a little bit more knowledge on what they have to do, in a short amount of time … they’ll be interested in how they can help their kids.” JR also utilized text messages. The text messages evolved because “making positive phone calls home became difficult to plan and was time consuming.” The text
messaging method also evolved to include pictures of students and their accomplishments. Each form of communication served to support and inform parents of their role in their child’s educational journey. JR reflected “I will continue to implement positive communications with parents in an effort to improve student achievement.”

**Research Question 3**

Based on my analyses, I identified one connection between the action research process and teacher voice; this connection was the decision-making processes utilized in the schools of the teacher researchers. Within these processes, teachers had two experiences: included as experts and being replaced by top-down decision-makers. The outlier for this research question was the connections two of the teacher researchers made regarding teacher voice and its relationship to students and parents. These connections provided evidence for research question three, *What connections are there between the action research process and teacher voice?*

**Teacher expertise.** Being involved in the decision-making processes within their schools provided the teacher researchers opportunities to share their expertise, which supported teacher voice. These opportunities included sharing knowledge and advocating for teacher voice, creating schedules, planning and facilitating professional development opportunities, and participating on decision-making teams.

**Sharing knowledge and advocating.** In their roles as instructional coaches, Casey and Stella share their knowledge with their colleagues and use their role as advocates for teacher voice. For example, in learning about the practice of teaching supports, Stella reflected on her experience and offered this advice: “to refine your own ideas, that’s how you find your voice, that’s how you share your own learning or your own enthusiasm about learning with your colleagues and with your students.” Casey, on the other hand, views her coaching role as an
advocate asserting, “It’s one of the reasons that I have stayed working as a coach. I feel like I can be that voice for teachers.”

MLK shared her knowledge in the form of a plea designed, “to get other people to do this (action research). She offered, “I guess that’s where the voice ties into this, this is what I’ve done, this is how successful it is now you should try it too.”

JR acknowledged that teacher knowledge is essential in many cases and stated that “going to the teachers and asking them what they think about certain things” is important. She added, “There are some things where you feel the teacher might have the most knowledge about that particular thing, whatever it is, and teachers should have a voice there.” Were these tenets to be applied, JR believes “they would take ownership in it.”

**Schedules.** Creating schedules is another way one of the teacher researchers shared her expertise. For example, MLK had the opportunity to create schedules, which she described as a freedom she shared with colleagues. This freedom is characterized as having the opportunity as professionals to allocate the time needed to ensure academic and social/emotional goals are met. For example, MLK shared “There is no rule in our school that says I have to teach math for 90 minutes.” MLK commented on creating schedules saying, “There is a lot of choice and voice in how you structure your day with your team, and our team in particular has chosen to protect that time (science).”

**Professional development.** Two of the teacher researchers shared their expertise in having the opportunity to design and facilitate professional development opportunities in their schools. Casey shared the importance of collecting feedback from teachers to ensure their voices are heard. She mentioned that she received “consistent, good feedback from PD sessions, month after month; there’s that data to support it.” She added, “People are feeling supported they’re
feeling like… someone just said the other day, ‘You’re not just talking the talk about voice and choice, you’re offering it for us as educators too.’”

Stella identified her expertise as both chief planner of professional development in her school and co-facilitator of the professional development experiences. She shared, “There are two of us who plan it (professional development) and the principal kind of jumps in. But I’m the chief planner.” This expertise is extended to the professional development experiences where teachers are “making sure that their colleagues are having time for conversations with each other. And they get so excited when they hear what others are doing.”

**Decision-making teams.** Two of the teacher researchers shared their expertise by participating on decision-making teams within their schools. Stella’s school has a decision-making team called the Vision Keepers; it is comprised of teachers, students, parents and community members. As Stella explains, “If any teacher puts a vote down, we must go back and revisit it and work together to come up with a decision that everyone can live with.” She adds, “That’s pretty powerful teacher voice in action.”

GV’s past experiences with her building leadership team led her to declare that they were “very open” and she explained that “(teachers) just did it because they wanted to, they believed in it, they had some energy, they had something to share, and their voice was heard, because, it was just a different kind of environment.”

**Replaced by top-down decision-makers.** Four of the five teacher researchers experienced being replaced in the decision-making processes by top-down decision-makers; this discouraged teacher voice. The areas of replacement included professional development opportunities, teacher expertise, and a general acknowledgement that decisions are still made from the top down.
MLK’s sentiments reflected her experiences with professional development where, “There’s no choice, there’s absolutely none.” MLK said, “I think professional development plays a role in our voice because we’re no longer being asked what we want to do.” MLK and her colleagues viewed professional development opportunities as “ridiculous” and authoritative with no awareness of adult interests and needed development. She shared, “This is what you need to do, you need to be here, and it’s a bunch of eye rolling. You know, people don’t support that … we don’t have any choice in what we do anymore.”

GV and JR both experienced having their expertise replaced by top-down decision-makers. For example, GV described the leadership team in her current school as a group that makes decisions based on their interests rather than on teacher expertise. She explained, “They’re more interested in the title and the stipend than having a real passion for, okay, this is where we need to take our building.” GV added, “In my position we would want to put some initiatives in place; we’d do some research, we’d make presentations to the leadership team, and they didn’t want to hear it…in this structure it’s hard to have a voice like that.”

JR and her colleagues experienced having their expertise replaced by top-down decision-makers. She remarked, “How does it make sense to change something that is already working fine? I think you should ask us what we’re doing - come and ask us what’s working. That was a time when I felt like teacher voice was important.”

Casey shared this sentiment regarding the general sense of top-down decision-makers saying, “I also think that we do still operate many things with the top-down approach.”

**Students and parents.** The outlier for this research question was two teacher researchers’ connections between teacher voice and the action research process, particularly the relationship to students and parents. GV shared, “Teacher voice is advocating for the services of
the students and in being heard and being respected and working for change and not just kind of sitting back and complaining.” She added, “I think the biggest thing about teacher voice is building relationships with kids and knowing that kids know that I care about them – they need to know somebody cares.”

JR shared, “I think this project gave me the chance to use my voice more with the parents … to establish a rapport, make sure that I have a positive relationship with them.” Additionally, JR reflected, “Teachers’ need to use their voice more in a positive way that’s beneficial to the students and not always comfortable from their standpoint in what they feel should be done because it’s comfortable for them.” Likewise, JR remarked, “I think it’s important to keep in mind that when you’re a teacher you’re very influential, your voice is very influential, you are counted on for your personal and professional opinion all the time.”

Profiles

Each teacher researcher’s profile includes segments from the data collection analysis – final reports, field notes and interviews. These segments provided evidence for each teacher researcher’s “ways of knowing” (Drago-Severson’s, 2009, p. 39) throughout their action research journey. The “ways of knowing” (p. 39) include the instrumental knower, the socializing knower, the self-authoring knower and the self-transforming knower. In addition, my analysis revealed that all the tenets of a single way of knowing may not apply to every teacher researcher. A summary of this application is contained in the table below.

Note – The Instrumental Knower views the world through a concrete lens and is unable to completely understand another person’s viewpoint. My analysis did not reveal any evidence for this way of knowing.
Each teacher researcher was invited to reflect how the profile reflected or did not reflect their experiences through the action research project. Four of the five teacher researchers responded and agreed with the identification of their “ways of knowing” (Drago-Severson, 2009, p. 39).
## Table 10

*Application of the Tenets of Ways of Knowing*

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<tr>
<th>Socializing Knower make meaning in a social context, has a capacity to reflect &amp; consider other perspectives</th>
<th>Socializing Knower self-concept is shaped by other perspective &amp; their approval</th>
<th>Self-Authoring Knower develop the capability to generate an inner value system &amp; take ownership of this internal system</th>
<th>Self-Authoring Knower unable to recognize that individuals who hold opposite viewpoints can actually inform their way of knowing</th>
<th>Self-Transforming Knower less invested in their identity &amp; realizes their viewpoints are limited</th>
<th>Self-Transforming Knower understand that the interaction with diverse groups &amp; organizations within society provide opportunities for them to learn, develop &amp; self-explore</th>
<th>Self-Transforming Knower use their self-systems as a way of seeing</th>
<th>Self-Transforming Knower acknowledge a sense of loneliness &amp; dissatisfaction with their self-systems which can prove to be a challenging developmental shift</th>
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MLK: Self-Transforming Knower

Based on my analysis of MLK’s final research report, field notes and interviews, I identified MLK as a self-transforming knower. The self-transforming knower is less invested in her identity and realizes their viewpoints are limited (Drago-Severson, 2009). For example, MLK’s research project evolved from two basic problems – the desire to deliver great science instruction to her students and the knowledge that her colleagues believed that delivering great science instruction was impossible in the current testing culture. The following comments from MLK’s colleagues reflect these concerns: “This teacher made it something all science should be: hands-on activities, inquiry based, FUN and relevant (great science); how can we fit science instruction in now that we have the new writing program, AND math AND literacy, etc.”

MLK’s final report attempted to answer her research question, How does STEMScopes support student engagement and improve argument writing? Her data collection included pre and post surveys from all her students and writing samples from four students. In addition to her final report, MLK used a weekly journal to support her reflection efforts throughout the action research project. Some examples of quotes follow:

“… I would like to have more time to explore the limits in science and I love doing hands-on projects (student quote); (my colleagues) are beginning to see the value in science – the thinking, writing, reading, problem-solving.”

The findings from MLK’s report indicated that implementing the STEMScopes, and argument writing lessons both increased student engagement within the science lessons as well as improve writing skills. For example, post survey results show that 75% of her students felt they learned best by doing science.
MLK’s report also highlighted the impact of the Do-Talk-Writing process; a way to write about science. The Do provides hands-on learning experiences, the Talk facilitates a productive talk session around a concept, and the Write provides the students with an opportunity to write about their thinking. MLK shared, “Do-Talk-Write gives a scaffolding experience for writing about science.”

The self-transforming knower also understands that the interaction with diverse groups and organizations within society provide opportunities for them to learn, develop and self-explore (Drago-Severson, 2009). For example, my analysis of MLK’s field notes revealed four takeaways; two were collaboration with colleagues and advocacy. MLK intends to share the findings of her report with school board members, colleagues, and colleagues at the University of ABC as well as with an outside evaluator who is on the STEMScopes project for the University of ABC. She also shared in one email, “I'm happy to participate if I can focus on the benefits of the hands-on/inquiry based science program I'll be teaching this year.”

Self-transforming knowers use their self-systems as a “way of seeing” (Kegan, 1982, p. 225). The learner and practitioner voices identified in MLK’s report and journal entries are a “way of seeing” (Kegan, 1982, p. 225); “… I was introduced to the model Do-Talk-Write first as an adult learner … it helped push my thinking after discussing my thoughts with peers.” MLK also shared, “I jumped at the opportunity to become a Science Resource Partner (SRP) for my school with the hopes of furthering my own knowledge of science content… my work as an SRP has improved my science content knowledge dramatically.”

However, self-transforming knowers acknowledge a sense of “loneliness and dissatisfaction with their self-systems” (Drago-Severson, 2009, p. 49), which can prove to be a “challenging developmental shift” (p.49). For example, MLK remarked the following about
sharing her research findings with her principal and colleagues, “I’m not sure how it’s going to be received because it doesn’t seem like the support for science is really there in our building.”

Another sentiment that reflected MLK’s loneliness and dissatisfaction was, “I do what I have to do and then I go home … there’s no support… I find it frustrating when two people out of 18 are coming, I feel like a failure …why aren’t they coming?”

**Stella: Socializing and Self-Authoring Knower**

Based on my analysis of Stella’s final research report, field notes and interviews, I identified Stella as making meaning as both a socializing knower and a self-authoring knower (Drago-Severson, 2009). I contend that this identification was partially based on two themes, which emerged from the interview analysis: the context and Stella’s multiple roles in this context. Kegan (1982,1994) believes the process of development is an attempt to resolve tension between a need for individuality and a need to belong in one’s context.

Socializing knowers make meaning in a social context, have a capacity to reflect and consider other individual’s perspectives (Drago-Severson, 2009). For example, Stella sees her role as instructional coach as one way to help colleagues meet school expectations such as collaboration, “I think that we have a collective voice that’s very powerful, but I think that there are teachers that don’t feel safe to let their weaknesses be seen.” Stella also sees her coaching role as a “private, individualized way of collaborating for teachers that can feel a lot safer.”

My field note analysis provided additional evidence for Stella’s socializing way of knowing. One of the takeaways from my field notes described a goal-oriented Stella where she weighed every aspect of her project each time we talked. For example, she adjusted the way she would analyze her data because of the realities of school and the timeline for this action research
project. She continued to strive for a balance of what is realistic and meaningful for her and the teachers.

The other takeaway from my field notes described this action research journey as a beginning for Stella to improve her abilities as coach and to support her colleagues’ improvement of their craft. For example she shared that she would like to extend a coaching cycle for a year (most cycles are six to eight weeks). Her administrators would allow her to do this and she believes she would get volunteers.

The learner and practitioner voices identified in Stella’s report and journal entries were further examples of the socializing knower. For example, Stella shared, “I can see now how natural it is to move between the reflective stances, and how important it is to do so in order to move the conversation, and the professional growth, along.” She also mentioned, “In order to help a client change beliefs and behaviors, a coach must listen carefully to understand the client’s patterns of thinking (Aguilar, 2013). This is what I can learn from coaching HL.”

**Socializing knower (self-concept).** Another aspect of the socializing knower is that the perspective and the approval of others shape the socializing knower’s self-concept (Drago-Severson, 2009). For example, collaboration, one of the themes from Stella’s interview, is inherent in this school’s context and includes expectations for excellence, which has caused a sense of apprehension. Stella said:

I thought that everyone here was much smarter than I was and it took me a long time to be comfortable enough to use my voice … I think that there is an implicit understanding that we all get it (professional development topics), that we should get it.

**Self-authoring knower.** The self-authoring knower has developed the capability to generate an inner value system and takes ownership of this internal system (Drago-Severson,
2009). For example, the purpose of Stella’s research was inspired by her coaching experiences as well as the works of Aguilar (2013), and Hall and Simeral (2008). The premise of Aguilar’s (2013) work pertains to questions used as part of a reflective coaching stance and includes the finding that dynamic, reflective coaching relationships have the power to transform not only the teaching practices of the client, but the entire school culture. Hall and Simeral (2008) state that there are four stages in a continuum of professional development and awareness that a teacher moves through. Stella utilized her journal to help identify the teacher’s stage in a continuum of professional development and awareness as well as the coaching role she adapted. She commented, “I continually reflected upon the appropriateness of their identified stage throughout our coaching cycles.” And, “I am far more comfortable in the role of instructional coach than I had been at this time last year.”

Additional examples of Stella making meaning as a self-authoring knower were evident in the different voices she used, which included those of instructional coach, professional development facilitator, and as a learner. As an instructional coach and professional development facilitator, Stella “sees that the individual coaching and the group stuff overlaps (professional development sessions) and is always looking for entry points into a coaching relationship… a lot of times those entry points come from professional development.” As learner and coach, Stella wondered about the opportunities “to engage in dialogue with someone who listens carefully to what you say and then gently probes at the thoughts that you left unsaid, in hopes to further your thinking or assuage your fears.”

However, the self-authoring knower is unable to recognize that individuals who hold opposite viewpoints can actually inform her way of knowing (Drago-Severson, 2009). For example, Stella’s final report included three data sources, one being a survey distributed to all
nine teachers Stella coaches. An overall finding in the survey results supports Stella’s goals for establishing relationships based upon trust and confidentiality (83%), and empathy and compassion (100%). At the same time, Stella commented, “I have the most room for growth on the areas most closely related to conversational approaches and questioning strategies… survey participants do not have the same level of knowledge regarding questioning techniques as I do.”

**GV: Self-Authoring and Socializing Knower**

Based on my analysis of GV’s final report, field notes, and interviews, GV makes meaning as a self-authoring knower and in some instances, as a socializing knower.

The self-authoring knower develops the capability to generate an inner value system and takes ownership of this internal system (Drago-Severson, 2009). GV conducted her study using a main research question and eight sub questions. For example, GV’s main research question, *Can high school students successfully complete college level courses?* found that 91% of the students earned the dual enrollment credit. In light of this finding, GV shared, “Teachers perceive 83% of students put a great deal of effort into their coursework and indicate nearly one third of students strive to do their best.”

Some of GV’s research questions also provided evidence for meaning making as a self-authoring knower. For example, the second question, *How does enrollment in such courses affect student engagement in the high school setting?* revealed the following statements – “The courses we currently offer have an academic focus; by self-selecting Advanced Placement (AP) Dual-Enrollment and Dual-Credit courses, students have the opportunity to work to a higher level of rigor in a self-selected course in which they are interested.”

The student responses for question six, *How does enrollment in such courses affect students’ college and career aspirations?* were similar to findings in a study GV included in her
literature review; dual enrollment experiences support college readiness (Wang, Chan, Phelps & Washbon, 2015). One student responded, “This course has given me an opportunity to figure out what I truly want to do when I go to college.”

GV’s literature review provided findings for question seven, *How does enrollment in college courses during high school affect college graduation enrollment and college graduation rates?* Partnering with a career and technical college can allow high schools to provide their students the exposure to particular fields without purchasing expensive equipment, and build college awareness in students who may not consider enrolling in college (Karp, 2013).

Another example of self-authoring knowing was evidenced in GV’s conclusion that some of the student failures were due to the lack of guidelines for dual enrollment at her school. She recommended that her school adapt guidelines similar to those found in a study included in her literature review. These guidelines suggested a minimum GPA, a minimum standardized test score and teacher recommendations. GV also speculated, “Although some might consider a failing grade to be a failing experience, hopefully these students will consider it to be a learning experience and identify skills and attitudes needed to be successful in postsecondary experiences.”

Additional evidence of GV making meaning as a self-authoring knower was evident in the learner voice from her report and through the field note analysis. GV shared, “As an adjunct instructor for the Early Childhood Education program, I became curious about the success rate of dual enrollment courses offered in our school; I created a research plan to guide my quest for answers and enlightenment.”
The field note analysis produced one takeaway: confidence. For example, GV has experience conducting an action research project. This past experience contributed to her confidence in this project. Also, after her first round of data collection, GV shared:

I believe it is supporting my question … and after semester grades come in my question will continue to be supported – student grades will be part of this confirmation for students need to have a C or better to obtain college credit …

Socializing knower. The socializing knower makes meaning in a social context where individual perspectives and the approval of others shape the socializing knower’s self-concept (Drago-Severson, 2009). GV demonstrated this way of knowing in three ways; two of these ways regarded GV’s sentiments about teachers in her school. One was noted in her report – “After talking with several teachers about these new dual enrollment opportunities, I was surprised to hear the staff had mixed feelings; some staff felt the dual enrollment courses were in direct competition with the AP courses …” The second was noted in her second interview.

To the point of some of our upper level teachers feeling insulted that we are bringing in an opportunity (dual enrollment classes) that is in direct – they perceive to be in direct competition – so we’ve got some you know splitting of factions there…

The third way was through an email exchange where GV appeared to contradict the confidence displayed earlier in the project. She shared, “I am so far behind that it is not acceptable! I simply have not been able to devote time to it. I am just lagging behind with the research and the write-up and will shoot for Feb. 5.”

Casey: Self-Authoring and Self-Transforming Knower

Based on my analysis of Casey’s final research report, field notes, and interviews, I identify her ways of knowing as self-authoring and self-transforming. The self-authoring knower
develops the capability to generate an inner value system and takes ownership of this internal system (Drago-Severson, 2009). For example, Casey’s literature review affirmed practices her colleagues were using to support student agency, and also provided new ideas to enhance student agency. One article highlighted a practice that her school was implementing; this involved the impact of student goal setting and self-assessment on reading comprehension and attitudes in elementary schools (Burdon, Flowers, and Manchak, 2011). A major finding of this study was that the treatment group made significant gains compared to the comparison group. Casey applied this finding to her school’s work on this topic – “This article was a good reminder that we need to offer more professional development in this area for staff. Although it occurs in pockets, it is not currently a school-wide practice.”

Additional evidence of Casey’s making meaning as a self-authoring knower was found in the learner voice from her report and through the field note analysis:

Another idea I learned is that if students are on pace in a particular subject, they can work on other content area work in class. I love how this practice models for students that learning can take place anytime, anywhere.

The field note analysis produced two takeaways: commitment and coming together. Casey’s commitment to supporting teachers in successfully implementing the proficiency based learning system supports her research purpose, which asks the question, “Are teachers using approaches while unpacking the standards to promote student agency?”
Casey used the phrase, “coming together,” which she believes means “coaching teachers to meet school and district goals around proficiency based learning, in particular student agency.”

**Self-transforming knower.** The self-transforming knower understands that the interaction with diverse groups and organizations within society provide opportunities for them to learn, develop and self-explore (Drago-Severson, 2009). Two examples of this way of knowing were found in Casey’s data collection and analysis of her action research project. For example, Casey listed nine ideas to implement in her coaching role such as, “to offer suggestions and resources for ways to increase student voice in the classroom (i.e. use of parking lots and exit slips) and collaborate with administrators to organize classroom and site visits for staff.” Another finding was derived from the student surveys, which included, “overwhelmingly positive data for project-based learning that incorporates student voice and choice. They (students) noted that they learned the material better than if they had taken a test.”

Other examples of the self-transforming way of knowing were found in Casey’s second interview and field note analysis. Casey remarked, “the teacher involved in the coaching cycle with me was extremely pleased with the creative process and the products that showed the students’ understanding of their social studies content… it was a game changer for her and her students.”

The field note analysis produced the takeaway, evolving. Casey’s action research project, more than those of the other teachers, evolved throughout the duration of her project. Implementing her plan, collecting data, reflecting, and adjusting her project when needed caused this evolution. She affirmed, “I want more time to interview because I have collected data from
teachers who are using PBL (proficiency based learning) strategies…I would like to collect more data with teachers who are not using PBL strategies.”

**Self-transforming knower (a way of seeing).** The self-transforming knower uses her self-systems as a way of seeing (Drago-Severson, 2009). Three examples of this way of knowing were found. The first was a finding from Casey’s data collection and analysis of her action research project where she hoped to “develop these reflections and conclusions further and create a resource for educators who are working towards a student-centered proficiency-based learning system in their school districts.”

The second example is a learner voice from Casey’s report, which said, “When the teachers I coach recognize the value in making shifts in their practice, it seems that the changes they make are more often sustained over time.” The third example is from Casey's second interview where she stated that she would like to work with fewer teachers and dig deeper, “...like I did with that social studies project, a really, nice deep reflective coaching cycle…”

**JR: Emerging, Self-Transforming Knower**

Based on my analysis of JR’s final research report, field notes, and interviews, I identified JR as an emerging, self-transforming knower. For JR, the emergent, self-transforming knower included a tenet of the self-authoring knowing, which develops the capability to generate an inner value system and takes ownership of this internal system (Drago-Severson, 2009). There were two examples of the self-authoring knowing. The first was the purpose for JR’s action research project, which was to learn how she could improve relationships between school and parents. This purpose was informed by school demographics and a school-wide goal set by her principal for all teachers to make positive phone calls home to parents.
The second example included practitioner voices evident in JR’s report. For example, JR confirmed, “I will continue to implement positive communications with parents in an effort to improve student achievement.” JR also commented, “When making positive phone calls home initially I started out by focusing on students that I thought might be challenged academically. I also made phone calls home about students that I thought might be challenging behaviorally.”

**Self-transforming knower.** The self-transforming knower is less invested in her identity and realizes their viewpoints are limited (Drago-Severson, 2009). There were two examples of this way of knowing; JR’s research questions and the field note analysis. JR’s action research project was guided by an overarching question, *What is the best way to communicate with the parents of students in my class to maximize parental support/engagement of students?* and two research questions: *Will making positive phone calls home to the parents of students in my class improve participation/communication/engagement among parents; and what methods do parents prefer to communicate with school?*

These excerpts from my field note analysis found two takeaways that illustrated this way of knowing: perseverance and collegial sharing. For example, JR demonstrated throughout her project the ability to endure in spite of obstacles; one of these obstacles was colleagues’ negative phone calls to parents of siblings. JR stated that although the school goal was to build and sustain positive relationships with parents by making positive phone calls home, she found that this was not the case for some of her colleagues…parents were receiving lots of negative phone calls.

Many of our interactions during the project went beyond a simple check-in, for collegial sharing, an exchange of feedback, reflection, and new ideas. For example, as I listened to JR tell her story about the attempts she made to reach parents for the January parent/teacher conference, and shared my feedback, she paused and said, “I am surprised I thought of that.” In fact, JR often
stated during our interactions, “I did not think of that” in response to our dialogue about her project. I believe our interactions provided a venue for JR to think of new ways to reach her students’ parents, and they provided me with an awareness of the power of her project – the need for educators to establish and sustain positive parent relationships.

**Self-transforming knower (interactions with diverse groups).** The self-transforming knower understands that the interaction with diverse groups and organizations within society provide opportunities for her to learn, develop and self-explore (Drago-Severson, 2009). This way of knowing was illustrated through JR’s literature review, some of her findings and my field note analysis.

JR’s research questions evolved throughout the project and were informed by her experiences as well as by the literature review she conducted. The literature review confirmed the practices she was utilizing in her project, and also provided new ideas for her to implement. JR noted, “The following literature consists of articles, documents, and websites that were reviewed to inform the project. Each piece of literature was helpful in improving communication with parents and maximizing support and engagement among students and parents.”

JR’s findings that reflected the self-transforming knower included her perseverance and beliefs in utilizing four different strategies to create and maintain parent relationships; and the impact of building positive relationships with parents, and grandparents. JR shared, “In preparation for the January Conferences, I found it more difficult to reach parents through letter, phone call, text message, or face-to-face conversation.” She utilized the emergency contacts (the grandparents) and explained that she was having difficulty getting in touch with the parents and needed their help.
JR concluded that many of her parents needed to be educated regarding the responsibility of being a parent of a school-aged child, that they are “important in their child’s success academically.” She affirmed, “Parents also need to be positively reinforced and told that they are doing a good job.” Additionally, JR shared “Grandparents are very involved in the lives of their grandchildren and have a mature perspective in regard to parenting a school-aged child.”

Another example of the self-transforming knower was illustrated in my field note analysis with the takeaway, evolving parent communication. JR’s project began with making positive phone calls to establish relationships with parents. Once the relationships were established, the phone calls were used to educate parents about the importance of being active in their child’s education. JR used explicit phrases such as “I am calling to confirm your appointment for …. I have you scheduled for this time ….” to reinforce the importance of the parents’ role in their child’s education.

The phone calls were replaced by texting, which positively changed the relationship with her students’ parents. The texting included messages and pictures of students holding achievement certificates and participating in other experiences; and the messages used phrases such as, “Congrats!” and “Thank you for helping your child learn all her/his letters, numbers.”

**Self-transforming knowers (a way of seeing).** Self-transforming knowers use their self-systems as a way of seeing (Drago-Severson, 2009). Some of JR’s findings, learner voices and my field note analysis, provided examples of this way of knowing. JR’s findings included how the positive phone calls evolved into texting, which was the parents’ favored way of communication. For example, JR shared “I got bored with making the positive phone calls … as the year progressed, making positive phone calls home became difficult to plan and time
consuming.” She also found that it was important to “use group texts because in some cases, a student may have a few adults involved in parenting.”

JR’s survey results regarding parents’ favored ways of communication affirm her change in practice where 80% indicated that they preferred texting because “sometimes they (parents) are busy and don’t have time to talk and others enjoyed the pictures of their children that I sent.”

JR’s learner voices in her report established a way of seeing prior to her project beginning – “I am passionate about learning how to improve relationships between school and parents” and then as a reflection of her action research experience – “Attitudes improved when parents realized that my phone call was positive in nature.”

My field note analysis and prior knowledge of JR’s habits led me to identify JR as a digital native, which I contend supports a way of seeing as a tenet of self-transforming knowing. JR intentionally implements technological strategies into her practice such as Skype and virtual stories. In addition, she included links to the articles she used for her literature review and mentioned the website remind.com, which is a free resource for educators who want to text parents without exchanging personal phone numbers.

Summary

This chapter presented the findings from my analyses of the teacher researchers’ final reports, interviews and my field notes. These findings were organized and presented in two ways; answers to each of my research questions, and a profile for each teacher researcher. The profiles synthesized the data collection analysis for each teacher researcher and applied Drago-Severson’s (2009) “ways of knowing” (p.39) to each teacher researcher.

The following chapter will discuss the findings and their implications, an application of the findings and their implications to my practice and further research.
Chapter 5: Findings, Implications, and Further Research

Chapter five is organized around a discussion of the study’s findings and implications and further research.

Findings and Implications

The discussion of the findings and their implications are organized into two sections: findings and implications and an application of the findings and their implications to my practice. Table 11 depicts the discussion.

Table 11

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Knowledge Generation

Knowledge generated at the local level in response to global demands is an important component for practitioner inquiry (Cochran-Smith & Lytle, 2009). In my study, the teacher researchers generated knowledge by conducting an action research project. The projects were in response to global demands such as improving science content and writing, making connections between high school and college, improving relationships between teachers and parents, providing coaching strategies to improve teacher practice, and increasing student engagement. By generating this new knowledge for their classrooms and schools and in one case for a university-level project, the teachers affirmed their stance as experts in their field of interest.
Science content and writing. In an action research study concerning elementary science, most teachers felt more confident with new science content and the ability to communicate it to students effectively (Goodnough, 2011). Similarly, one of MLK’s findings was that student-designed experiments increased science knowledge and motivation. Also, MLK anticipated that her action research project would generate new knowledge if it examined the benefits of a hands-on-inquiry based science program. She added, “I think it would be helpful to me, my school and the science group I’m working with to have some action research around this topic.”

Improving relationships between teachers and parents. Parental engagement, JR’s topic, is a subject that has been thoroughly researched. However, JR and Thompson, Mazer and Grady’s (2015) studies regarding parental engagement highlighted the importance of finding the right format of communication with parents. In both cases, texting was found to be an immediate way to receive information about a student’s academic and behavioral progress.

Increasing student engagement. Casey’s topic, increasing student agency or voice, is also apparent in the literature. Many of the research findings indicate that strategies, and processes targeting student agency and voice lead to an increase in motivation and positive academic and behavioral progress. Casey and the teacher researcher in this study (DiLucchio, Leaman, Elicker & Mathisen, 2014) found that when students are given a choice in a learning activity or assessment, their ownership and motivation increases. Similarly, Casey was compelled to make changes to her original research design because of the knowledge generated at each phase of the project. For example, she added student data to her project at the request from a seventh grade social studies teacher.

Providing coaching strategies to improve teacher practice. Although instructional coaching is prevalent throughout schools, research is lacking and there is little agreement about a
definition (Denton & Hasbrouck, 2009). Therefore, Stella’s research regarding instructional coaching strategies contributes to the growing body of knowledge generation for this topic, particularly what coaching strategies support and challenge a teacher’s continuum of professional development.

**Making connections between high school and college.** Dual enrollment programs, another highly researched topic, require certain tenets in order for programs to increase student participation and success. One of these tenets includes access to programs, which require states to inform and support students and parents throughout the dual enrollment process (Zinth, 2014). This intentional effort supports low income and minority students, which is an underserved population for dual enrollment (Zinth, 2014) and a topic of interest for GV’s study. At the same time, GV created additional knowledge to support the expansion of the dual enrollment program at her high school. She shared in one interaction that the research questions were being supported by the data collected and believed this would continue.

**Implications for Knowledge Generation**

There are several implications for knowledge generation, which include transformational learning and expanded practice. The teacher researchers generated local knowledge in response to global demands; these global demands impacted their classrooms, and schools. Conducting action research is an organic approach to solving an issue or providing information about a situation. Its authenticity guarantees that the teacher researchers will be engaged in each stage of the process, which includes conducting the research, presenting the outcomes and recommendations, and following up on the implementation of the recommendations. Knowledge generation empowers educators to use their expertise and become valued members of the decision-making processes in our schools and districts.
As teachers generated knowledge they also experienced transformational learning, which concerns itself with how an adult knows (Kegan, 2000). Transformational learning is required to meet adaptive challenges (Heifetz, 1994), which necessitates solutions while in the process of implementation for it changes the “structure of a person’s meaning-making system,” (Kegan, 2000, p. 52). Knowledge generation can also lead to expanded practice. The teachers engaged in action research and experienced an expansion of their practice, which included “responsibilities to students and families, and transformed relationships with colleagues” (Cochran-Smith & Lytle, 2009, p. 135).

There are several ways that knowledge generation can occur in our classrooms and schools. By working together, administrators and practitioners will recognize that knowledge generation can provide solutions for classroom, and school issues. This recognition can provide the foundation for developing ways to support knowledge generation through communities of practice (Wenger & Trayner, 2011) and the action research process.

**Teacher Voice**

Marzano (2007) states that through the research process a model of instruction can be created to further explore teaching practices. Essential to this process are two factors: the model is used as a vehicle of communication and a method for creating a common language that schools and districts agree upon that constitute effective, teaching practices (Marzano, 2007). Marzano’s (2007) contention connects with the way that the teachers in my study experienced voice, which was through decision-making processes. Within these processes, the teachers had two experiences: being included as experts and being replaced by top-down decision-makers. Teachers as experts resemble Marzano’s (2007) contention.
**Teacher expertise.** In my study, being involved in the decision-making processes within their schools provided the teachers’ opportunities to share their expertise, which supported teacher voice. JR acknowledged that teacher knowledge is essential in many cases and stated that “going to the teachers and asking them what they think about certain things” is important. She added, “There are some things where you feel the teacher might have the most knowledge about that particular thing, whatever it is, and teachers should have a voice there.” Were these tenets to be applied, JR believes “they would take ownership in it.”

Similarly, Hargreaves and Shriley (2011) proposes teachers should be involved with developing a system of excellence, which includes creating consistent professional learning opportunities and viewing teachers as adult learners. Casey designed and facilitated opportunities within the professional development system within her school. She collected feedback from teachers to ensure their voices were heard and applied that feedback to the next round of professional development. She added, “People are feeling supported they’re feeling like… someone just said the other day, ‘You’re not just talking the talk about voice and choice, you’re offering it for us as educators, too.’”

**Top down.** Although Hargreaves and Shirley (2011) view and my findings support designing and facilitating professional development opportunities as one way for teachers to be involved in the decision-making processes within their schools, my study and the literature also offer contrary interpretations. For example, Martell’s (2014) study examines the experiences of PreK-12 teachers in his district-based teacher research professional development course. Although the course provided positive experiences for the teachers, the district discontinued the course and allocated funds for district-wide needs (Martell, 2014). One teacher in the study summarized her professional development experiences by stating, “I think the professional
development that I’ve experienced... (is) generally pretty worthless... Teacher research is the first time that I feel professional development is directly improving my teaching. I wish the district supported it more.”

Likewise, MLK said, “I think professional development plays a role in our voice because we’re no longer being asked what we want to do.” MLK and her colleagues viewed professional development opportunities as “ridiculous” and authoritative with no awareness of adult interests and needed development. Both instances are examples of teachers being replaced by top-down decision-makers—in this case, with professional development opportunities.

**Implications of Teacher Voice**

Teacher voice can become part of the decision-making processes within our schools and districts. However, certain conditions must be present in our schools and districts. I agree with Allen’s (2004) conditions for teacher voice, including a belief by teachers that the audience (i.e., principal, superintendent, school board members, etc.) gives fair and respectful consideration of their ideas and suggestions during the decision-making process and that the audience has influence in the decision-making process in order for the teachers’ input to become a reality. These conditions lay the foundation for teachers to use their expertise and make meaningful contributions in the decision-making processes within their schools and districts. Without these conditions, schools and districts default to a top-down decision-making model. Teacher voice is an essential component for our schools and districts to be learning organizations.

**Contextual Factors and School Structures**

Action research requires a systemic and reflective process in collaboration with others (Herr & Anderson, 2015). This process is impacted by contextual factors and school structures. The literature and my findings indicate contextual factors and school structures both hinder and
support the action research process. Colleagues as a contextual factor both hindered and supported the action research process. In a collaborative action research study (Dana, 1995) to create more collegiality, the teacher researchers created time at faculty meetings for small group sharing. Initially, the faculty resented this sharing; over time, the faculty embraced the small group sharing and preferred this format to a principal-run faculty meeting. GV experienced a similar occurrence while conducting her action research project. She stated that her colleague questioned her action research project saying, “Well, why are you doing this? We know dual enrollment is a good thing to do, why are you going to waste your time doing this research project?”

Likewise, school structures such as collaborative planning time can support the action research process. GV identified a school structure that could be used for action research, commenting, “I would have time within network meeting time (common planning time) to be able to say, ‘Hey, let’s kind of investigate this a little more.’” However, in Martell’s (2014) study, one finding indicated even though many of the teachers had daily or weekly collaborative time in their schedules, this was often used to attend to school or district-wide agendas such as discussing standardized test results.

An additional finding from my study, practitioner communities, can be supported or hindered by contextual factors and school structures. My study found varying instances of practitioner communities. MLK experienced three different instances of community. For example, she talked about the “beauty of collaboration” and how her colleague has the greatest ideas, which she “steals from him.” This also illustrates how the community provides members with intentional opportunities to engage in joint activities, and discussions to support and challenge each other (Wenger & Trayner, 2011).
Another instance for MLK was that her project involved study groups where teachers learned science content along with students. Unfortunately, teacher participation was inconsistent, which MLK attributed to the teachers’ belief that “science is not a priority because it is not tested.” At the same time, MLK was an active participant in her study group facilitated by instructors at a local university. MLK shared her findings with her colleagues and was inspired by their comments, which included validation for her qualitative results.

**Implications for Contextual Factors and School Structures**

In order to create, and sustain action research, our schools have to embrace certain contextual factors. Two of these factors are time and a culture for learning. Time must be allotted within the school’s master schedule and protected from other school and district needs. A culture for learning must also be established and nurtured where colleagues learn with each other. These factors can support and promote school communities that provide learning and developmental opportunities for adults.

**Applications of Findings and their Implications to my Practice**

Drago-Severson’s (2009) leadership model is grounded in the belief that “we must all be learners who are invested in supporting each other’s growth” (p.4). This belief provides a response to the adaptive challenges our schools face today. To this end, school leaders are called to lead adult learning by identifying developmental levels and providing supports and challenges for growth.

As an educational administrator, I believe using the pillar practices and the findings in my study, specifically the identification of the teacher researcher’s “ways of knowing” (Drago-Severson, 2009, p. 39) will enhance my practice and provide examples for school leaders. By utilizing the pillar practices with the teachers’ ways of knowing, I can simulate what it would
look like to create a learning environment where adults can grow and develop. In addition, I believe this application provides some solutions to my research problem, which highlights the demands that exist in our PreK-12 schools such as accountability, student diversity, closing the achievement gap and working in an era of standards-based reform (Drago-Severson, 2009).

**Pillar Practices and Ways of Knowing.**

The pillar practices (teaming, leadership roles, collegial inquiry and mentoring), an element of Drago-Severson’s (2009) leadership model, serve as holding environments (Kegan, 1982) and consider how an individual “makes meaning of an experience in order to grow from participation in them” (Drago-Severson, 2008, p.63). Action research can occur within a pillar practice as it strives to go beyond knowledge generation to knowledge implementation.

In order for teachers to make meaning from their experience with a pillar practice, Drago-Severson (2009) suggests developmental supports and challenges to help the various knowers (instrumental, socializing, self-authoring and self-transforming) grow (Drago-Severson, 2009). For example, in order for an instrumental knower to experience teaming a supporting strategy would include setting clear expectations for teamwork (Drago-Severson, 2009). A strategy to challenge growth would include encouraging the knower to move beyond what is perceived as the only answer and include other perspectives to stretch their thinking (Drago-Severson, 2009). Action research is one way to support and challenge a practitioners’ way of knowing.

The discussion that follows uses the pillar practices with the teachers’ ways of knowing and includes the developmental supports and challenges that help knowers grow. The developmental supports and challenges selected were based on my experiences with the teachers. Also, four of the five teachers were identified with several ways of knowing. For the purpose of this discussion, I “assigned” the teachers one way of knowing.
Table 12 depicts an example of using the pillar practices and the “ways of knowing” (Drago-Severson, 2009, p. 39).

Table 12

*Using Pillar Practices and Ways of Knowing*

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**Teaming.** The strategies listed in this section provide opportunities for the teachers to grow in two ways: engaging in reflective practice and attending to developmental diversity (Drago-Severson, 2009). Stella and GV are identified as socializing knowers. These knowers make meaning in a social context and have a capacity to reflect and consider other individual’s perspectives. However, these perspectives and the approval of others shape the socializing knower’s self-concept (Drago-Severson, 2009). In order for Stella and GV to make meaning of a teaming experience, I would utilize the following strategies: The support strategy would focus on establishing abstract goals and the steps to achieve it and the challenge strategy would aid the construction of their own values and standards rather than co-constructing them (Drago-Severson, 2009).
JR and Casey are identified as self-authoring knowers. These knowers have developed the capability to generate an inner value system and take ownership of this internal system (Drago-Severson, 2009). However, the self-authoring knowers are unable to recognize that individuals who hold opposite viewpoints can actually inform their way of knowing (Drago-Severson, 2009). In order for JR and Casey to make meaning of a teaming experience, I would utilize the following strategies: The support strategy would generate opportunities to design initiatives and lead them and the challenge strategy would assist them in managing interpersonal aspects of teamwork (Drago-Severson, 2009).

MLK is identified as a self-transforming knower. These knowers are less invested in their identity and realize their viewpoints are limited; understand that the interaction with diverse groups and organizations within society provide opportunities for them to learn, develop and self-explore; use their self-systems as a “way of seeing” (Kegan, 1982, p. 225); and acknowledge a sense of “loneliness and dissatisfaction with their self-systems” (Drago-Severson, 2009, p. 49), which can prove to be a “challenging developmental shift” (p.49). In order for MLK to make meaning of a teaming experience, I would utilize the following strategies: The support strategy would value her sense of independence and provide opportunities that enhance reflection and self-expression and the challenge strategy would challenge her to cope with hierarchy (Drago-Severson, 2009).

**Implications of teaming.** Teaming provides two sources for adult development, and growth: “engaging in reflective practice and attending to developmental diversity” (Drago-Severson, 2009, p. 75). Reflective practice is a process of identifying, examining, confronting and changing the essential beliefs that influence our behaviors (Osterman & Kottkamp, 2004), and developmental diversity is an awareness of the different ways adults make meaning (Drago-
Severson, 2009). Providing opportunities for teaming in a school community allows an individual to engage in reflective practice where they can learn about the reasons for their actions. These reasons are shared with the team to contribute to its growth. Also, attending to developmental diversity allows each team member to actively listen, share their viewpoints, and grow collectively as a team.

**Leadership roles.** The strategies listed in this section provide opportunities for teachers to have intentional experiences with leadership. These experiences surpass merely assigning leadership tasks (Drago-Severson, 2009). As socializing knowers, Stella and GV would benefit from the following strategies as they participate in leadership roles: The support strategy would offer acceptance from authorities in helping these knowers feel safe when sharing their voice and the challenge strategy would urge this knower to rely on their own views when leading and decision-making (Drago-Severson, 2009).

JR and Casey, as self-authoring knowers, would benefit from the following strategies as they participate in leadership roles: The support strategy would establish frameworks for analyzing proposals and the challenge strategy would advise this knower to develop an awareness of their own leadership goals and the steps needed to achieve them (Drago-Severson, 2009).

MLK, as a self-transforming knower, would benefit from the following strategies as she participates in leadership roles: The support strategy would guarantee that the team has a culture of collegiality where power is equally distributed and has ample space for creativity and the challenge strategy would have this knower assume authority when fitting even if doing so feels arduous (Drago-Severson, 2009).
**Implications of leadership roles.** Providing leadership roles intentionally offers supports and challenges for individuals to grow, and develop (Drago-Severson, 2009). This is different than distributed leadership, which Drago-Severson (2009) defines as merely assigning leadership tasks. I agree that leadership roles must be intentional, and add that they must also be meaningful in order for adults to grow. Meaningful leadership roles provide adults with opportunities to use their skills and knowledge. They also provide opportunities for adults to acquire new skills and knowledge that can be applied in new leadership roles. Creating a school culture that provides and supports meaningful leadership roles is required for individual and community growth.

**Collegial inquiry.** Collegial inquiry or shared dialogue involves reflecting on one's expectations and commitments with others as part of the learning process together with improving individual and school-wide practices (Drago-Severson, 2009). As a means to make meaning of collegial inquiry, Stella and GV would gain from these socializing knower strategies: The support strategy would offer space to assess their practice through writing or engaging with a colleague before interacting with a larger group and the challenge strategy would encourage this knower to depend on their own judgments (Drago-Severson, 2009).

As self-authoring knowers, JR and Casey would make meaning of collegial inquiry by utilizing the following strategies: The support strategy would emphasize making their own decisions regarding self-generated goals and the challenge strategy would encourage self-inquiry concerning their belief systems (Drago-Severson, 2009).

Self-transforming knowers, such as MLK, would utilize the following strategies so as to make meaning of collegial inquiry: The support strategy would ensure stakeholders share the same level of commitment and the challenge strategy would coach this knower to be aware of colleagues’ feelings who do not have the same aptitude for inquiry (Drago-Severson, 2009).
Collegial inquiry is similar to shared practices, a component of a community of practice (Wenger & Trayner, 2011). Shared practices are developed when members share a repertoire of resources (Wenger & Trayner, 2011). Casey affirmed that knowing the content is important and that some of the things she knows to be good practice were “echoed by teachers” in her conversations.

**Implications of collegial inquiry.** Collegial inquiry is regarded as shared dialogue, which involves reflecting on one's expectations and commitments with others as part of the learning process (Drago-Severson, 2009). It can improve individual and school-wide practices (Drago-Severson, 2009). Providing opportunities for collegial inquiry in a school community allows individuals to examine their practice and be receptive to their colleague's viewpoints.

**Mentoring.** Mentoring, considered to be one of the oldest ways to support human development, has the capacity to expand viewpoints, reflect upon beliefs, share expertise, and create a safe environment for risk taking (Drago-Severson, 2009). Socializing knowers, such as Stella and GV, would benefit from a mentoring relationship by experiencing the following strategies: The support strategy would ensure the knower feels understood, cared for and accepted as an individual and the challenge strategy would provide a variety of ways for the knower to look internally and take risks in voicing opinions (Drago-Severson, 2009).

As self-authoring knowers, JR and Casey would grow in a mentoring relationship by experiencing the following strategies: The support strategy would give information and practices that assist these knowers to achieve individual goals and the challenge strategy would explore different ways to problem solve (Drago-Severson, 2009).

Unlike the other knowers, self-transforming knowers see their mentors as companions and believe the relationship is mutually beneficial (Drago-Severson, 2009). MLK would benefit
most from a mentoring relationship by utilizing the following strategies: recognizing that this knower values and has a deep respect for the “lived experiences and perspectives of others,” which includes the mentor and the challenge strategy would provide opportunities to “embrace critical feedback” (Drago-Severson, p. 226).

**Implications of mentoring.** Mentoring has the capacity to expand viewpoints, reflect upon beliefs, share expertise, create a safe environment for risk taking and is considered to be one of the oldest ways to support human development (Drago-Severson, 2009). The mentoring relationship also embodies the three tenets of a holding environment (Kegan, 1982). One of these is creating a context with the right balance of support, and challenges (Drago-Severson, 2009). Providing mentoring opportunities within a school community ensures individuals have a safe place to experiment with their practice while receiving guidance, which will support learning and growth.

This application provides one solution to my research problem, which responds to the complexities (such as accountability, diversity, etc.) inherent in our PreK-12 schools. I contend that in order to respond to these complexities our schools need to become learning organizations, which cultivate growth and develop opportunities for adults. It also provides examples for administrators to lead adult learning and illustrates how action research can align with a pillar practice.

**Further research**

Keeping in mind that my study affirms and highlights the role action research plays in teacher practice, teacher voice and organizational structures, I contend there are more opportunities for research. As a lens for future research, I would use inquiry as stance in the following ways.
Inquiry as a stance “repositions the intellectual capacity of practitioners and proposes a framework that aligns with other social reform movements with a goal of radical transformation of teaching, learning and schooling” (Cochran-Smith & Lytle, 2009, p. 4). This tenet of inquiry as a stance applies to me in two ways. First, it inspires me to read more of Kincheloe’s (2003, 2005) works regarding critical constructivism and teacher research. Critical constructivism is a learning theory that contends individuals make meaning based on their interactions between prior knowledge and new ideas and promotes “self-reflection in relation to social power” (Kincheloe, 2005, p. 33). Also, as researchers, teachers can become empowered and become “active producers of knowledge, not simply consumers” (Kincheloe, 2003, p. 56). Both ideas from Kincheloe add another perspective to my current understanding of constructivism and teacher research.

Second, this tenet of inquiry as stance motivates me to become an active member of the action research community by joining and participating in organizations such as the American Educational Research Association (AERA).

Another aspect of inquiry as stance is that its habit or worldview uses a cyclical process to delve into real problems that exist within classrooms and schools (Cochran-Smith & Lytle, 2009). I would use this aspect to revisit with the teachers from my study and determine to what extent are they using inquiry-based pedagogy or action research processes to plan instruction, how are they reflecting upon their practice, and how are they sharing results from their practice. With this information in mind, I would create a community of practice for the teachers from my study and other practitioners interested in pursuing inquiry-based pedagogy and the action research process. This community of practice would use as a guide a social and political lens and
the acknowledgement the role practitioners play, individually and collectively, in bringing about change in classrooms and schools (Cochran-Smith & Lytle, 1999).

Within this community of practice, the practitioners’ knowledge and interactions with students and other stakeholders would be the focus of the research (Cochran-Smith & Lytle, 2009). It is this tenet of inquiry as stance that places practitioner research at the center of educational transformation and is referred to as an “organic and democratic theory of action” (Cochran-Smith & Lytle, 2009, pp. 123-124). Collaborative action research projects with students and adults as co-researchers would be strongly encouraged.

By using the various components of inquiry as stance, I believe that they contribute to additional solutions for my research problem. They also can contribute to developing professional development opportunities, which support adult development and learning.

**Summary**

This chapter provided the findings and implications of my study, which included an application of the findings to my practice. It also included a discussion regarding further research.

The implications of my study provide a pathway for educators to transform their schools into learning organizations. This pathway includes providing opportunities for practitioners to generate knowledge, to use their voices and to identify contextual factors and school structures that support and obstruct opportunities for growth and development. Also, this pathway provides a response to the adaptive challenges schools face.

One way to implement this pathway is through the action research process. My study has shown that teacher growth can occur when space is provided to create knowledge through the action research process. I contend that the pillar practices (Drago-Severson, 2009) can be the
space for action research to occur for it allows opportunities for “meaning making of an experience in order to grow from participation in them” (Drago-Severson, 2008, p.63). The pillar practices offer a road map or framework for school leaders called to lead adult learning.

As an educational administrator, I will continue to provide opportunities for practitioner research in order to create and sustain a learning culture in our schools. This practitioner research should be in collaboration with stakeholders, particularly students, for both hold a unique position in schools to identify topics that need new and different solutions. Providing opportunities such as action research allow practitioners and stakeholders to generate knowledge and share their expertise to create pathways for transforming our schools into learning communities.
APPENDIX A: OVERVIEW OF TEACHER RESEARCHERS

To: Teacher/Researcher for dissertation on Action Research
From: Susan Inman
Re: Overview for participants
Date: September, 2015

Thank you for your consideration regarding participating in my dissertation research.

Overview:
As you may know, my research is centered on teachers conducting action research. I am very interested in exploring how teachers use action research in their classrooms and schools and what are the outcomes. Action research is a process, which analyzes a practical problem with an aim toward developing a solution to that problem. Specifically, my research will be centered on the following 3 research questions:

What are the experiences teachers have as they utilize the action research (AR) process?

What are teacher perceptions regarding how AR impacts classroom practices, collaboration with colleagues and school practices?

Is there a connection between the AR process and teacher voice?

If you join me for this research journey, your commitment would be as follows:

• Agree to become a teacher/researcher

• Agree to collaborate with me as researcher and share your findings

• Your time commitment would be for October 2015 – January 2016
  o During this time, you would be collecting two cycles of data (see Steps for action research attachment) and sharing these results with me

• Optional meetings for sharing your findings with other teacher/researchers

Time commitment:
• September 1 – 30:
  o Prepare for the action research project by meeting with me, which will include answering any preliminary questions prior to beginning action research

• October - December:
  o Conduct two cycles of action research and share findings with me at a minimum of once per month

  o Create a final report of your action research results and share with me
    • Your report is part of the data collection process for my research
o Participate in a Pre-Interview regarding perceptions of action research

- December and January:
  o Post interview with me regarding the overall experience
  o Share with me your final report

Each teacher/researcher will receive a $25 gift card from Amazon for their participation
APPENDIX B: STEPS FOR ACTION RESEARCH

Action research:
analyzes a practical problem with an aim toward developing a solution to a problem (Creswell, 2008).

Steps for Action Research

1) **Create your question around these factors**
- What are you passionate about learning?
- Create a question based on an issue or problem you would like to tackle in your classroom or school.
  - Keep in mind: It should be a solution important to you and your students.
    - Sample questions:
      - How do students show respect when working together?
      - What activities engage boys in my class?

2) **Create and put into action your plan**
- Read background information (i.e. books, articles, research papers) that supports your question.
- What strategies will you use to help answer your question?
- When will you use these strategies?
- Share your plan with a colleague.
  - Sample action plan:
    - Read research about respect, behavioral expectations and rubrics.
    - Create a rubric with your students for behavioral expectations.
    - Create time each day for students and teacher to reflect on progress.
    - Based on daily feedback from the rubric, add new strategies to address behavior.

3) **Collect data**
- Have I used at least three different sources to collect my data? Example – interviews, focus groups, observations, rubrics.
  - Sample data:
    - Student rubric results
    - Student interviews
    - Teacher and colleague observations

4) **Analyze your data**
- This is where you think on paper.
- What patterns do you see or not? Other observations.
- What does the background information say about my question?
  - Sample analysis:
    - Patterns: When we take time as a class to review behavioral expectations, the
rubric scores either meet or exceed expectations.

5) **Share your results**
   **With colleagues, students and community**
   
   **Sample results:**
   o Share with team members or the whole staff.
   o Share these findings with your students.
   o Plan with your students a presentation for parents and the community.
   o Presentation of results can be in any format – for example, written form, iMovie, or other creative formats.

**Key ideas:**
- **Reflect 10 minutes, daily.**
  - This includes:
    - Collecting and recording data
    - Analyzing data
    - Write about your results
    - Balance data collection with analysis and writing about results

This template is adapted from the work of:
APPENDIX C: ACTION RESEARCH PLANNING FORM

Teacher Research Planning Form, October 2015.

Action research: analyzes a practical problem with an aim toward developing a solution to a problem (Creswell, 2008).

Name

1. Research Question:
   a. Sub-questions (optional)

2. Resources and strategies.
   a. What resources such as a book or article will you use to learn background information about your research question(s)?
   b. What strategies will you use to help answer your research question(s)?

3. Data collection. I will collect the following types of data (at least three): a.
   b.
   c.

4. Data analysis. Write a short statement about how you plan to analyze your data.

5. Write Final Research Report

6. Timeline:

Date(s)

a. Develop question and sub-questions: 10/1-10/19

b. Determine what types of data to collect: 10/19-10/26

c. Write-up and hand in Teacher Research Planning Form: 10/19-10/26

d. Start action and/or data collection: 10/26

e. Share data at monthly scheduled meetings: TBD

   Share 3 pieces of data

   Share analysis, reflections, and a summary

   Other
f. Write-up Teacher Research Report Form: TBD


This template is adapted from the work of:
APPENDIX D: FIRST INTERVIEW QUESTIONS

First interview questions

Question #1:

As we begin this process of action research and learning together, I would like to know as much as possible about how you learn. I know we all approach learning differently, so it will help me if you could think about a recent situation in which you learned something and then tell me about your learning process, that is, how you learned in that situation. What resources and opportunities supported your learning in that situation? How was your learning process in this situation typical of how you learn new things? How was it different from your usual learning process?

Question #2:

In order to get a sense of what each person who has joined this project knows as we start out about action research, please tell me what you know or have heard about action research. If you have ever been involved in an action research project before, please briefly describe what you did in that project and what you learned from your involvement.

Question #3:

One idea that interests me is 'teacher voice.' If that term is one that you have run across before, please tell me what it means to you. Tell me about times when this idea of teacher voice was important to you.
APPENDIX E: SECOND INTERVIEW QUESTIONS

Second interview questions

Question #1:

As we end this process of action research and learning together, I would like to know as much as possible about what you learned and experienced. Reflect back to the experiences you had through this process.

- Choose one specific experience to describe what you learned about yourself as a learner, how you learned this, and what, if any, impact did the action research process have on your practices.
- Also, do you believe what you learned about yourself will have any impact on future learning?

Question #2:

As I interacted with you throughout this action research process, I wondered about the context (school environment) of your action research project.

- Describe the context of your action research project.
- Please identify and explain how two of these contextual elements were supportive or challenged your action research project.

Question #3:

As you may recall, an element of my research is teacher voice. Reflect back on your definition of teacher voice as you began your action research process.

- Has it changed – why or why not?
- What, if any, opportunities did your project provide for you to use your voice?
- Based on your action research experience, what future opportunities may there be to use your voice?

Question #4:

The last question was crafted for each teacher researcher and inspired by our interactions throughout the action research process and their final research report.

GV:
I am curious about the following statement from your final report:

“Hopefully, our programming promotes confidence within our students when considering postsecondary educational plans.”
How has this action research project provided evidence regarding the program offered and students’ postsecondary plans?

**Stella:**
The statements below are from your literature review.

Aguilar takes the stance that dynamic, reflective coaching relationships have the power to transform not only the teaching practices of the “client,” but the entire school culture as well. By listening carefully to the client and engaging them in a powerful dialogue that is both reflective and informative, an instructional coach can serve as a catalyst for professional growth.

Based on your research journey, do you believe one or both of these statements have taken root in your school and your practice? Explain.

**MLK:**
I have been intrigued to hear you talk about how teachers believe they do not have time to teach science. Through this action research process, what evidence, if any, do you have to confront this notion of “no time to teach science?” Also, how could student voice be part of confronting the notion of “no time to teach science?”

**JR:**
According to the data you collected, parents stated that text messages were their favorite means of communication. I wonder how you can use text messages as a way to deepen parental and grandparent involvement with their children?

**Casey:**
The following two statements are taken from your final report.

- **Context/setting** - I wanted to check-in with staff to determine where they were with regards to increasing student agency during this second year of implementation.
- **Reflection** - Noticeably absent from most conversations was the topic of student voice in the classroom. Given the fact that we spent most of 2014-15 using a process that actively included students in developing our shared vision for learning, classroom codes of cooperation and standard operating procedures, I expected more teachers to discuss this during their interviews with me.

These 2 statements appear to reveal that students and teachers are not on the same page regarding student agency. Please comment on this from your perspective as a coach.
APPENDIX F: TEACHER RESEARCH FINAL REPORT

Teacher Research Report Form, December 2015

Name ____________________________________________________________

1. **Context/setting** in which you conducted your research

2. **Question:** Sub-question(s)

3. **Literature review.** Cite at least two articles or one book you read to inform your project and briefly describe what you learned from them. How did these resources connect with your topic?

4. **Data collected,** such as observations, grades, writing samples, survey results, reflections, etc. Include at least three methods.

5. **Data analysis.** Briefly describe process.

6. **Findings, Reflections, and Conclusions.** Write a paragraph about your findings, a paragraph about your thinking about the findings, and a paragraph about the conclusions you have reached.

7. **Other (optional).** Share any other data, processes or reflections here or ideas you may have about sharing this research with colleagues.

This template is adapted from the work of:
QUESTION: What happens when a middle school creates reading intervention classes to teach 6th, 7th, and 8th graders who cannot decode how to read and spell phonetically (encode)? Some related questions I am investigating:

- How helpful or important is it to provide the teachers with a reading program or curricular materials?
- How do the teachers use this curricular program?
- How helpful or important is it to provide the teachers with training by a teacher experienced in teaching reading intervention to middle schoolers?
- How helpful or important is it to provide teachers with time to collaborate and share best practices?
- What factors do students credit as helping or hindering their learning to read and write?
- What factors do the intervention teachers credit as helping or hindering their students’ learning?

BACKGROUND AND RATIONALE:

Setting: My public, urban middle school serves 600 6th, 7th, and 8th graders. 95% of our students qualify for free lunch, and 85% are learning English as a second language. The average education level of my students’ parents is less than sixth grade. Most students enrolled in sixth grade reading at a fourth grade level. Approximately 75 students at our school did not pass a test called the Core Phonics Survey because they did not recognize all of the sounds of the alphabet.

My previous study: This study is a companion to a study I completed last year called The Power of Pretzels. In the 2002-2003 school year, we had informal reading intervention courses that served more as tutorials for students with their regular Humanities classes. Action research I conducted last year revealed that though the one-on-one help students received in their informal intervention courses in 2002-2003 helped students pass their core classes, they did not help students master the foundational literacy skills they needed to read and write independently. What, I wondered at the end of last year’s study, would happen if intervention courses targeted a basic building block skill, such as decoding? What, that is, would happen if we put resources into teaching students who could not sound out words the ability to do so? How fast could seventh graders reading at a first grade level catch up with their peers—and what other effects might learning to read have on them
Action Research
Building a sense of belonging in my classroom (modified to protect the identity of the researcher – SI)

Research Data/Background Research
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1885415/
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3120079/
http://www.interventioncentral.org/blog/behavior/how-use-power-personal-connection-motivate-students-4-strategies
http://www.teachers.net/wong/OCT13/
http://newteachers.tes.co.uk/content/how-make-your-presence-felt-classroom

Question: Since middle school students rotate through my (technology) classes every nine weeks, how can I create a sense of belonging for them in the classroom, school and with them?

Action Plan:
● Have students take pre survey first day of class. Talk about belonging in the school.
● Greet students at the door with a hello and quick comment, first and second week.
● Greet students by name and quick comment, third week.
● Greet students by name and handshake and quick comment, high five or fist bump, fourth week
● Have students take post survey during week four.

Collect Data:
● Student Survey (pre & post)
  o Link to survey results (deleted link for it identifies researcher- SI)
● Student Survey Responses
  o Link to survey results (deleted link for it identifies researcher - SI)
● Rubric –compare score values for the class, look for improvement by increased scores
● Student Interviews

Analysis of Data:
Patterns observed & observations

Key Ideas:
Build upon getting to know students.
See how this closeness changes work effort and desire to be successful in students.

Results and Conclusions
Seventh grade students (12 and 13 year old) in the final quarter of this school year took a survey that was dealing with their “Feeling of Belonging” at X Schools. The purpose was to gauge what the feeling of belonging was in the school at the current time. The survey asked for their opinions
dealing with the school atmosphere, their teachers and their peers. On the survey results documents, answers to the questions as well as ideas that substantiated either a positive or negative response. The feeling of the researcher was that this age of student is more open and honest and will answer questions with more positively as opposed to a negative slant due to the thought of it being a session to complain.

Variables to the research

- The researcher was involved with these same students on a three day Outdoor Education field trip that allowed for more interaction between myself and the students. We were around each other for 24 hours a day during this field trip.

- During the research gathering time span, the researcher was absent from school and also was absent on the first day of class when the first survey was taken. An email was sent to all students about the survey, but I was not able to meet or interact with them during the first day.

- A larger cross section of students could possibly change or substantiate the outcome of the survey.

Success of ideas

- The survey was successful in gathering ideas from students.

- The researcher changed the initial action plan time schedule back a week due to my absences.

- Students liked the attention in the greeting.

- Students more readily spoke to or greeted me outside of class.

- Student voice is important in how they see their education and how they can change that impact.
Throughout my time as a teacher, it has become clear to me that my students are coming from more and more challenging home environments. This includes, but is not limited to, issues connected to low socioeconomic status. I find that students with these challenges are often disengaged from school at least part of the time. Some do not see the importance of school, and others cannot not get out from under outside stresses long enough, and consistently enough, to learn at the expected rate and level of other 6th grade students. This leads to a cycle of falling behind, confusion, and increased disengagement from learning and the school community. Seeing this cycle affecting my students lead me to the question, how do I help all students—especially those from low SES homes—increase engagement through building their cognitive capacity? (modified to keep the teacher researcher’s identity anonymous; these are excerpts from the study - SI) Building a sense of belonging in my classroom (teacher topic).

In an effort to begin to answer this question, I studied the book, Engaging Students with Poverty in Mind by Eric Jenson. Jenson identifies five actions to build cognitive capacity:

1. Build Attention Skills
2. Develop processing speed
3. Teach problem solving and critical thinking skills
4. Develop processing Speed
5. Foster self-control

My plan was to engage students in activities that would build cognitive capacity in all five areas. While I feel as though I did make progress in most areas through adjustments to my teaching style, routines and activities, a more organized approach would have been more effective. When I work through similar challenges and questions with future classes, I will work through one action at a time until there is a demonstrable change in student learning and behavior; until these strategies become automatic for them. The broad focus that I undertook for this research project limited my ability to clearly articulate my goals for our community to the students; I feel we would have been more successful if we had been working together step by step, instead of me working from above to manipulate their cognitive capacity across all five actions. One tentative plan I have for accomplishing this next year is to begin our year with our study of the human body, namely the brain and nervous system. This will give me the opportunity, from the outset, to introduce growth mind-set and the idea that we can exercise our brains and build them up, just as we would a muscle.

The first action I undertook was to build attention skills. I did this mainly through:

- Hooks, teasers and challenges at the beginning of most lessons
- Making predictions
- Pausing and chunking (giving a break during instruction for processing and anticipation)
- Teaching study skills
- Engaging in fast physical activities
- Redirects, rituals (routines)
- Providing time for practice

I approached training working memory and developing processing speed mostly through the use of games and activities. During the research cycle we played games such as Alibi, Co-Seek-I, Number Basket, Going on a Picnic and variations on Greedy and Simon Says. I also
asked students to push their memory through group reviews, such as a quick share in meeting (observed) and through small group teaching and re-teaching. While it was hard to ‘see’ the results in day-to-day work and interaction, the table below shows the increased confidence students had in their memory.

<table>
<thead>
<tr>
<th></th>
<th>3.10.15</th>
<th>4.29.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a great memory, bring it on!</td>
<td>31%</td>
<td>69%</td>
</tr>
<tr>
<td>Like a have to focus, but I can do it!</td>
<td>47%</td>
<td>25%</td>
</tr>
<tr>
<td>Like I am a little lost sometimes</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>I am often lost right from the beginning of the game</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

This research began with a question: how do I help all students – especially those from low SES homes – increase engagement through building their cognitive capacity? I believe that I have been able to do so through focusing on attention skills, explicit teaching or problem solving and critical thinking and fostering self-control. Working through play has also helped students increase processing speed and working memory. While I wish I had taken a more focused approach to the problem of engaging these students, I have learned a lot about how to increase engagement and how to implement such changes in the future.

<table>
<thead>
<tr>
<th>Survey Data</th>
<th>3.10.15</th>
<th>4.29.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>How engaged I feel in most lessons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very into it</td>
<td>5%</td>
<td>31%</td>
</tr>
<tr>
<td>Into it</td>
<td>61%</td>
<td>31%</td>
</tr>
<tr>
<td>Sort of into it</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>Not very/ not at all</td>
<td>0%</td>
<td>6%</td>
</tr>
</tbody>
</table>

| What I think might help me be more engaged:       |         |         |
|                                                  |         |         |
|                                                  | read ourselves; more hands on; go slower; less math; more fun/ amusement; a more quiet spot; fewer directions; more details; more quiet; be more interesting; make things easier | if we had a hands on activity before we do lessons; more hands on activities; I enjoy watching videos about our subject and get more from them than I do from text |

<table>
<thead>
<tr>
<th>Study Skills</th>
<th>3.10.15</th>
<th>4.29.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel like I have the skills I need to be organized and learn independently</td>
<td>41%</td>
<td>69%</td>
</tr>
<tr>
<td>I have some skills I need to be organized and learn independently, but I need some clear strategies</td>
<td>35%</td>
<td>19%</td>
</tr>
<tr>
<td>I need some clear strategies to</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>Issue</td>
<td>Percentage 1</td>
<td>Percentage 2</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>become an effective independent learner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I really don’t know how to study on my own</td>
<td>6%</td>
<td>13%</td>
</tr>
</tbody>
</table>
References


