Veteran Public School Teachers' Perceptions of Research-to-Practice Methods and Effectiveness: A Qualitative Study

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VETERAN PUBLIC SCHOOL TEACHERS’ PERCEPTIONS OF RESEARCH-TO-PRACTICE METHODS AND EFFECTIVENESS: A QUALITATIVE STUDY

by

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A DISSERTATION

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In 2015, the United States government signed the *Every Student Succeeds* Act which called for evidence-based interventions, strategies, and programs in K-12 education. Mission statements in districts around the country echoed the need for evidence-based, or research-based practices in classrooms to bolster student achievement. While a wealth of research exists regarding the movement of research into practice, most studies are centered on teacher education programs, or pre-service teachers’ use of research in first or early years. Little is known about how veteran public school teachers apply research in their practices. In this qualitative inquiry, eleven veteran public school teachers from elementary, middle, and high schools were interviewed using a semi-structured protocol to determine their perceptions of research-to-practice in education.

Using a two-stage process, the data was analyzed for codes, categories, and themes. Four themes emerged: *Engagement, Resistance, Research-to-Practice in Action*, and *Proposed Practices*. Teachers in this study lacked a means of collaboration between themselves and educational researchers; instead they used materials from SD/PD offerings and the expertise of other educators as their primary means of learning about research or
research-based methods and strategies, neither of which required direct contact with researchers or research articles. Other research has suggested that collaboration between teachers and researchers would help bridge the research-to-practice gap (Alber & Nelson, 2010; Ball, 2012; Cooper, 2007; Hedges, 2010; McIntyre, 2005; Schneider, 2014; Wentworth, Carranza & Stipek, 2016), but the present study suggests that veteran public school teachers prefer to collaborate amongst themselves, in their own way, and through their own preferred mediums. Inserting meaningful, contextually relevant, and important research into these interactions is a step toward bridging the research-to-practice gap in education. A Self-Directed Teacher Research-in-Practice Model is advanced to address the findings of the study, and empower teachers in practice to embrace and use research in meaningful ways.
Acknowledgement and Dedication

It is with my deepest appreciation that I thank my committee for their commitment to me and to my work. Thank you for your support and persistence. You stretched me and made me better. I am forever changed because of your devotion to my learning.

Dr. Guy Trainin

Dr. Loukia Sarroub

Dr. Wayne Babchuk

Dr. Theresa Catalano

I dedicate this work to all my family I love so much, and to my brother, Scott Henry.
# Table of Contents

## CHAPTER 1 – INTRODUCTION

- Statement of the Problem ........................................................................... 1
- Background ................................................................................................. 4

## CHAPTER 2 – REVIEW OF THE LITERATURE ........................................ 7

- Introduction ............................................................................................... 7
- Search Description ....................................................................................... 7
- Defining and Rationalizing the Research-to-Practice Gap ......................... 8
- Bridging the Research-to-Practice Gap ...................................................... 17
- Proposed Models for Bridging the Research-to-Practice Gap ................... 21
- The Gap in Research-to-Practice Research .............................................. 25
- Purpose Statement and Research Questions .......................................... 27

## CHAPTER 3 – METHODOLOGY ................................................................. 28

- Qualitative Methods .................................................................................. 28
- Criticisms of Qualitative Analysis ............................................................. 31
- Paradigm and Positioning .......................................................................... 33
- Researcher Bracketing .............................................................................. 36
- Role of the Researcher .............................................................................. 38
CHAPTER 4 – FINDINGS

Engagement

Research and research-based methods definitions

Why teachers engage with research

How teachers gain access to research

Elements conducive to teacher engagement with research

Resistance

Sources of research-based strategies

Time

Teacher Characteristics

Inapplicability of Research

Research-to-Practice in Action

Teacher Demonstrations

Collaboration

Building-level autonomy and administrative support

Proposed Practices
Demonstration, observation, collaboration .......................... 90
Teacher leaders .......................................................................... 92
Choice ....................................................................................... 92
Administrative support ............................................................... 93
Pick one ..................................................................................... 94
CHAPTER 5 – DISCUSSION ............................................................ 96
Summary of the Themes .............................................................. 96
Implications of the Research ...................................................... 97
RQ1 ......................................................................................... 98
RQ2 ......................................................................................... 103
RQ3 ......................................................................................... 109
RQ4 ......................................................................................... 113
RQ5 ......................................................................................... 120
Proposed Model ......................................................................... 123
Persistence of the Gap ............................................................ 126
Limitations and Delimitations .................................................. 135
Future Research ................................................................. 136
REFERENCES ............................................................................. 138
APPENDICES

Appendix A: Informed Consent Form .............................................. 149

Appendix B: Recruitment Email Template ........................................ 151

Appendix C: Interview Protocol ...................................................... 152

Appendix D: Participant Demographics .......................................... 155

Appendix E: Alignment of Research Questions and Interview Questions .... 158

Appendix F: Member Checking Template ......................................... 159

List of Figures

Figure 1: Self-Directed Teacher Research-in-Practice Model .............. 123

List of Tables

Table 1: Participants’ School Population Categorization and Public School Level
........................................................................................................ 43

Table 2: Data Analysis Examples: Codes to Categories to Themes ........ 58

Table 3: Document Analysis: Example of Research/Research-based Materials Provided by Participants ................................................. 61

Table 4: Document Characteristics Matrix ........................................ 63
CHAPTER 1

INTRODUCTION

Statement of the Problem

In December of 2015, the Every Student Succeeds Act (ESSA) was signed as a reauthorization of the Elementary and Secondary Education Act of 1965, and supplanted the previously enforced No Child Left Behind Act of 2001. ESSA aimed to assure that every student is able to succeed, and called for evidence-based interventions, strategies, and programs in schools for which it has been determined extra support is necessary (National Conference of State Legislatures, n.d.).

The use of evidence-based or research-based wording regarding education predates the landmark ESSA 2015 legislation, including the Reading Excellence Act (1998) programs developed to support literacy instruction, which had at the heart “scientifically based reading research” (http://www2.ed.gov/pubs.promisinginitiatives/rea.html; https://www.congress.gov/bill/105th-congress/house-bill/2614/text). Additionally, in an answer to the call for research-based practices, the Institute of Education Sciences (IES) was founded in 2002, as an extension of the United States Department of Education, and was aimed at promoting, funding, reporting, and disseminating high quality educational research (Institute of Education Sciences, https://ies.ed.gov/aboutus/). The IES manages the What Works Clearinghouse (WWC). WWC’s goal is “to be a resource for informed education decision making” (Institute of Education Sciences,
http://ies.ed.gov/ncee/wwc/aboutus.aspx) by conducting reviews of educational research and disseminating research information to researchers, educators, and policymakers through an expansive web-based database.

The requirement for evidence-based or research-based interventions, instructional strategies, or programs was also part of the Individuals with Disabilities Education Act of 2004 (Wright, 2004) and appears in many districts’ mission statements, purpose statements, strategies and/or objectives, furthering the notion of research-based methods as part of the educational landscape from the highest level of the public school hierarchy to the local level. At a local level for example, the Omaha Public School District, a large metropolitan public school district in the Midwest, uses the term “best instructional practices” often in the strategies for achieving the district mission, and in addition to that term, this same district includes as a strategy “Provide school staff with ongoing and relevant evidenced-based [emphasis added] cultural-proficiency training to foster respect for students and families of diverse cultures” (OPS Strategic Plan, 2014, pp. 48). Millard Public Schools, an adjacent Midwestern suburban public school district, included similar language, incorporating “instructional best practices” [emphasis added] into a strategy to meet the district mission statement (Millard Public Schools, https://sites.google.com/a/mpsomaha.org/mps/superintendent/strategies-action-plans), while another neighboring suburban public school district, Papillion LaVista has in its Purpose and Direction statements that their “direction is to prepare every student for success through superior educational programs delivered by highly effective educators, who use innovative, research-based strategies [emphasis added] in a safe and supportive environment in collaboration with family and community members” (Papio LaVista
Community Schools, http://www.plcschools.org/domain/34), thus suggesting the inclusion of research in the practice of teachers. Lincoln Public Schools, another large Midwestern public school district, developed school improvement goals which state, in part: “The school improvement plan is developed to focus the entire school on the goal using *research-based strategies* [emphasis added] for curriculum, instruction and assessment” (Lincoln Public Schools, http://home.lps.org/schoolimprovement/), and the list of district strategy statements which include this verbiage as a result of wording in federal government documents which call for evidence-based and research-based interventions, instructional strategies, or programs, goes on and on, well beyond the Midwestern region, in districts from coast to coast.

The public school education system aims to provide a quality education for all students. The needs of students change constantly over time, and the methods for addressing their needs must change also. Teachers in practice, like any profession, must constantly learn. They must stay abreast of new technologies, new methods of instruction, and new evidence for instructional strategies that keep the goal of student achievement at the center of their practices. This premise facilitates the need for evidence-based, or research-based instruction, and teachers who embrace it.

With local-level language signifying the inclusion of evidence-based or research-based interventions, instructional strategies, or programs, it is important for schools to demonstrate that their teachers in fact do use evidence-based and/or research-based instructional strategies, interventions or programs as well. Federal legislation and local mission statements have normalized terminology such as “best instructional practices,” “research-based methods,” and “evidence-based practices”; however, sustained,
normalized, meaningful partnerships between teacher-practitioners and education researchers as vehicles for moving research to practice remain anomalies in many public schools. The research-to-practice gap in education has a well-documented history (e.g., Cook, Cook, & Landrum, 2013; Hargreaves, 2007; Neal, Neal, Kornbluh, Mills, & Lawlor, 2015; Vanderlinde & Braak, 2010), and although it has often been noted that pathways for the dissemination of research exist (e.g., WWC, staff development for teachers, new curriculum adoption, or workshops for professional development), specific evidence regarding implementation of research by teachers is lacking. How are teachers accessing research? What do they find useful? How do they decide what to use?

**Background**

As a public school teacher for over twenty years, I have been a witness to and a participant in countless staff development (SD) and professional development (PD) sessions - sessions which often purported to be disseminating research-based methods, programs, or curriculum. The practices which were presented from year to year sometimes felt irrelevant, delivered to teachers unidirectionally - from a completely different level of concern than that which was fore-fronted by teacher experiences in the classroom - a palpable gap which seemed to serve to distance teachers from research, and to disengage them from staff development events. Speakers and dispensers of these research-based practices could never adequately satisfy my need to know whose research was being illustrated, since merely stating that something is research-based is quite different from describing foundational research that supports the method, program, or curriculum. As Miretzky (2007) stated,
the vast majority of teachers experience educational research through the agendas of professional developers/workshop providers, or administrators panicked about test scores, or teacher educators who have 35 undergraduate students with whom they must cover a semester’s worth of material. How many research findings or theories have turned into one more addition to a bag of tricks? (p. 279).

Forever dubious, I would begin digging through research on topics of SD/PD meetings to determine for myself the answers to my questions. How was data collected? To what was this program or intervention compared? What was the quality and intent of the research? For whom was the research intended? Under what conditions was the research method, program, or curriculum most effective? Did the research condition mimic the classroom? Did it mimic my classroom, my students? I wondered if other teachers were doing the same types of searches for answers in the space in which teacher-practitioners as pedagogical users worked as their own knowledge gatherers. With each SD/PD session, I could feel the gap widening as teachers rejected research-based methods, or blindly accepted them as their own without questioning those methods and practices, and the distance between teachers and solid, valid research that would benefit their students grew.

Hargreaves (2007) hypothesized that the research to practice gap in education exists for a multitude of reasons, including the context in which the research agenda is determined, a lack of access to research on the part of teacher-practitioners (therefore a shortfall of educational research “users”), and because educational research studies lack classroom contexts and replicated results to bolster their usefulness for teachers. Additionally, despite efforts to create access to research through the existence of rich resources like the IES and WWC, there seems to be no mechanism for the systematic or
mandatory use of them, or other such resources, to guide educators or education policymakers; therefore, regular, habitual use of research resources is not a widespread practice among those groups.

What *do* teachers do to inform themselves about quality research so that they can make informed decisions in the classroom? How do teachers assure the effective use of research-based methods? Knowing how teachers connect to research can assure that research-based decisions are happening, whether or not a PD method is truly research-based or addresses specific concerns and needs of teachers at the classroom level.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

In a landmark lecture in 1996, Hargreaves defended his position that education “is not at present a research-based profession” (p. 3), comparing the use of research in education to that of medical science. He noted that there existed several differences between medicine and education in the practice of moving research knowledge to actualization. Among those discrepancies were the stark differences between teacher practitioners and medical doctors regarding access to research, priority setting in what is studied, and the context of research compared to the applied setting, with medical doctors enjoying a more connected relationship with medical research than teachers with educational research. Since the time of Hargreaves’ public stance in the Teacher Training Agency Lecture (1996), others have attempted to define the gap, explain its existence, and create bridges to bring together research and practice in education to meet the goals of educational directives.

Search Description

I conducted a preliminary search to collect articles related to the educational research-to-practice gap from within the last ten years, yielding 132 articles. To further refine the results, those studies which were not directly related to classroom practice (for example, ones relevant to professional studies, medicine, corporate training, or other non-traditional classroom practices) and those which involved strictly special education were eliminated, which reduced the total to sixteen articles directly related to the specific terms of research-to-practice in education. The scope was widened by including terms
“research-to-practice gap” and “teachers” (with the same exclusions), which, discounting some overlap with previous searches, yielded six more studies. Fewer than ten new articles and studies each emerged with subsequent searches using terms “evidence-based,” and “research-to-practice gap”; and “staff/professional development” and “education.”

Articles and studies in the area of research-to-practice gaps are abundant, but specific articles and studies aimed at understanding the phenomenon amongst public school educators in America are less so, and ones that explicate the teacher point of view, fewer still. Most research-to-practice studies are from the educational researcher or educational theorist’s point of view, an important note when trying to reach a full understanding of the gap and its meaning to all stakeholders.

**Defining and Rationalizing the Research-to-Practice Gap**

Various researchers in the field of education have, like Hargreaves, suggested that a research-to-practice gap exists, have speculated causes and rationales for the gap, and have provided definitions of the gap through their perspectives and the perspectives of those who participate in studies examining the gap. Acknowledging the existence of the research-to-practice gap in education, Ball (2012) summarized the potential reasons for its persistence. In her address to the American Educational Research Association, Ball recommended a model called the “Zone of Generativity” to facilitate moving research into practice in education. Referring to the gap as the knowing-doing gap, Ball suggested five causes for its existence:

1. The inaccessibility of research reports;
2. A lack of professional norms and time for practitioners and policy makers to consult and use research findings;

3. Educational practitioners and policy makers very rarely carry out the research;

4. A lack of forum for equal collaboration between educational practitioners, policy makers, and researchers; and

5. As Susan Furman has noted, ‘Research is often used to justify political positions already taken rather than to set a new direction for policy.’ And as others have noted, research does not even need to pass standard scientific muster in order to be used to justify policies (p. 285).

Ball’s explanation for the research-to-practice gap in education incorporated multiple perspectives (teachers, researchers, and policy makers) and pointed to why research-practice collaboration may not be a natural outgrowth in education.

In their explication of the gap between educational research and practice, Smith, Richards-Tutor, and Cook (2010) identified three primary reasons for the struggle teachers experience in connecting to research: research is written for a sophisticated audience who understands statistics and methods, the research is carried out in a completely different context from the teacher’s environment, and researchers are not teachers who understand real teaching problems and situations. Research written for a “sophisticated” audience relates directly to what Ball (2012) called the “inaccessibility of research reports” (p. 285). Despite the underlying assumption that teachers are not “sophisticated,” the fact that research is not written directly and specifically for teachers’ consumption contributes to the inaccessibility factor in the research-to-practice gap. To remedy this, Smith, Richards-Tutor, and Cook described a three-pronged approach (citing
Shermer, 2007) of dissemination in which all three parts – theory, data, and narrative - must be present to facilitate effective, accurate movement of research to practice in education. They further proposed that the typical dissemination practices include theory and data, but lack the teacher narrative which places research into a teaching context, and could be considered the addition of greater accessibility for teachers to research.

One way for teachers to learn about educational research is to read articles in journals related to their specific fields in education, an activity practicing teachers might perform for a graduate course, to inform a specific aspect of teaching, or as part of teacher action research. West (2011) noted that many teacher action research guidebooks do not require a literature review as part of the process, and asserted that when teacher practitioners omit the literature review portion in their action research - beyond a lack of guidebook directives - they possibly do so for several reasons. He suggested that teachers do not view a literature review as a valuable use of time, and that teachers privilege their own classroom experiences over journal articles and books as a means of looking at student data systematically. Therefore, the lack of use of original research by teachers could be attributed to the “inaccessibility” notion of educational research, as suggested by Ball (2012), as teachers may not choose to sift through lengthy research written for a sophisticated audience, or may not have physical access to journals containing current research. West suggested that it is possible that teachers avoid using journal articles and books as a way to push back against the ivory tower of research institutions as the “traditional gatekeepers of knowledge” (p. 90), the sophisticated knowledge producers.

Citing Sagor (1992), West (2011) described teaching as a fairly isolated practice with little interaction between professionals when compared to other fields. Collaboration
must be planned and effortful in the teaching practice, and models of a close relationship between research and practice do not exist in most schools. As Ball (2012) noted, there are no normalized networks for collaboration between teachers and researchers. West added that “This divide between research and practice has posed a problem for education since the 1930s, when university professors began distinguishing themselves as either researchers or teacher educators” (p. 93), creating polarization in education and crystalizing the gap between research and practice. Additionally, staff development initiatives which may include the dissemination of research-based instructional information often do not involve teachers as decision-makers at all. According to West (2011), “Often, principals, district-level administrators, legislators, and other powerful stakeholders decide which educational and developmental topics teachers will pursue, without regard to the needs that the teachers themselves perceive” (p. 93). This top-down direction for staff development practices may play a part in furthering the gap between research and practice, as teachers being told what to do and not being trusted for their own knowledge, observations, and ideas experience less authority and agency in their own classroom practices.

Another of Ball’s (2012) suggestions for the existence of the research-to-practice gap included that “professional norms and time for practitioners and policy makers to consult and use research findings” do not currently exist (p. 285). Findings that support this notion were demonstrated in a study by Tavakoli and Howard (2012), in which teachers of second languages responded to a questionnaire regarding research-to-practice in L2 education. The study relied heavily on data compiled from the numeric questionnaire information.
The questionnaire had five sections investigating teachers’ (a) views on the significance and usefulness of research, (b) interest in and engagement with research activities, (c) beliefs about the proximity and association of research and practice, (d) whether and how the relationship between research and practice influenced their use of research and their views about it, and (e) expectations from research and suggestions for bringing L2 research and practice closer together (p. 231).

The participants were 60 teachers of adult language learners in the UK. Through self-scoring, the teachers indicated that research is important, but also that they did not engage as researchers. Those teachers who received degrees longer ago than others were more likely to feel that research did not support their practices than those who were more recently degreed. More experienced L2 teachers relied less on research than less experienced L2 teachers. “Notwithstanding the usefulness of conducting research in class, many of the teachers contended that they did not spend much time reading, participating in or conducting research” (p. 238).

Based on teacher responses, Tavakoli and Howard (2012) concluded that L2 teachers considered practice and research to be two entirely separate communities with different goals and roles. In fact, the teachers in this study appeared to view research as a reflective process, thinking about adjustments in practice for better results. “Our data demonstrate that although the teachers may not engage with research in its conventional sense they are nonetheless actively engaged in research of the type they know, appreciate and find useful” (p. 239). This serves to further define the differences in perceptions of the term “research” between teachers and educational researchers.
In a study of early career academics in Australia, Matthews, Lodge, and Bosanquet (2014) surveyed 522 early career university and college academics to determine which they valued and set as a priority - research or teaching. They found that even though the early career academics could select a high value for both research and teaching, a gap existed which privileged research. When the data was disaggregated for department of study within the institutions, there remained a gap between value and priority for research and teaching. Early career academics in the field of teacher education showed a strong inclination for research over teaching, which seems to indicate that the teaching field has a connection to research, but may point to a disconnect for teacher practitioners once they are out of teacher education programs, as the gap persists in practice. This seemed to be the case even within a year of leaving teacher education programs, according to Gray and Campbell-Evans (2002) who found that despite research training in undergraduate teacher education courses, first year teachers had barriers of time, stress, and accessibility in moving research to practice. The ease with which researchers and teacher-practitioners can collaborate once teachers are away from research institutions appears to decline, leading to a lack of collaborative partnerships as noted by Ball (2012).

McIntyre (2005) proposed that knowledge comes in different types and can be expressed as having a position on a continuum of knowledge. McIntyre asserted that the type of knowledge needed by an educational researcher (propositional knowledge) is at the opposite end of the continuum from the educational knowledge needed by practicing teachers (pedagogical knowledge). The gap on the continuum exists according to McIntyre, at least in part, due to the contention that “the kind of knowledge that research
can offer is of a very different kind from the knowledge that classroom teachers need to use” (p. 359). The two types of knowledge function in different ways as well; propositional knowledge must be generalizable, while pedagogical knowledge is rooted in context and practicality, which may make collaborative partnerships between research and practice difficult.

Miretzky (2007) further posed that the research-practice gap is perpetuated by the possible tendency for researchers to “contribute to underlying tensions when they do not pay sufficient attention to the needs of the schools and teachers they study, speak and write in researcher language, or leave the work of professional development to education bureaucrats” (p. 272). In a study in which 15 Chicago-area teachers (new and veteran) were interviewed about research-to-practice connections, Miretzky found that teachers were frustrated by district mandated staff development workshops that took “significant” time and were not considered to be relevant to the teachers. One teacher-participant noted that researchers should visit classrooms to gain context for how research looks when enacted. As suggested also by Anwaruddin (2015), Miretzky found that the culture of school did not support research-based inquiry, and that teachers did not wish to have observers report about their classroom practices for fear of being negatively portrayed, a concept that is in conflict with the notion of researcher-teacher collaborative partnerships. Teachers in Miretzky’s study expressed a ‘we/them’ dichotomy in discussing researchers and teachers, illustrated by experiences of PD during which the PD speaker issued a hopeless message about particular types of students – seemingly not understanding that those students populated the school at which he/she was speaking; and another instance at a national research conference during which the researcher continually referred to
teachers as “they” – distancing the practitioner audience from the researchers through the use of othering speech.

Miretzky’s (2007) participants bemoaned PD requirements and her interpretation of their displeasure was in part that “Such presentations may or may not be based on credible research findings, but for many teachers the two become merged, and the frustration and impatience aimed at professional developers winds up extending to research and researchers as well” (p. 274). Putting the onus back on researchers, Miretzky suggested that when the results of educational studies are made available, it should perhaps be incumbent upon the researcher to follow up on how the work is presented to and packaged for teachers.

Using focus groups and surveys, Vanderlinde and Braak (2010) sought to examine the research-to-practice gap in education through the perspectives of teachers, school leaders, researchers, and intermediaries. Intermediaries were defined by the researchers as “people or organisations [sic] responsible for distributing and translating research findings to practitioners” (p. 304). Among their results, they found that teachers perceive a wider gap than other groups, and additionally identified barriers to effective use of research in practice in education including a lack of applicability of research, and inaccessibility of studies due to complex language. Vanderlinde and Braak also noted that the researchers who took part in the study indicated that “research findings can influence teachers’ way of thinking about their own professionalism and offer them a conceptual framework, rather than changing their behaviours and practices” (p. 308), an important notion that speaks to the necessity of bridging research into practice. The researcher participants also indicated that when they conduct research, it is primarily for journals,
publications, and proceedings, perhaps indicating deference of responsibility regarding the dissemination of results to practitioners to another entity. The researcher participants also stated that they believed research should invoke thinking and reflective practice for teachers, not a list of things for teachers to do or change. Researchers who were interviewed as part of Vanderlinde and Braak’s study described a collaborative model to effectively disseminate research information to practitioners, including their own skill development so that results could be communicated accurately and concisely, and also suggested the continued practice of “professional development of practitioners and intermediaries” (p. 309), adding that the role of the intermediary should be considered crucial, and developed in respect to the need of bridging research to practice. Such a model would be an attempt to create the type of collaborative arrangement called for by Ball (2012) two years after Vanderlinde and Braak suggested its development.

Similar to Ball’s (2012) claims, in their study of sixty L2 teachers in the UK, Tavakoli and Howard (2012) found that there appeared to be four main reasons for why teachers do not engage with research: “lack of time, heavy workloads, institutional policies and teachers’ unfamiliarity with or lack of confidence in using research”; “the impracticality of research and that their needs and problems were not usually addressed by L2 research”; “the classroom should be where research starts rather than where it ends”; and teachers felt the “restricted research training they had received and conceded that the responsibility of making the connection between research and practice was to be shared by the teacher training programs and institutions in which they worked” (p. 239). To this end, Tavakoli and Howard recommended that researchers and teacher educators must learn more about teachers’ concepts and worldviews about research, because “It
appears to us that unless both sides are well aware of each other’s assumptions, beliefs and perceptions, the ultimate goal of co-constructing a more overarching and transparent picture of language education may prove too difficult to achieve” (p. 240).

While it seems that teacher practitioners agree that educational research is important, it also seems they do not infuse it into personal practice (Tavakoli and Howard, 2012). As teachers exit teacher education programs, it appears there is a falling-off of research habits used during teacher preparation courses (Gray & Campbell-Evans, 2002). In addition, the presentation of research to teachers through PD seems to be at odds with teacher practitioner levels of concern, and the disconnect serves to secure a gap between research and practice (Miretsky, 2007; West, 2011). The gap is further solidified by issues such as access to research that is meaningful and contextually similar to the classroom (Smith, Richards-Tutor & Cook, 2010; Vanderlinde & Braak, 2010), and a lack of a “forum” for researchers and educators to collaborate (Ball, 2012). The existence of a research-to-practice gap in education as described by Hargreaves in 1996 persists after over twenty years.

**Bridging the Research-to-Practice Gap**

Within the literature, there is general agreement that there is an educational research-to-practice gap; however, there are suggestions for bridging it. McIntyre (2005) suggests three ways to bridge the gap between research and practice in education. The first is to initiate meaningful dialogue between what he calls the two ends of the spectrum, culminating in classroom teachers themselves investigating the merits of research-based proposals by testing them through action research in their own teaching. This
approach is based therefore on the premise that research can be helpful in improving the quality of classroom teaching, but equally on a second premise that research cannot be helpful except through quite complex processes culminating in classroom teachers engaging in dialogue with research-based proposals (pp. 362-363).

By incorporating steps between research and classroom practice, McIntyre’s idea of dialogue can begin. The steps include critical judgment of research merits, reviews of research centered on particular educational themes, and generation of proposals for practice (p. 364).

A second method for bridging the gap according to McIntyre (2005) is to incorporate research strategies (and methods) that are directly aimed at informing classroom practice, and a third method starts at the proposed center of the continuum, with teachers actively involved in the research process (thus solving issues of improper dissemination and representation of educational research).

Schneider (2014) described an “inhospitable” environment “for moving scholarship into classrooms” (p. 32). For research to make it into teachers’ hands, Schneider asserted that it must appear to render significance – either by seeming important based on the researchers’ institutional affiliation, by appearance in an accessible publication, or via a staff development opportunity. Research that successfully connects to teacher practice must also be deemed philosophically compatible with teacher beliefs and contexts. Schneider’s third explanation for traditional mechanisms that move research to practice is what he terms “occupational realism” (p. 32) in which those who design or deliver professional development create packages that are easily added to
existing teaching practices, putting ideas squarely in teachers’ hands. Schneider’s fourth characteristic of research that finds its way to practice is called “transportability,” which he described as ideas that “have simple cores, or have been explained in accessible language, or are easily translated into lasting structures like curriculum frameworks,” adding that “Even if it does not represent better scholarship, it is easier to describe to busy colleagues” (p. 32). If research possesses all these characteristics, it is more likely, by Schneider’s logic, to move into teaching practices.

The four characteristics educational research must have to effectively find its way into practice as described by Schneider (2014) are less than ideal. There is no guarantee that those brokering the information are doing so with integrity and fidelity. Schneider cited Howard Gardner’s own critique of the use of Gardner’s Theory of Multiple Intelligences as having questionable application in classrooms – the theory being employed in classrooms possibly because it possessed the four characteristics that facilitated movement to practical settings, not because it was good.

Schneider (2014) identified two problems with research in practice as it enters through this traditional mechanism, channeled through convenient, transportable, relevant portals. The first is that the research itself may not actually be high quality research, and second, good research may lack the traits (the four he described) to be successfully transported into classrooms. He suggested that scholars engage with those who conduct staff development for educators, “recognizing their influence as gatekeepers rather than dismissing them as charlatans” (p. 34), or in a more decisive gesture, Schneider recommends that scholars take sabbatical breaks to work as “scholars-in-residence” in school districts to connect teachers more directly with quality research.
In a review of the literature, Anwaruddin (2015) identified barriers in moving research to practice in education, as well as possible remedies to the gap. Anwaruddin proposed the implementation of interpretive communities in which researchers would be integrated into professional learning communities of teachers to contextualize research for the purpose of closing the gap. Citing a general call for “greater cooperation among researchers, policy makers, and practitioners” (p. 4), Anwaruddin asserted that there are two major roadblocks to fulfilling that goal; first, more must be understood about how teachers interpret theoretical knowledge into practice, and second, the traditional PD model of reporting to teachers without discourse between the teacher and the reporter of research is fraught with problems. Traditional models of dissemination fail because, as Anwaruddin stated, “they do not attend sufficiently to the complexities of local contexts where knowledge is used and applied to practice” (p. 9). Calling the dissemination methods “systems of copy and paste,” Anwaruddin blames this unidirectional model for a global means of uniformity in which the research is blanketed over teaching and learning regardless of culture or localized contexts. Citing research from India in which research did not equally apply across all localities, Anwaruddin argued that dissemination initiatives should select research-based knowledge, which is appropriate to a given context and has practical implications for teachers and students in that context. To select research-materials, policy makers and knowledge managers ought to listen sincerely to teachers’ opinions about the appropriateness of research-knowledge in their local contexts. A thorough examination of the context where knowledge will be used has to be a priority for an effort to bridge the research-practice divide (pp. 10-11).
Teachers may sense when research or research-based methods do not appear to apply to their own settings, and in systems in which these methods are expected to be followed with fidelity, it can create resistance on the part of teachers to engaging with other research or research-based methods.

Bridging the gap according to educational researchers and theorists must involve collaboration (McIntyre, 2005; Schneider, 2014; Anwaruddin, 2015) ease (Schneider, 2014;), and context (Anwaruddin, 2015). The research, to be used effectively by teacher practitioners, must somehow “speak” to teachers, and teachers must feel a connection to it either due to collaboration and communication with researchers, the ease and smoothness with which research transports into practice, or because the research bears contextual similarity to their practices.

**Proposed Models for Bridging the Research-to-Practice Gap**

Models linking research and practice have enjoyed varying levels of success. While one collaborative model between a school district and a cooperating research university indicated an encouraging prototype, research exploring preservice teacher instructional models for both research-based strategies and research literacy has demonstrated limited success. The studies lacked longitudinal qualities that would indicate that successful models are sustained in practice, or survive as standard procedures once preservice teachers leave institutions of higher learning for teaching positions.

In a form of scaffolded instruction and support, Miller, Perkins, Suzuki, Odell and McKinney (2002) found that when preservice teachers were taught a research-based instructional method to apply in their internship settings, those who used the methods did
so with a high rate of accuracy and fidelity, and most indicated they would use the method again.

Cooper (2007) described a network of educators working to reduce the achievement gap between white students and their minority (African-American and Latino) peers as one that employed extensive reading in research literature and the ultimate design of three roles for research in the effort:

1. Organizing and disseminating research-based knowledge;
2. Building the capacity to evaluate school, district, and network efforts; and
3. Collaborating with researchers to conduct applied research (p. 321).

Within this in-depth description, Cooper laid out a research-to-practice model that bridges the research-practice (or knowing-doing) gap and also accommodates for the teacher preference to observe and communicate with other teachers to develop practices through a collaborative network of educators.

Using preservice teacher undergraduate participants, Emmons, Keefe, Moore, Sanchez, Mals, and Neely (2009) compared a control group who received no additional training and support in informational literacy to a group of similar students who did receive training and support in their preservice coursework. Differences in information literacy skills from pre to post conditions indicated that the treatment group had significantly increased their skills. The authors of this study believed that by enhancing the information literacy skills of teachers (in this case, preservice teachers), it could enable teachers to “evaluate the credibility of claims made by sellers of intervention programs that purport to be evidence-based” (p. 143).
Alber and Nelson (2010) suggested collaborative partnerships between teachers and researchers to bridge the research-to-practice gap. They outlined a step-by-step process for university collaboration to begin with classroom educators. Their model includes developing research at the classroom level, generating studies via collaboration between researchers and teacher practitioners that are “tailored to the needs of the students in each unique classroom” (pp. 24-25). Citing one of the most important benefits of collaboration for researchers, Alber and Nelson believed that their model would afford opportunities for researchers to see interventions in action to better evaluate the effectiveness of educational programs, methods, and interventions. As a benefit to teachers in the model, Alber and Nelson asserted that through interacting directly with researchers, teachers would receive more information than through traditional staff development means.

Hedges (2010) examined her role as a researcher engaged as a critical friend with teacher practitioners. She found that she took on multiple roles, from helping to procure, interpret and use data, to collecting readings on topics of teacher interest. The role of being a critical friend was found to have a positive impact on teacher practices.

In a study regarding the use of research to support and justify intervention planning in case studies focused on student participation by pre-service teachers, Gray (2013) concluded that it was empowering for pre service teachers to be “knowers” of research. “Though disappointing their desire for clear answers about practice, the process appears to have been empowering in terms of positioning them as expert knowers and as potential creators of new knowledge both for themselves and for colleagues” (p. 35). Gray also concluded that “Using the research format to gain greater understanding of
pupils’ perspectives has led to a questioning of current beliefs and practice, which may in turn lead to longer term and more deeply seated changes in behaviour than a successful small-scale intervention study” (p. 35). Research literacy in this case was regarded as a skill equal to other pedagogical tools in preparing teachers for effective practice.

Crawford-Garrett, Anderson, Grayson, and Suter (2015) followed three teacher education students into their first year of teaching as a means of examining the research-to-practice habit carryover from teacher education into first year practice. The three participants were part of a thirteen-month teacher education program granting a master’s in education to those who had non-teaching undergraduate degrees, and for which teacher candidates had to produce action research as part of a capstone experience during student teaching (final semester). Framing their work around a question, combined with three cycles of action research in student teaching, lead to positive carryover into first year teaching assignments. The authors recommended that action research should not be introduced at the end of the teacher education program, but instead should be a part of more than one course as a framework of the teacher education program as a means of making the use of research a habit, or established practice.

Van Ingen and Ariew (2015) examined how preservice teachers can access scholarly literature and improve information literacy skills by employing an intervention model in undergraduate methods courses. Teacher educators, working with an education research librarian, co-taught intervention workshops aimed at improving the information literacy skills of preservice teachers. The results indicated that those students who had taken part in the interventions scored much better than those who had not taken part in the interventions on portfolios for educational research projects.
Understanding the divide between research and practice in education, some universities have forged partnerships with districts. Wentworth, Carranza, and Stipek (2016) described the successful pairing between the Graduate School of Education at Stanford and the San Francisco Unified District. The two entities have developed a system of communication and collaboration that encourages the district to conduct robust analyses of student data, and connects the university and school district in a meaningful, relevant manner.

Models proposed or implemented for bridging the research-to-practice gap have enjoyed limited success; however, widespread practices of collaborative networks between researchers and teachers remain difficult. One problem with bringing together researchers and practitioners according to Anwaruddin (2015) is a numbers issue – there are fewer researchers than teachers. To counter this problem, Anwaruddin suggested that teachers should be afforded time and access to research texts for the purpose of interpreting them into their own contexts. In fact, Anwaruddin went on to say that “when teachers employ appropriate and critical lenses to interpret, adapt, and personalize” research texts (p. 13), they can learn from findings. In an effort to create an environment rich in the culture of examining research, teachers need to be supported by administrators charged with securing professional development to initiate Anwaruddin’s locally-based interpretive communities (researchers working with teachers) and engage in dialogue with each other regarding research texts.

**The Gap in Research-to-Practice Research**

Research-to-practice methods to improve instruction are part of the language of federal educational legislation, and subsequently have become important elements in
local level mission statements, supporting strategies, and action plans in public schools.
There is a notable gap between research/researchers/knowledge producers and public school teachers. Many descriptions exist to explain why the gap persists, as well as how to narrow or bridge it, but in practice there appears to be a lack of evidence that veteran public school teachers utilize pathways to link research to practice. While there are several studies incorporating the participation of preservice teachers (e.g., Emmons, Keefe, Moore, Sanchez, Mals, & Neely, 2009; Gray, 2013; Miller, Perkins, Suzuki, Odell, & McKinney, 2002; Van Ingen & Ariew, 2015) and first year/early career teachers (e.g., Crawford-Garrett, Anderson, Grayson, & Suter, 2015; Gray & Campbell-Evans, 2002), there is a lack of information regarding the perceptions of research-to-practice from teachers who have been teaching in public schools for five years or more. Teachers who have been away from undergraduate classrooms and the research demands of those courses may offer a viewpoint that differs from preservice or novice teachers. Years of experience may supplant the need for delving into academic texts for teachers who have five or more years of classroom experience. SD/PD offerings and waves of trends may serve to inform teaching practices, or veteran educators may have found more efficient and informative sources for effective teaching than reading academic texts. In addition, they may have recently engaged with research in pursuit of advanced degrees, perhaps influencing classroom practices. Sustained relationships between veteran teachers and research has been minimally explored.

Additionally, as educational researchers have explored the gap, it has been investigated unidirectionally – from the higher institution peering into teacher practices as teachers experience PD, or a new program to bridge the gap. Lacking are
investigations of the connections between research-based PD in the public school context in which it is delivered, and what teachers “do” with the PD once the delivery is over. If, as the research suggests, PD experiences are research-based and are not relevant to the teacher’s practice, how do teachers go about getting research-based answers to their own situational questions? There is a critical gap in the research about education research-to-practice behaviors of public school teachers from the veteran public school teacher point of view.

**Purpose Statement and Research Questions**

The purpose of this qualitative research study is to explore the perceptions of veteran public school teachers regarding the use of research-based methods in practice. The central question posed in this research was: **What are veteran public school teachers’ beliefs about their use of research in public school teaching practices?** Five sub-questions were developed to directly address the central research question:

- **RQ1:** What are veteran public school teachers’ perceptions of research?
- **RQ2:** In what ways do veteran public school teachers access to research or research-based teaching interventions, strategies, or programs?
- **RQ3:** What conditions encourage veteran public school teachers’ engagement with research or research-based strategies?
- **RQ4:** What challenges do veteran public school teachers face in applying research to practice?
- **RQ5:** How can research be more effectively utilized by veteran public school teachers to improve their classroom practices?
CHAPTER 3
METHODOLOGY

Qualitative Methods

The present study was conducted using qualitative methods. As suggested by Stake (2010), qualitative methods are appropriate in many cases, including when the researcher is studying a relationship, such as the current study in which I sought to determine what relationships exist between veteran educators and the use of research in practice. In the case of the present study, a qualitative approach was the best option, as the central question and research questions were “formulated to investigate topics in all their complexity, in context” and additionally, as the researcher, I was “concerned with understanding behavior from the informant’s own frame of reference” (Bogdan & Biklen, 2007, p. 2).

Within her outline for ten critical elements of qualitative research, Lichtman (2013) included that providing a deeper understanding of the phenomena under study through the human experience is a goal at the heart of qualitative research, and van Manen (1990) asserted that the human sciences require more than quantification; they require a method involving description, elaboration, as well as, “interpretation, and self-reflective or critical analysis” (p. 4). Qualitative researchers who attempt to delve into the meaning making of human experiences aim to understand what is observed through the perspectives of those being observed - as interpreted by the observer. In the case of research-to-practice gaps in education, while there has been some research on the topic, very little has been conducted from the perspective of the actual proposed users of educational research – public school teachers. Their voices are underrepresented in
analyses of research-to-practice gaps, and as Denzin and Lincoln (2005) pointed out, researchers can create “spaces where those who are studied (the Other) can speak. The evaluator becomes the conduit for making such voices heard” (p. 26).

The research question demands an analysis of participants’ experiences, and I have examined the features of the present study as compared to Bogdan and Biklen’s (2007) five features of qualitative research, noting the presence of each in varying degrees (though all are not ‘required’ elements to be present simultaneously in any given study). The five features are: being naturalistic, having descriptive data, having a concern with process, employing inductive analysis, and seeking meaning (pp. 4-8).

While my study was not necessarily naturalistic in the purest sense, the study involves teaching in the public schools, a setting with which I have been familiar for more than twenty years. I know the system well, understand how it works, and am fluent in the language and vocabulary of education. My research question arose naturally from my practice as I looked at ways to improve instruction and pondered what others do to improve as teachers. The second feature, descriptive data, includes a close analysis of interview transcripts, a central focus of the present study. Bogdan and Biklen suggested that “nothing is trivial” (p. 5) and that each piece of data brings information to the understanding of the experiences of those interviewed. Close attention was devoted to the responses of participants, which yielded a fresh and interesting description of the research-to-practice process. Central to the research questions, I invoked the third of Bogdan and Biklen’s features - having a concern with process - as I investigated how teachers made meaning of research, what processes they used in decision-making, and how teachers negotiated perceived obstacles in research-to-practice contexts. Concern
with process can also include my concern with my own processes for collecting information from participants, for analyzing the data in a meaningful way, and reporting fairly the intent of those who shared their experiences. The fourth feature, employing inductive analysis, was one of the strongest qualitative characteristics in the present study. There was no hypothesis testing, and I was, as Bogdan and Biklen described, “constructing a picture that takes shape as you collect and examine the parts” (p. 6). I know my own experiences as a teacher, but I attempted to set them aside as I collected the experiences of others. What emerged from the data told the participants’ stories, not mine, although my interpretation of their stories emanates from my own experiences. The analysis of data progressed naturally from the coding process, and was not a result of a priori coding. Finally, meaning was of utmost importance in the present study, as participants were asked to explain what they believed to be research-to-practice instances, how they felt they used research, what they perceived to be obstacles accessing or using research, and their ideas about improving the movement of research into practice.

Meaning was central to the phenomenon under scrutiny, and I agree with Stake (2010) that “The best qualitative research, I think, is seldom about how people feel; it is about how things happen, how things are working. Happenings are experienced, and the researcher needs to probe the assertions until the experience is credible” (p. 63); therefore, the central phenomenon of the inquiry was focused on the processes through which teachers use research.

Two reasons for selecting qualitative methods over quantitative methods according to Richards and Morse (2013) were that the research question could only or best be answered qualitatively, and the data demand it (p. 25). My purpose in using
qualitative methods was to make thinking visible, to draw forth conversation about research with potential research users and understand the processes by which those users engage, or do not engage, with research. Although data could have been gathered quantitatively, response choices would have been limited to those conceived by me and could not achieve thick and rich description. Information in research literature from the perspective of public school educators regarding research-to-practice is thin; therefore, the purpose of the present study was to enhance understanding of educators’ personal experiences and add to what is known about those practices, rendering qualitative methods useful and necessary in this study.

In the case of the present study, the voices of veteran public school educators represented the under-voiced or under-represented in research literature, as it is imperative that their perspectives have audience in the research-to-practice discourse. It could further be considered an added advantage that the one analyzing the talk of the participants (me, a fellow teacher) is also from the target group, thus adding a layer of authenticity.

**Criticisms of Qualitative Analysis**

Of the “Eleven Common Questions about Qualitative Research” proposed by Bogdan and Biklen (2007), two relate directly as potential criticisms for the use of qualitative research to investigate the central questions in the present research study. One is whether or not the findings in qualitative research are, or can be, generalizable. The intent of the present research study was to investigate the understandings of research-to-practice as experienced by veteran educators in public schools. The goal of this study was not to determine a law or precepts for research-to-practice in education, nor to generalize
findings to groups who are not veteran professionals in public schools. As readers compare their own experiences with the expressed views of the study’s participants, they can determine for themselves if there are similarities and differences, the nature and degree of those similarities and differences, and whether or not the study generalizes to their own specific settings. Trends and patterns which emerged from the data as codes, categories, and themes are themselves generalizations determined by my analysis, whose epistemological lens may or may not be congruent with that of the reader, thereby limiting generalizability even more.

This leads to the second of the relevant common questions about qualitative research as spelled out by Bogdan and Biklen (2007), which is the effect of the researcher’s “opinions, prejudices, and other biases” on data (p. 37), for which I have adhered to their advice to “Acknowledge that no matter how much you try, you cannot divorce your research and writing from your past experiences, who you are, what you believe, and what you value” (p. 38). In my analysis, I did not attempt to code from all epistemological perspectives, but instead I acknowledge that I was interested in what the data demonstrated through my worldview, realizing that, in line with Bogdan and Biklen, the data I collected provided much more detailed information related to my research questions than I could imagine without the participation of the participants. My limited experiences were broadened to include the stories of others whose perspectives added texture to my ideas; however, in analyzing the data, I constructed meaning through my own interpretation. The point of the present study was not to attempt to imagine the meaning of participants’ responses in every way, but in one way deeply; that one way being through my own interpretive lens.
Merriam and Tisdell (2016) posed a concern about the reliability and validity of qualitative methods, questioning researcher bias and the potential for the researcher to merely find what he or she expects. I examined the responses of public school educators via my own lens, so my interpretation was biased to my perspective. As a public school educator listening to, interacting with, and analyzing the talk of other public school educators, my position as the interpreter of the meaning of data should be congruent with the study’s participants in many ways. However, my transparency in stating my intentions, as well as identifying my background and worldview allows readers to draw their own conclusions. Additionally, while I would not expect every other researcher to draw precisely the same conclusions as I in analyzing the data, participants had the opportunity to member-check the transcripts for accuracy, as well as modify or add thoughts, so through this method of triangulation, validity was supported.

**Paradigm and Positioning**

Qualitative methodology involves “the nature of interpretation and the position of the qualitative researcher as interpreter” (Bogdan and Biklen, 2007, p. 21) as integral to the study itself. The raw data only tells a part of the story – data that under the analytical lens of the researcher takes on distinct meaning and which can be different if analyzed by another researcher - a researcher who perhaps comes from another discipline, or who interprets the world via a different worldview or epistemological lens. Using the definitions of philosophical frameworks, among which the nomenclature varies slightly, I label myself a feminist.

According to Bogdan and Biklen (2007), the definition of a paradigm is “a loose collection of logically related assumptions, concepts, or propositions that orient thinking
and research” (p. 24). How one orients thinking is critical to how one interprets what is observed or heard. In traditional feminist paradigm descriptors, the approach is characterized as one which centers on the female perspective in a system or culture in which the male perspective is privileged and is dominant. The role of the feminist researcher is to give voice to women and correct imbalances of power in male-dominated social structures or institutions (Neuman, 2011). This traditional view suits research in public education, in that typically public school administration is male-dominated and the teacher force is female-dominated. With decision-making and policy-making at the administrative level, the direction of power puts the female-populated teacher force in a position of oppression.

A more contemporary description of feminism groups the feminist paradigm with critical theory or critical social science (Creswell, 2013; Denzin and Lincoln, 2011), as feminism is concerned with power struggles that are present between groups (Creswell & Poth, 2018). While acknowledging the important role of feminist research in capturing the female perspective, Taylor, Bogdan, and DeVault (2016) define feminism broadly to include other socially oppressed groups, stating “Most feminist research builds on the ideas of social oppression and inequality, and feminist researchers have joined with those concerned with other dimensions of inequality” (p. 15). In this sense, feminist researchers work to expose power imbalances and empower oppressed groups to explore newer, better ‘ways of doing and being’ that benefit more people, with an emphasis on benefitting traditionally oppressed and underserved persons or groups. Research by feminist investigators should raise awareness among oppressed groups and bring new understandings to light, inviting change through empowerment in systems that maintain
oppression. Feminists know that a system in place does not assure that it is the only system available, and continuing to do what has always been done without questioning it fuels and emboldens the power that keeps it in place. Among the objectives of feminist social research according to Neuman (2011) is the goal of facilitating change in society or social structures – like public schools.

From the feminist viewpoint, reality is based on power and identity struggles – privilege or oppression based on race, ethnicity, class, gender, etc.; therefore, Bogdan and Biklen (2007) noted that qualitative researchers who identify as feminists, postmodernists or critical theorists believe that “all social relations are influenced by power that must be accounted for in analyzing informants’ interpretations of their own situations” (p. 33), which not only supports the notion that listening to participants share their viewpoints and experiences is important, but that the power dynamic that drives those words must also be considered and is important in the analysis by a feminist researcher. Feminist researchers are not “detached” from the participants or subjects studied; instead they engage often personally with participants and create “empathic connections” in the process of research (Neuman, 2006). In fact, Creswell and Poth (2018) asserted that one of the goals of feminist researchers is to “establish collaborative and nonexploitative relationships” (p. 28) and use research as a means of creating change in previously perceived systems of imbalance.

Neuman (2011) proposed that when conducting social science research, the researcher makes certain implicit choices based on his or her ontological and epistemological assumptions and positions. According to Neuman’s ontological continuum between realists and nominalists, I am a moderate nominalist as one who
believes that “subjective-cultural factors greatly shape all of our experiences with the physical and social world, and we can never totally remove such factors” (p. 93). My perspective is completely in line with Neuman’s assessment of the nominalist as one who does not believe that general laws cut across all people, and that the nominalist researcher offers “carefully considered interpretations of specific people in specific settings” (p. 93), which reiterates the goals of the present study. My analysis of the data is a result of my feminist vantage point as an educator and researcher.

**Researcher Bracketing**

Acknowledging that the researcher serves as a conduit for the experiences of participants, Lichtman (2006) suggested that it “is imperative, then, that the researcher has experience and understanding about the problem, the issues, and the procedures” (p. 16) which the same researcher investigates. Although I attempted to set aside my teacher-self when acting as a researcher - that part of me is integral to my life and to my way of interpreting the experiences of other similar educators. As Lichtman proposed, I do have knowledge and understanding about the topic under study, I have intimate experience with the topic, and the research question arose from my personal quest to become better within my practice as a public school educator. In the spirit of bracketing, I avow that I am an educator and being such influenced my interpretation of the data – my teacher-self cannot be separated from me and it did influence my researcher-self. By exposing that I am a teacher and I have had experiences with research-to-practice situations and have ideas about them, I am able to question my own ideas through the thoughtful talk of others. I conducted my research not only as a fellow teacher investigating a phenomenon, but also as an actor who has been thinking about the topic of the study deeply for some
time, while the public school educator participants in the study may not have been thus engaged.

The researcher does not enter the inquiry without some preconceptions; therefore, Charmaz (2014) said that the researcher must examine those preconceptions and things “the researcher takes for granted about self, situation, and the world” (p. 160). Van Manen (1990) challenged that at times researchers know too much about the subject under scrutiny, and he suggested that rather than try to set those beliefs and values about the topic aside, that instead “We try to come to terms with our assumptions, not in order to forget them again, but rather to hold them deliberately at bay and even to turn this knowledge against itself, as it were, thereby exposing its shallow or concealing character” (p. 47). Through inductive analysis of the data, I held my preconceived notions ‘at bay’ as I coded first for exactly what was present in the data. In part, my goal was to reexamine what is ordinary in my social setting as a public school educator to see it in a new way, to uncover the meaning behind what is ordinary in the shared experiences of public schooling (Neuman, 2006). In addition, Spradley (1980) advised that participants may have knowledge about the research topic whether or not they have been consciously thinking about it, and that the researcher’s own knowledge may go beyond that of the participants’ knowledge, but there is information in the data that can add insight to what the researcher knows about the topic. Entering into the interviews, I believe I thought I could anticipate the responses of participants due to our shared profession and interests; however, careful questioning, probing, and listening helped me set aside my assumptions to uncover different, deeper, and more personal meanings and experiences of the participants than I expected.
Role of the Researcher

Though he was focused on phenomenological research, Van Manen (1990) advised qualitative researchers to be aware that the researcher’s knowledge and beliefs about a topic “may provide the researcher with clues for orienting oneself to the phenomenon” (p. 57), and added that the use of “I” or “we” in qualitative (phenomenological) research writing may signal the recognition of one’s own experiences in those of the participants. There is an interplay between the researcher’s point of view and how the words and experiences of the participants are perceived. The on-going interpretation of the participant’s environment, body language, inflections, and responses by the researcher serve to influence the subsequent words and actions of the researcher, only to begin again the cycle within an interview. As Bogdan and Biklen (2007) noted, this can “suggest that when qualitative researchers do research they engage in a kind of dialogue with their informants. Their own theoretical and ideological views are powerful, but these perspectives are also shaped by what they learn from their informants” (p. 34). I am aware that my own dispositions may have affected participant responses. As a researcher, physically noting my agreement, head-shaking, and even leaning forward during the interview may have encouraged participants to continue in a particular vein of response that might have otherwise been abandoned. The same can be true of negative influences having an opposite effect. Suppressing all conversational dispositions would have been unnatural, and in qualitative research, as posed by Corbin and Strauss (2008), researcher reactions can occur at an unconscious level, possibly contributing to what others have coined “co-construction” of data.
Having spent over twenty years in the field of public education as a classroom teacher, I am familiar with the setting, a quality that supported me as a researcher in a topic that explored the perceptions of veteran educators in public schools. Understanding the setting in such a manner was helpful, and the time I have spent in public schools helped me as the researcher to “focus on a clearer problem and frame a sharper research question” (Richards & Morse, 2013, p. 24). In addition, I was able to utilize my knowledge, experience, and dispositions to promote focused responses that added depth to the topic of inquiry.

Research Questions

As is the convention in qualitative research, the research questions for the present study were not posed as hypothesis-testing types of questions. Corbin and Strauss (2008) advised that “it is necessary to frame the research question(s) in a manner that provides the investigator with sufficient flexibility and freedom to explore a topic in some depth. Also underlying the use of qualitative methods is the assumption that all of the concepts pertaining to a given phenomenon have not been identified, or aren’t fully developed, or are poorly understood and further exploration on a topic is necessary to increase understanding” (p. 25). As a researcher investigating research-to-practice in education, I do not believe it is possible to identify all related concepts; therefore, the research question and sub-questions provided an entry point into the perceptions of others, and an opportunity to illuminate new understandings. The concept explored in this study that is “poorly understood” is the veteran practitioner’s perceptions and perspectives regarding research-to-practice in public school settings.
Stake (2010) advised that qualitative researchers should narrow the scope of an investigation to one central question, maintaining that other sub questions may guide the inquiry of the initial grand topic. Creswell and Poth (2018) also suggested researchers employ a single, broadly stated central question, and heeding this advice, the study had one central question. In addition, the essence of the qualitative research question, the central query to which all interview questions are aimed at unveiling, should be focused on the lived experiences of those interviewed. Van Manen (1990) recommended researchers “be steadfastly oriented to the lived experience that makes it possible to ask the ‘what it is like’ question in the first place” (p. 42); hence the overarching research question of the proposed study was: **What are veteran public school teachers’ beliefs about their use of research in public school teaching practices?** Five sub-questions were developed to directly address the central research question:

RQ1: What are veteran public school teachers’ perceptions of research?

RQ2: In what ways do veteran public school teachers access research or research-based teaching interventions, strategies, or programs?

RQ3: What conditions encourage veteran public school teachers’ engagement with research or research-based strategies?

RQ4: What challenges do veteran public school teachers face in applying research to practice?

RQ5: How can research be more effectively utilized by veteran public school teachers to improve their classroom practices?
Method

A general qualitative method for the present study was implemented via interviews with veteran (five years or more) public school educators. Following Neuman’s (2006) definition for a unit of analysis as “the unit, case, or part of social life that is under consideration” (p. 58), the unit of analysis for this study was veteran (five years or more) public school educators, whose interviews were recorded, transcribed, and analyzed as split data. Analysis was conducted in multiple phases to determine the codes, categories and themes that emerged from the data.

Participants

Adhering to guidelines by Bogdan and Biklen (2007) to support sample selection, I avoided any situations which would cause participants to feel coerced, I honored their privacy by the use of pseudonyms and avoiding descriptors which would reveal to a reader the identity of participants, and I was truthful and transparent in describing the research and the participants’ roles in it, using ethical practices and IRB-approved Informed Consent (Appendix A).

Regarding the selection of participants for qualitative studies, Spradley (1980) advised that it is acceptable to interview participants with whom the researcher is familiar, and with whom the researcher has already established a relationship; however, for this study, I heeded the advice of Creswell (2016) and avoided backyard involvement, opting instead for methods of selection that extended the research into districts other than the district in which I taught. My sample included veteran public school teachers, those who have been teaching in the public schools for at least five years, to address a participant gap in the research-to-practice literature. The participant pool was drawn from
public schools (rather than private, charter, or parochial schools) because adherence to federal and state guidelines by public schools regarding evidence or research-based practices is specific and expected. The participant pool included only teachers, not administrators, counselors, or other non-teaching school professionals because classroom practice was a focus of this study, and also because as a feminist, I am interested in teacher perceptions regarding sources for research-based changes in classroom practices.

As a veteran public school teacher, I have developed a network of connections with other teachers who are likewise connected, both in my own district and beyond it. My acquaintances served as a means of access to other educators, a method of convenience sampling, through which I was also able to procure another participant via the snowball method, a method Lichtman (2006) referred to as quite useful. I contacted five teachers, as well as one relative with teaching connections, and asked each to suggest names of potential participants who were current public school teachers, had been public school teachers for at least five years, and who were not teachers in the district in which I was employed. Each of my connections produced a list of names for me to contact. An initial email was sent to each prospective participant (Appendix B). Once I received a response from any prospective participant, I began an email exchange that spelled out the specifics of the study, and included the Informed Consent and Interview Protocol (Appendix C). Lichtman suggested “there are no hard rules” (p. 119) regarding the number of participants for a qualitative study because the goal is meaning - depth is applied to analysis - therefore a large number of participants may not be necessary. Her examples included sample sizes of ten and fewer. My goal was to collect data until I achieved saturation and therefore did not have a preset number of participants. This was
achieved at 11 participants (Appendix D). Each participant and I worked out a time and place to meet for a recorded interview. One interview was conducted over the phone and two pairs of interviews were conducted together (participant convenience). During the interview scheduling process, I kept a detailed memoing notebook. All interviews took place within four weeks during the spring of 2017, and they included teachers from three different states (two Midwestern and one Southern), as well as a total of five different public school districts. Participant demographic information by level of public school and school categorization (Table 1) indicates the distribution of participants, though it is notable that a rural category was not represented in the participant population. In addition, all high school participants were from large inner city high schools, and urban elementary, as well as inner city urban middle schools were not represented.

Table 1. 
Participants’ School Population Categorization and Public School Level

<table>
<thead>
<tr>
<th>Public School Level</th>
<th>Suburban</th>
<th>Urban</th>
<th>Inner City Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>Elise</td>
<td></td>
<td>Evie Libbey</td>
</tr>
<tr>
<td></td>
<td>Mark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>Hannah</td>
<td>Allie Kayla Ruby</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>Catherine Jessica Maddie</td>
<td></td>
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<td></td>
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<td></td>
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</tbody>
</table>

Interview and Participant Descriptions

Allie. I met with Allie at her urban middle school of approximately 714 seventh and eighth graders immediately after dismissal. The school had major construction occurring, visible to the exterior, which appeared to include an addition to the building. As I waited
for dismissal in her school’s parking lot, a spectacle of nearly thirty school buses rolled out in an amazingly organized, highly orchestrated manner. When they were gone, I crossed the parking lot and searched among several portables to find the one that housed her ESL classroom.

Allie was a 48-year-old, Asian American (Korean) ESL teacher for seventh and eighth grade English language arts and sheltered social studies with twenty years of experience teaching in public schools. Her ESL caseload involved twenty-one students. Allie’s highest level of education included a master’s degree in reading, along with an endorsement in administration, and she had been accepted into an Educational Doctorate (EdD) program for which she was set to begin in approximately six months. Allie was a very energetic, passionate interviewee who excitedly shared her ideas and classroom stories.

Catherine and Maddie. Catherine and Maddie both work at the same inner city urban high school, and in addition to each knowing my contact person, they were also friends with each other. Due to scheduling conflicts, we worked out a time that was amenable to all of us, and we met together at their high school in Catherine’s office space immediately after school dismissal. Their inner city urban high school was a dual language building of 2452 students in grades 9-12. Within the school’s population, there were 310 ESL students served, ninety percent of whom Catherine estimated to be native Spanish speakers.

A fifteen-year veteran of public schools, Catherine was a white, 39-year-old teacher of ESL in the areas of science, and grammar & writing, as well as the ESL department chairperson with her master’s degree in education and an eye on pursuing a
PhD. Catherine’s tone throughout the interview was friendly, humorous, and showed genuine care for her ESL students.

Maddie was a 38-year-old, white, sixteen-year veteran of public schools who taught in the social science department. Maddie held a master of arts in historical studies, a master’s degree in political science and was (at the time of the interview) a PhD student in political science at a Division I university. Maddie’s teaching responsibilities included teaching Advanced Placement (AP) Government, AP Comparative Politics, AP Psychology, and psychology. Maddie clearly intellectualized and problematized her teaching world, and offered thoughtful insights.

**Elise and Mark.** Elise and Mark, elementary teachers, were married to each other and agreed to meet with me over their spring break at their home. I arrived at their home at one o’clock and we sat comfortably in their living room, occasionally stopping to pet a very friendly, cone-collared Kenny – their family dog.

Elise was a 28-year-old, six-year veteran, white kindergarten teacher with her master’s degree and additional certifications. She was also the elementary technology specialist at her suburban K-5 school of 750 students. Elise was an intense, soft-spoken teacher with a laser-like focus on helping kindergartners progress academically.

Mark was a 29-year-old physical education (PE) and health teacher at an elementary school different from the one in which his wife was employed, but in the same suburban district as Elise. His building served grades 2-5 and housed approximately 520 students. Mark held a master’s degree plus credits, and although soft-spoken, he was passionately committed to building programs for his students that utilized technology, 21st Century skills, and encouraged purposeful physical activity. After our interview,
Mark proudly showed me a mini-gym he was building in their house – including a rock wall – for visiting nieces, nephews, friends’ children, and their own future children.

**Evie.** Evie was a 28-year-old, five-year veteran teacher with an ELL endorsement. She taught 3rd grade, all subjects, at a dual language inner city urban elementary school that served 865 students, grades Pre-K through grade four. Her school was largely Hispanic (85%), and the dual language program combined English and Spanish education in all subjects. Evie did not speak or teach in Spanish - in a manner that rotated weekly, her responsibilities were to teach subjects one week to one group of students, then the next week flip students with her Spanish-speaking grade-level partner teacher and teach the content again to the new group of students. Rotations based on content were determined quarterly.

Due to scheduling complications, I met with Evie at a coffee establishment close to her home a few hours after dismissal on a school day. Evie had written thoughts on her Interview Protocol and used her notes to guide her thinking during the interview. She expressed a lack of confidence in the subject of the study (use of research in practice), and I worked to encourage her to express her ideas, but I did not purposefully or intentionally lead her to respond in any particular way. Evie was a very sweet, kind, unassuming, humble teacher who wanted to do her best for her students.

**Hannah.** Hannah was a 31-year-old, nine-year veteran public school teacher. Her placement was in an affluent suburban middle school where she taught speech and drama to all 470 sixth through eighth grade students. I met with Hannah immediately after her school’s dismissal inside her impressive theater classroom, complete with curtains, lights, props, and soaring ceilings. Hannah had her master’s degree in curriculum and instruction
with an emphasis in behavior management. In a previous inner city public middle school, she had served as an eighth grade English teacher where she had extensive experience in managing troubled youth. Throughout the interview, Hannah exuded incredible energy and positivity, as well as confidence in her craft, and in her responses to my questions.

**Jessica.** Our schedules did not work to meet face-to-face, therefore, my conversation with Jessica took place via phone. Jessica was a 52-year-old, white visual arts teacher with some credits toward a master’s degree who had been teaching seven years. I had been to her urban inner city 9-12 high school previously and knew that the physical structure of the building was large with three floors of classrooms and portables on the property, servicing over 2,000 students. The school served students from older, affluent neighborhoods, as well as high population areas of poverty.

Meeting over the phone during Jessica’s plan time was not optimal and created some difficulties. I read the Informed Consent which she affirmed via email. I recorded the phone conversation on speaker in a private home where there were no other people, but absent the physical cues of a face-to-face interview, there were awkward pauses, misunderstandings, many repeated phrases, and a lack of comfort and rapport. Though the interview felt rushed, Jessica was cooperative and insightful. She was focused on serving a specific demographic within her school - concerned for her students of poverty and finding ways to engage them in academics.

**Kayla.** I met Kayla during her plan time in the middle of the morning at the urban 7-8 middle school of approximately 1,000 students where she was employed as a social studies teacher and instructional coach. The morning of our interview, she had just administered a state assessment, and after our interview would teach and work as an
instructional coach for the remainder of the day. Kayla was a 40-year-old, white teacher with her master’s degree and sixteen years of public school experience. Kayla was purposeful, confident, and knowledgeable, as well as eager to share her thoughts in the interview.

Libbey. Libbey opted to interview on a day her district had as a work day (no students). I met her in her spacious dual language kindergarten classroom, complete with play centers and a horseshoe table which we used for our interview. The fairly new elementary school was a very large building in the downtown area of the district, situated among business buildings and only a few blocks from the tallest downtown structures. Libbey was a 35-year-old, Hispanic sixteen-year veteran teacher with a master’s degree in administration, and endorsements in ESL, K-3 Math Specialist; she was beginning an endorsement in early childhood education. This inner city urban elementary served 767 children aged 3 years through sixth grade, and reported a 96% poverty status. Libbey’s teaching responsibility was the English side of the Spanish/English dual language program, and she served as a mentor facilitator for all new teachers, and grade level leader. Libbey was passionate, intense, committed and inspiring throughout the interview. Sharp, intelligent and articulate, Libbey had pride in her work, her building, her colleagues, and her community.

Ruby. Ruby was a 58-year-old, white, fifteen-year veteran eighth grade English language arts teacher at an urban 7-8 middle school of 714 students, whose name I acquired via snowball sampling from another participant. We met on a Saturday morning at a coffee shop close to her home, and before our formal interview began, Ruby had breakfast and inquired about doctoral programs, colleges, and endorsements. We established a casual,
friendly rapport before the formal recorded interview began. Ruby was a humorous, well-educated professional who went into teaching after a career in a medical staff office, and had acquired two master’s degrees. She was often spicy and colorful during the interview, peppering the talk with interesting vignettes and analogies. Ruby was a reflective teacher, interested in teaching the ‘whole’ child.

I chose to adhere to rules of ethical considerations, including Informed Consent, the right of participants’ privacy, and protection from harm as asserted by Fontana and Frey (1998). As a means of protecting the identity of participants, pseudonyms were assigned by me and the association of real names to pseudonyms was known only to me. There were no perceived threats related to participation in this study and the potential benefits existed simply through a greater understanding or awareness of research-to-practice methods, which may result in better, more efficient and effective use of research in education, thus improving academic performance for students. No monetary incentives were provided for participation. Participants had the option of abandoning the study at any time, including the period of time during or after member-checking; however, none opted to do so.

**Data Collection**

Asserting that qualitative research is conducted with interpretive methods, Richards and Morse (2013) used the term “armchair walkthrough” to describe ways a researcher can think through methods as one designs a study to properly build the research project. I determined via my “armchair walkthrough” that data collection through interviews would be the best way to make the thinking of participants apparent to me on topics of research-to-practice issues. Of the three purposes stated by Stake (2010)
for using interviews in qualitative research, “Obtaining unique information or interpretation held by the person interviewed” (p. 95) directly applied to the present study. Participants engaged in face-to-face and phone interviews. The interviews were digitally recorded (Lambert, 2012; Merriam, 1998; Spradley, 1980) and transcribed by me. As the interviewer/researcher, I was current with Collaborative Institutional Training Initiative certification in human research.

During the interviews, I collected artifacts of what the participants shared as samples of research each had used to improve practice in his/her classroom. This was done by collecting names of items and/or taking a picture of what was provided as evidence of research-to-practice materials. These items were later included in the document analysis.

Immediately following each interview, I jotted descriptive notes about each participant(s), as well as demographic information. Prior to data analysis, I developed these into descriptive paragraphs.

**Interview Protocol**

Describing the interview process, Fontana and Frey (1998) determined that an interview is both “the tool and the object” in qualitative research (p. 47). The interview is the vehicle for drawing out the perspectives of the participants, but it is also the object from which meaning emerges. I employed a semi-structured interview protocol, with structured questions, as well as the flexibility to probe for meaning and elaboration (Lambert, 2012). In addition, as Creswell and Poth (2018) recommended determining “the open-ended research questions to be answered” (p. 166), I matched my protocol to
my research sub-questions (Appendix E) to be sure my inquiry would lead to a better understanding of the central question.

My interview protocol was strongly founded on suggestions of Lichtman (2006) who outlined the interview protocol into five major sections: *advanced planning, the opening, getting started, the body of the interview* and *the end of the interview* (p. 120-121). I reversed the first two sections in the protocol, covering the *opening*, then *advanced planning* recommendations. In the *opening*, as suggested, I discussed permission and consent, as well as permission to record interview conversations.

Per Lichtman’s (2006) *advanced planning* section, I followed with demographic questions, then with general questions to learn more about each participant. Spradley (1980) suggested beginning interviews with broad, descriptive questions about the participant’s experiences with whatever phenomenon is under study to initiate talk about the subject, a model I employed.

The section Lichtman (2006) labeled as *getting started* actually included rapport-building techniques, body language suggestions, and setting the proper positive climate for each participant to respond openly and freely. Fontana and Frey (1998) suggested that within the interview and research process, researchers should work toward building rapport and a relationship with the participants to minimize the perceived hierarchical distance between the researcher and the researched. My ability as a veteran public school teacher to identify with my participants as “one of us” helped me establish rapport quickly, and worked to mitigate any perceived hierarchical distance.

The Lichtman (2006) inspired *body of the interview* section involved the semi-structured interview questions, during which notes were taken and probing questions
were asked. The protocol included “grand tour” questions (Lichtman, 2006) such as (IQ1) “Please describe a typical day for you in your current position. What are your responsibilities?” and (IQ2) “What do you view is the role of research in serving your students in your current position?” with the potential for specific follow-up questions to clarify concepts brought forth by the participants. According to Fontana and Frey (1998),

The researcher begins by ‘breaking the ice’ with general questions and gradually moves on to more specific ones, while also, as inconspicuously as possible, asking questions intended to check the veracity of statements made by the respondent. The researcher, again according to traditional techniques, should avoid getting involved in a ‘real’ conversation in which he or she answers questions asked by the respondent (p. 67).

In this study, the movement to more specific questions took place during the intermediate questions, (IQ 3-6) and included probes. Questioning techniques called “elaboration” and “probing” (Lichtman, 2006, p. 124-125) were used to get more detailed information from participants throughout the interview, or to clarify responses. Questions on the interview protocol in this category included:

IQ3. Tell me about a time you used research to change your classroom practice.

Probe: How do you decide what research or research-based practices to use?

Probe: In your position, how do you access current research, or learn about research-based practices?

Probe: To what professional organizations do you belong?

Probe: To what education publications do you subscribe?
IQ4. Some teachers say that research does little to inform practice. Why might that be?

IQ5: What are the major challenges you feel public school educators face in utilizing research in practice?

IQ6: What strategies do you feel are or would be most effective for linking research to practice?

Following the guide of Merriam and Tisdell (2016) for semi-structured interviews, my protocol included the flexible use of questions with a mixture of those directly from the protocol and those which were a result of careful listening and a desire for details or clarification. The use of open-ended questions was employed, per Merriam’s recommendation, as well as avoidance of the use of speculative “why” questions.

Last, the end of the interview (Lichtman, 2006) involved a wrap-up question, (IQ7) “Are there any other suggestions you have for how public school educators can better utilize research to improve practice?” as well as thanking each participant, and getting interview materials together before leaving the interview site. During the end of the interview period, I reminded each participant that I would email the interview transcript to him/her for review, clarification, additional information, or other feedback, and that each should look for that email in the near future.

**Triangulation**

Merriam and Tisdell (2016) suggested that triangulation “is a powerful strategy for increasing the credibility or internal validity of your research” (p. 245). Data was collected from “different people” at “different times, and from different places” (Carlson,
2010, p. 1104) as one method of creating a spectrum of responses, using what Merriam and Tisdell referred to as *multiple sources*. In addition, this study employed other means of triangulating the data.

Document analysis provided one source of triangulation (Bowen, 2009; Taylor, Bogdan, and DeVault, 2016). To support what participants said, documents were observed and later analyzed to substantiate claims made in the interviews. Another leg of triangulation was member-checking, in which participants were encouraged to reflect on and modify earlier responses. Triangulation by use of multiple means, including specifically member-checking, helps the researcher to be more “confident” that the intended meaning of participants has been communicated (Stake, 2010, p. 124). This means of “respondent validation” (Merriam and Tisdell, p. 246) allowed an opportunity for participants to re-engage with the topic of the study and provide additional insights if necessary. Finally, I employed a peer review of the data analysis process as an additional leg of triangulation (Creswell & Poth, 2018; Merriam & Tisdell, 2016; Taylor, Bogdan, & DeVault, 2016), engaging the assistance and input from two of my committee members.

**Data Analysis of Interviews**

The method of analysis was a two-stage coding procedure using the transcripts from participant interviews. As recommended by Corbin and Strauss (2008), coding was flexible so that structure and rigidity did not guide the process, rather, thoughtful inlets obtained through multiple passes through the data informed coding. Corbin and Strauss advised that “No researcher should become so obsessed with following a set of coding procedures that the fluid and dynamic nature of qualitative analysis is lost. The analytic
process, like any thinking process, should be relaxed, flexible, and driven by insight
gained through interaction with data rather than being overly structured and based only
on procedures” (p. 12). While my analysis was, as Creswell and Poth (2018) described,
“custom built,” it also followed their Data Analysis Spiral model (p. 186) and basic steps
for organizing, coding, and representing the data.

Coding methods were largely based on Saldana’s (2016) descriptors and
recommendations, and took place in two phases, with multiple passes through the data for
each phase. The goal during coding was that the codes would be “essence-capturing” and
that categories and themes would emerge. Heeding Saldana’s advice, I was “rigorously
ethical,” respecting the integrity and intent of responses given by participants, and, to
remain focused during coding, I revisited my research questions often. Reflecting my
personal preference and the suggestion of Saldana, I coded manually, using a pencil and
paper method with “split” data, as split data promotes a more nuanced analysis than
lumped data.

As soon after each interview as I was able (usually within a week), I transcribed
the interviews. I did not employ special software for this, choosing instead to type out the
transcripts myself as I listened to the recorded interviews, stopping after long passes to
listen again for the purpose of being accurate. I printed each transcript and put it in a
transcript notebook, organized into sections for each participant which included the
signed Informed Consent, my notes on individual protocol notesheets, printed copies of
photographs I took of research examples when provided, and the transcript.

There were a total of nine transcripts, as two interviews included two participants
each. In one case of a combined interview, the pair was a married couple (Elise and
Mark) who consented to participate together at their home over their spring vacation, when it was most convenient for them. The other combined interview took place when two teachers from the same public school (Catherine and Maddie) who were contacted separately, selected the same date for their interviews. As the two were friends, they decided to proceed with the interview on the date chosen, together in Catherine’s office. When all transcripts were in the notebook, I reviewed my scheduling notes and descriptions for each participant, then began a thorough read-through process for each transcript. After each transcript read-through, I began a second read-through, this time noting initial codes and memoing my thoughts and impressions. I repeated this process for all nine transcripts.

In the first cycle of coding, I used open coding, also called initial coding (Charmaz, 2014; Corbin and Strauss, 2008; Neuman, 2006; Saldana, 2016), which included process, structural, and in vivo codes for responses to interview questions. I developed a spreadsheet in Excel to organize the codes into a codebook. The codebook contained a sheet for each interview question, with columns for each participant under which every code was entered respectively. During the process of moving codes from the transcripts into the codebook, I reviewed codes, pieces of transcripts, and began to notice threads that ran through the different participants’ responses. I entered all codes for all participants for each interview question before starting a new sheet in the codebook for each subsequent question.

I experimented with MAXQDA software during phase one coding, but found I was spending more time interacting with the software than with the transcripts and felt that somehow I was losing the meaning of the data. I engaged the assistance of one of my
committee members at this point to help me sort through my coding methods, and determine if I needed to continue with the software program. In line with Creswell and Poth’s (2018) suggestions regarding peer review, my mentor was knowledgeable about the topic and methods, and was able to ask “hard questions,” prompting me to think about my strategies. He gauged my discomfort with the software program I was attempting to employ and suggested that I continue my analysis in the manner to which I was accustomed, aiming for deeper understanding of the data. He also reviewed my codebook, provided feedback and direction, and advised me to continue to develop my codes into categories in the second cycle of the coding process.

Second cycle coding was focused coding (Charmaz, 2014; Saldana, 2009). Focused codes are ones from initial coding that “appear more frequently” and “have more significance than other codes” (Charmaz, p. 138), and bring together many data pieces into a more focused unit of meaning. Following the peer review session, I re-read the transcripts side-by-side with the codebook, and reviewed the codes I had assigned, revising and refining them as necessary. As I completed this for each question for each participant, categories began to take shape. Adhering to the suggestions of Merriam (1998), I was careful that my categories were able to “reflect the purpose of the research” (p. 183-184), but also through a purposeful re-reading of the transcripts, I attended to the intended meaning of the data by each participant. I developed categories in the codebook on a new sheet adjacent to each interview question code sheet, and placed codes into the categories. The data were sorted into a total of twenty categories for all questions. I then turned my attention to the document analysis to allow time for the categories to settle, and to afford time for another pass through the transcripts to be sure nothing was missed,
that I maintained focus on the initial research questions, and that the impressions I had of the data regarding themes held up. After document analysis, I reviewed the codebook to develop the categories into themes, through a process Creswell and Poth (2018) referred to as “winnowing the data.” While Creswell and Poth suggested that ultimately five to seven themes tell the story of the participants’ experiences, I settled on four themes to tell the story of veteran public school teacher beliefs about the use of education research in practice. With the research questions in mind, I reviewed the transcripts and the codebook to make modifications to the themes as needed. At this stage in the development of themes, I re-engaged the assistance of the same committee member as a peer reviewer who helped me to further refine my analysis. I then elaborated on the

Table 2.
Data Analysis Examples: Codes to Categories to Themes

<table>
<thead>
<tr>
<th>Samples of Codes from Data</th>
<th>Categories Developed from Codes</th>
<th>Themes Developed from Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reflective mindset</td>
<td>Teacher Characteristics</td>
<td>Engagement</td>
</tr>
<tr>
<td>• Have to try</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Teacher has to be willing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• See self as learner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• New teachers, willing to try</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Overworked</td>
<td>Teacher Characteristics</td>
<td>Resistance</td>
</tr>
<tr>
<td>• Lack of confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Negative attitudes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Survival mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Overwhelmed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Dialogue</td>
<td>Collaboration</td>
<td>Research-to-Practice in Action</td>
</tr>
<tr>
<td>• Collaborate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Team approach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Exchange of ideas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Specialized SD</td>
<td>Choice</td>
<td>Proposed Research-to-Practice</td>
</tr>
<tr>
<td>• Pick and choose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• “I’m meeting my needs”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Differentiate training</td>
<td></td>
<td></td>
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<tr>
<td>• Ownership in PD</td>
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</tbody>
</table>
themes, and developed a representation to illustrate the process of data analysis, moving from codes to categories and themes (Table 2).

**Document analysis.** Documents provide an important source of data to aid in triangulation and should be used to lend insight to the perspectives of participants (Taylor, Bogdan, & DeVault, 2016); therefore, I used the documents mentioned or supplied by the participants of the study. The documents were supplemental and contributed to my understanding of research-to-practice as intended by the veteran public school teachers in this study, but they were not the central focus (Altheide & Schneider, 2013).

During interviews, I asked each participant to provide an example of research or a research-based resource he/she had used to improve instruction, an example of what Altheide and Schneider (2013) referred to as *auxiliary documents*. If a participant produced a physical document, I took a picture of the item(s), which I later printed to include in the transcript book. In addition, for those who did not produce an item, as well as for others who did, I noted from the transcripts into the codebook any research-based items each participant cited as having influenced instruction. Among his five uses for document analysis, Bowen (2009) suggested that documents provide supplementary insights into data derived from other sources, such as interviews in the case of the current study. One of the specific uses of documents in qualitative research is to “corroborate evidence from other sources” (Bowen, p. 30). Because the interview question specifically solicited research or research-based examples, I took the examples provided by the participants to mean that the examples represented, at least in part, what the participant perceived as “research” and/or “research-based” materials as each defined it; however, I
could not assume that the documents selected were indeed examples of research or research-based materials. Adhering to Rapley’s (2007) suggestion that I approach the documents with appropriate skepticism, I delved into an investigation of each. With this in mind, the analysis of the documents in this study employed Bowen’s rationale that as the researcher, I “should establish the meaning of the document and its contribution to the issues being explored” (p. 33), which in this case was the definition for research and research-based methods in education for each participant.

As the first step in document analysis, I coded the mention of specific research and research-based examples or materials from the transcripts and noted title names as *in vivo* codes when given. After all research-based titles had been entered and research examples that were mentioned by the participants were coded into the codebook, I researched the titled items and websites to determine if each was in fact research-based (condensed in Table 3).

To make this determination, I looked at each example specifically for the inclusion of studies or cited studies within the materials to support program materials and methods. I made notes concerning each example and correlated the notes to the codes. This method followed Bowen’s (2009) process for thematic analysis, as well as Merriam and Tisdell’s (2016) description of content analysis when the nature of the content of documents is essential. I determined that the examples of research and research-based materials provided by the participants in this study were in fact from sources which incorporated research and scholarly support.
Table 3.
Document Analysis: Examples of Research/Research-based Materials Provided by Participants

<table>
<thead>
<tr>
<th>Example of Research or Research-based Materials</th>
<th>Support for Research/Research-Based Claim</th>
<th>Sources for Supporting Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Action Plan Best Instructional Practices: Moving Classroom Instruction from Good to Great</strong></td>
<td>Research-based references in select sections.</td>
<td>Published by the school district for teacher use. PDF obtained from district website on June 23, 2017.</td>
</tr>
<tr>
<td><strong>Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement (2nd ed.)</strong></td>
<td>Research-based book. Based on meta-analysis of primary studies, and refers the reader to the study for analysis of methods employed to construct the text. Research since first edition is discussed. The book reads somewhat like a literature review.</td>
<td>Dean, C.B., Hubbell, E.R., Pitler, H., &amp; Stone, B. (2012). <em>Classroom instruction that works: Research-based strategies for increasing student achievement (2nd ed.).</em> Denver, CO: McREL.</td>
</tr>
<tr>
<td>Danielson Group Domains: Framework</td>
<td>Danielsongroup.org uses research-based ideas from UDL and others in the framework, but does not cite them within the framework.</td>
<td>Retrieved June 23, 2017 at <a href="http://www.danielsongroup.org/framework/">http://www.danielsongroup.org/framework/</a></td>
</tr>
<tr>
<td>Dru Tomlin (Speaker, district guest)</td>
<td>Dru Tomlin listed as Director of Middle Level Services on the AMLE website</td>
<td>Retrieved June 23, 2017 at Dru Tomlin: <a href="https://www.amle.org/AboutAMLE/AML">https://www.amle.org/AboutAMLE/AML</a> EStaff/tabid/400/Default.aspx</td>
</tr>
<tr>
<td>Khan Academy (Used for Art History)</td>
<td>Of 114 adjuncts listed in Khan Academy for Art: 67 hold PhD, 15 are PhD candidates or students, 25 hold an MA, 7 have research backgrounds, art backgrounds and/or advanced degrees not specifically listed.</td>
<td>Retrieved June 23, 2017 at <a href="https://www.khanacademy.org/about/our-content-specialists">https://www.khanacademy.org/about/our-content-specialists</a></td>
</tr>
<tr>
<td>Example of Research or Research-based Materials</td>
<td>Support for Research/Research-Based Claim</td>
<td>Sources for Supporting Information</td>
</tr>
<tr>
<td>------------------------------------------------</td>
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<td>-----------------------------------</td>
</tr>
<tr>
<td>Leveled Literacy Intervention (LLI) Resources by Fountas and Pinnell</td>
<td>Studies for the purpose of demonstrating the effectiveness of LLI done by University of Memphis is cited on product website. Other links to additional research available on the site.</td>
<td>Retrieved June 23, 2017 at : LLI Efficacy Study as cited on their website: <a href="http://www.fountasandpinnell.com/research/">http://www.fountasandpinnell.com/research/</a> Shareable link for the “Research Base” which the product website claims provides the research support for the intervention program: <a href="http://www.fountasandpinnell.com/resourcelibrary/id/121">http://www.fountasandpinnell.com/resourcelibrary/id/121</a></td>
</tr>
<tr>
<td>Stack of research articles</td>
<td>I had thumbed through top of stack. Studies and academic articles from academic journals, and as participant indicated, obtained via university library.</td>
<td>e.g. from picture Levin, I. &amp; Aram, D. (2013). Promoting early literacy via practicing invented spelling: A comparison of different mediation routines. Reading Research Quarterly, 48(3), 220-236.</td>
</tr>
<tr>
<td><em>This We Believe in Action: Implementing Successful Middle Level Schools</em> (2012)</td>
<td>Association for Middle Level Education (AMLE) resource. This version of the text has numerous citations of studies and scholarly works, as well as a reference section for each chapter.</td>
<td>Association for Middle Level Education. (2012) <em>This we believe in action: Implementing successful middle level schools</em>. Ohio: AMLE.</td>
</tr>
</tbody>
</table>
The next step was for the purpose of supporting the themes that emerged from the interview data, a means of triangulation. Following the suggestion of Rapley (2007), I developed questions to guide my investigation of the documents. With the central question of the study in mind, I created a matrix of characteristics (Table 4) using the

Table 4.
Document Analysis: Document Characteristics Matrix

<table>
<thead>
<tr>
<th>Sample of Research-based Materials</th>
<th>Who created this document?</th>
<th>How was the document attained?</th>
<th>How is the document used?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Publisher</td>
<td>Other</td>
<td>Passively</td>
</tr>
<tr>
<td>Academic Action Plan Best Instructional Practices: Moving Classroom Instruction from Good to Great</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Assorted Articles</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement (2nd ed)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Danielson Domains Framework</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Graduate Textbooks</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Kagan Texts</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khan Academy</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Leveled Literacy Intervention</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Notice &amp; Note: Strategies for Close Reading</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD Books</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SAMR Model</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>This We Believe in Action: Implementing Successful Middle Level Schools</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncovering Student Ideas in Primary Science: 25 New Formative Assessment Probes for Grades K-2 (Vol. 1)</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
guiding questions: “Who created this document?” “How was this document attained?” and “How was the document used?” with response options that emerged through the coding process. These questions also addressed the concerns of authenticity elicited by Merriam and Tisdell (2016), who stated that the researcher has a responsibility to learn about the documents obtained and observed in a study. In the case of the present study, teachers who shared documents with me during interviews did so by also adding that it was something they personally used, or something the district or building was currently promoting; therefore, it was something that was in use, thus supporting authenticity. Bowen (2009) suggested that “the researcher should consider the original purpose of the document – the reason it was produced – and the target audience” (p. 33), categories of information which were addressed in the characteristics matrix during analysis.

**Summary of document analysis.** The range of documents analyzed for this study included journal articles and studies, graduate program texts, district-promoted materials to support initiatives, professional development materials, and a district-produced best practice handbook. The majority of these documents was attained passively by the participants as the product of a district push and was publisher-produced (as opposed to journal articles – a more direct form of research communication than education professional development materials). All of the examples that participants provided were research-based, research-supported, or actual research. It was clear that the teachers in this study shared similar ideas regarding the use of research to improve practice.

Rapley (2007) implored qualitative researchers who analyze documents to think as much about what is *not* present regarding documents as what is. What was missing in
the research examples provided by the participants was choice and purpose in the aspect of possession of some of the examples, as well as actual original studies for most of the participants. No participants mentioned direct connections to researchers as a means to gather or learn about research-based methods of instruction. This suggested that while the teachers in the study felt they were using research and research-based methods and could support that through quality examples, they were not altogether autonomous in the selection of what they used, how what they used suited their needs, or how research-based materials and methods were attained. This finding strongly supports the themes that emerged through the analysis of interview data.

**Member Checking**

Member checking provides a useful form of validation in the process of triangulation (Carlson, 2010; Creswell & Poth, 2018; Merriam & Tidell, 2016; Taylor, Bogdan, & DeVault, 2016). As Carlson described it, “Member checking is often a single event that takes place only with the verification of transcripts or early interpretations” (p. 1105); as such, in this study, member checking involved the review of transcripts by each participant as a single event. When every interview had been transcribed, I sent the electronic version of each to its respective participant via email, along with an invitation to reply with any modifications. Using a template (Appendix F), I thanked each participant and encouraged feedback regarding our conversation. Adhering to the suggestion of Carlson, I stated that participants should not concern themselves with filler phrases such as “um,” “you know,” “so,” and others, as these are natural in conversations and not a part of what I would analyze. Participants were given a timeline for responding so that analysis could continue. Of the eleven member-checking notes I sent, I received
confirmation from seven participants, with no additions, corrections, or revisions, and received no response at all from the remaining four.
CHAPTER 4

FINDINGS

Veteran public school teachers were able to describe in detail elements that contributed to research-to-practice success, as well as those that were less effective. The themes that emerged through the interview data which addressed the central question as to veteran public school teacher beliefs about research-to-practice in education broke into two overarching clusters: human aspects that impact research-to-practice, and research-to-practice features. The human themes were Engagement and Resistance, while the research-to-practice themes included Research-to-Practice in Action and Proposed Practices. Each theme was strongly supported by the categories developed in the two-cycle coding process.

The themes Engagement and Resistance describe participants’ perceptions of research, as well as teacher characteristics that make research-based classroom transformations successful, and those that make transformations difficult. The research-to-practice features themes of Research-to-Practice in Action and Proposed Practices drew together the participants’ ideas of what works to move research into practice and what would potentially work best to do the same.

Engagement

The participants in the present study identified what they believed to be research and research-based methods, discussed why they (and other teachers like them) engaged with research, how they accessed research, and what other elements must be present for teachers to use research to improve practice effectively.
Research and research-based methods definitions. Teachers in the present study had fairly consistent ideas about what constituted research that might inform practice. Most incorporated district-provided SD/PD texts into their definition of research-based materials, while they also included concepts learned at conferences, through social media, and other online sources. All eleven participants described research as professional readings they performed to make themselves better teachers. As per the document analysis, teachers in this study typically referred to such sources as Kagan materials (including workshops and conferences), Fountas and Pinnell materials, or other similar resources when they referred to research or research-based materials. What the veteran teachers referred to as research was not necessarily the same as what a researcher would call research. Only three (Libbey, Catherine, Maddie) of the eleven participants discussed reading academic texts and journals (original research studies), all others mentioned only other types of texts and sources.

Why teachers engage with research. Teachers in this study mentioned the use of research to help their students, to improve their own knowledge of content, or to learn new approaches for content delivery. For example, Allie, a middle school ELL teacher, mentioned wanting to help her students learn language to be successful, saying, “Obviously, my number one goal is to help them get on their grade level, their proficiency level.” Catherine specifically named literacy skills as something her inner city urban high school ELL students needed. Kindergarten teacher Libbey articulated that “While we are still spending time learning about being great math teachers, or great writing teachers, it’s necessary that we learn what the research is saying about trauma-informed classrooms, and that we really unpack that as a team together and figure out -
how does that inform our practice?” about her inner city urban elementary school. Jessica, an inner city urban high school art teacher, said she used research “to educate myself, as well as to keep current on what’s going on.” Hannah, a suburban middle school speech and drama teacher, used research specifically about her content area to learn “how to engage those students that maybe aren’t as engaged in that subject matter and find things that appeal to them,” and “improve your classroom, improve your instruction, because you know we can promote lifelong learners with our students, but we ourselves need to be lifelong learners as well. So I feel like that’s essential and that could really help create a better classroom and using research is a big key component to that.”

In addition, the participants in the present study often spoke of wanting to change classroom practices, adjust teaching methods, or improve as teachers; and they used research to achieve those goals. Jessica stated that she used research to learn about content, adding, “I’m always changing what I’ve done in the past,” and included research to make good changes to her classroom. In a discussion of her “constant evolution to be better,” urban middle school English teacher Ruby said she used research to change because “you get stale if you don’t change things and keep up,” a point often iterated among participant responses. Hannah stated that she turned to research about behavior management when she had “run out of options and you kind of feel like at your wits end about what to do…you’ve tried so many different strategies that didn’t work,” adding that at the inner city urban school where she had been previously employed, research lead her to a behavior management program her school eventually adopted building-wide. Inner city urban elementary teacher Evie explained her use of research concisely, saying that she used research to “help fix the problems I see,” a statement that was rooted in teacher
agency and spoke to the ability of teachers to dig into topics that were situationally important.

**How teachers gain access to research.** A common thread among the participants regarding successful engagement with research-based practices was how information was obtained. Some participants specifically mentioned using teacher demonstrations and observations to learn about research-based practices (Kayla, Libbey, Elise, Evie, Ruby, Mark), as well as social networking (Elise, Mark, Libbey, Hannah, Evie) to learn more about research-based methods *through other teachers*. No teachers in this study mentioned having direct links to or methods of communication with researchers.

According to participants in this study, teachers demonstrating for and observing one another was a powerful tool for moving research-based methods into teaching practices. Evie described the practice of demonstration or modeling as one that included a building expert, in her case the literacy coach, who would model a lesson using a particular new research-based strategy, “then she would watch us teach it after that and then she’d…coach us on what to do differently next time.” In Kayla’s urban middle school, they employed a method of demonstration and observation they called “Instructional Rounds,” a practice modeled after medical school methods. In this model, teachers watched research-based methods employed in other classrooms for a brief period of time, then talked about those practices immediately following demonstrations. Kayla said this method was useful because, “I think the biggest thing is not just getting the information out to teachers, but having people that are in your room talking about the application of that research,” a method of engaging teachers with research-based methods in practice.
Elise, a suburban kindergarten teacher, indicated that she also used teacher demonstrations as a means of moving research into practice. She said, “I, last year, became a demonstration teacher myself…in the content area of math. We’re encouraging teachers to try a new method teaching math.” Seven teachers were trained to be math demonstrators in her district, and she added that she was able to watch the other six demonstration teachers at different grade levels, which “was actually very powerful” in informing her kindergarten practice.

Social networking tools were also used by participants in this study as a means of learning about newer research-based methods through other teachers and education leaders. When asked for suggestions for linking research to practice, Elise said, “It might sound silly, but social media does a lot. Like being able to connect with people who might have tried it somewhere else, or just getting little glimpses of it to motivate you to try something new I think.” A follow-up question lead her to expound on the idea, saying “I follow different leaders in technology on Twitter” to learn about new practices, and regarding social media chat about the site breakout.edu, she added, “I found a lot of interest dipping my toes into that.” An avid Twitter user, Elise elaborated, “I know like just Twitter – (I) played with my breakouts, I heard of breakout, but when you see it pop up on Twitter you can call up breakout.edu and it pulls up on your feed, like you see all these different things it just keeps. It’s that constant reminder, where if I don’t have time to dig into it, then well, it pops up a couple weeks later and I go ‘Ok, I need to look into that,’” adding that “I follow different leaders in technology on Twitter and it’s like seeing something they retweet, or something they did even - if it might not apply to kindergarten - it sparks an idea and I could try in kindergarten.”
Mark, a suburban health and elementary PE teacher, added that their district has a chat on Twitter every Monday evening, focused on a specific topic. “We have a (district) chat every Monday…where it’s kind of focusing on a specific topic…I think it’s a real easy, quick way and concise way of learning and grasping onto whatever (topic) was given.” Mark commented, “It’s just three questions, and it’s anyone that wants to join can, but I’ve seen so many people share things they’ve researched, or share things that they’ve read and understood and tried in the classroom…I mean, we’ve got someone in our chat from Baltimore…So it’s people around also.” Libbey used Twitter also, describing her use as, “I’ve recently…become really active on Twitter and there are a lot of really good professional learning networks that really come together around a very specific topic…and I’ll do one of the Twitter chats…bookmarking all the things people are saying. ‘Oh, you teach dual language, are you familiar with this resource?’ And then it’s helpful for me - because we’re just starting dual language – to be talking to Val in San Diego who’s been doing dual language for fifteen years in kindergarten…I’m able to connect with a real kindergarten dual language teacher and she’s telling me the resources that she really uses that are really helpful.”

Hannah used Pinterest to find “new strategies and ideas.” When asked how she accessed research or research-based practices she would like to try, Hannah responded, “I hate to say Pinterest, but…there’s really good ideas…and it brought up actually the speech and drama forum and different strategies to use in the classroom, especially with like reluctant students that aren’t as engaged” in speaking and acting. Similarly, Evie said, “If I am looking for a specific thing, I will look on Pinterest or look on social media or Google or something to figure out what I want to do.” The inclusion of these social
media sites as research or research-based resources indicates that they trust other practitioners, and respect teachers as professionals with specialized knowledge.

Hannah also mentioned that she collaborated with other teachers in her district to share research-based ideas by sharing Google files. Social media tools provided teachers in this study with new avenues for accessing information about implementing research and research-based strategies in classrooms from other teachers, and in some cases, connecting them directly to experts in particular topics.

The concept of learning about teaching practices from other teachers seemed to be important to the participants in the present study. For example, Libbey related two scenarios in which she would be offered a book she should read: if a fellow teacher offered her the book, she said she is very likely to read it; however, if she is told to read a book by a presenter in a staff development session, she said she is not likely to read it - “I’m going to trust the people I have a relationship with,” adding, “it’s so much more meaningful to hear from a practitioner versus a supervisor, or a book seller, or a curriculum specialist,” supporting the idea that teachers respect and trust other teachers who understand the classroom context. Libbey’s expression showed that she trusted those who are on the same plane as she, privileging authentic relationships that she developed across time and on her own over other entities she listed.

When discussing the use of Twitter, Elise explained that learning about research-based strategies from teachers who were trying them provided “little glimpses” of how those strategies might work for her, and might “motivate you to try something new.” In every case, the participants in this study cited learning about research-based practices from other teachers as superior to all other methods. As for initiating use of research-
based methods to model for others, Kayla, an instructional coach (as well as classroom teacher), noted that she relied on feedback and interactions with teachers who observed her attempts with new methods to help her improve, still forefronting the importance of teacher-to-teacher connections in implementing research-based instructional strategies.

Based on selections offered to me as examples of research or research-based materials that the participants in this study produced as evidence, the teachers in the present study preferred to engage with education literature that was written in a practical manner, rather than that which appears in academic journals. The majority of the participants in the present study (Jessica, Libbey, Evie, Elise, Mark, Hannah) preferred to utilize the Internet and social media to learn about research-based methods, rather than interacting directly with academic texts.

**Elements conducive to teacher engagement with research.** The veteran public school teachers in this study expressed open-mindedness, and willingness to use research-based practices and try new things as important to successful engagement with research in practice. Ten of the eleven participants (all but Evie) in the present study held masters degrees or graduate credits, and all mentioned willingness to try new things and/or open-mindedness as characteristics of those who engage with research or research-based methods. A “reflective mindset” was suggested by Kayla as a characteristic that teachers who use research have, stating also that teachers who move research to practice “don’t have that mindset (that) can stop you from seeing the value in the research.”

The participants in this study also mentioned that being afforded opportunities and being trusted by administrators was fundamental to effectively using research to improve practice in the public schools. Elise noted that this could entail teacher self-
advocacy, as teachers may need to request funds for resources, or support to attend conferences. She remarked, “I do think having that trust from your administration is huge and I think you get that from being able to defend what you’re doing,” further stating that she used research to ‘defend’ what she needed or was doing in her classroom. Mark added, “One of my biggest things is having a principal that will trust me to let me do what I’m doing…and kind of build the program,” saying that teachers who use research must invite others, including administrators and supervisors into classrooms to see what it can look like.

Evie noted that she also had support from administration to continue to work with research-based methods and materials, specifically Kagan tools, stating that “My principal…loves Kagan…so he totally is willing to spend his budget on Kagan things,” further illustrating that administrative support for teachers including research-based methods in practice is a way to help teachers engage with those methods. Kayla felt that having a supportive team helped facilitate implementation of research-based methods, stating, “having a strong team of educators…having that positivity of like…‘we’re in this together and let’s do what’s best for kids,’” was an example of having a positive environment conducive to the use of new research-based strategies in teaching.

Some of the participants felt that younger, newer teachers would be more willing to experiment with research-based methods, including Allie, Hannah, and Mark, who all felt that teachers who matched this description have a greater skill set with technology than older teachers, thus making them willing to embrace research-based methods that include technology. As Allie remarked about younger/newer teachers and their technological skills, “The newer teachers coming in – I mean, man! They are amazing.
They can get on and do these like crazy things with technology.” Mark’s impressions of beginning teachers were similar, “I feel like you can get those beginning teachers and show them the research and get them more on board to do it, or try something new…when you’re starting out, you know, seeing something, ‘Oh that’s really neat, I want to give that a try and see how it works.’”

According to the participants in the present study, veteran public school teacher engagement with research happens so that students benefit, can come from numerous sources, and occurs best when teachers are supported, open to change, and willing to try new things. The work of moving research into practice can be difficult, but as Elise said, “Once that motivation, passion is there, people will do the hard work.” Ultimately, Hannah summarized the characteristics of successful research-to-practice teachers as those who know teachers “have to be hopeful that things are going to work out and not come at it like from a negative point of view. I feel like being negative towards research will only lead to negative results. But being optimistic that there’s hope that something maybe could change, that something beneficial could come out of it…You could have the best students in the world, but there can still be improvement in your instruction...there’s always ways that you can improve and that change is a good thing in the classroom.”

**Resistance**

Veteran public school teachers in this study felt there might be several reasons why some teachers do not engage with educational research; or do not feel encouraged to try new research-based instructional strategies in their classrooms. Among those reasons are the sources of the research-based strategies, considerations of time, certain teacher characteristics, and the inapplicability of research.
Sources of research-based strategies. When the participants in this study produced and discussed research-based documents they were using in their respective practices, eight of the thirteen documents analyzed had been obtained by the participants as the result of a district initiative. Phrases such as “throw all this professional development our way” (Allie), the district determines what is “passed down” (Elise), district level “coordinators kind of dictate” what research-based methods will be used (Mark), and “a lot of it, the district kind of…throws at us” (Evie) indicate a system of unwelcome intrusion into the professions of teachers in research-to-practice experiences. Jessica and Mark both shared instances of district-mandated agendas for special area professional learning community meetings, which both indicated did not relate to classroom content or pedagogy. In some cases, as Libbey stated, “it doesn’t matter what the research says” because if a decision has been made by a principal, such as no recess for elementary students (her example), then the teacher must do what he or she is told.

Allie also illustrated an authoritarian system when she shared a scenario as if a directive was coming from the building or district level to a teacher, “You need to make everyone included in the process…you’re going to gain more respect and you’re going to gain more positive attitude from the teachers, because we’ve been in that situation, right? Where they’re (district administrators) like ‘Ok, well guess what, we’re gonna do this this year, this practice and you’re gonna like it and if you don’t like it, too bad’ and then teachers get really upset.” The submissive reception of research-based methods meant to Hannah, “Sometimes when things are just required of you, when you don’t necessarily need it, it’s kind of a struggle.”
Maddie explained that the use of research was district-driven in a system that seemed irrelevant in her teaching context. She said, “Unfortunately, it feels like within (her district) it’s an annual thing. ‘Oh, we’ll try this for a year. Oh, it didn’t work that year, so we’ll throw it out and we’re gonna try something else.’ So I feel there’s not a lot of follow-up or not a lot of communication back and forth between the research and the strategies that are being passed down,” making it difficult for teachers to invest fully in district-driven research-based initiatives.

The nature of research lead some in the present study to talk about a pendulum shift – they voiced a concern about investing time in research-based practices that would shift back over time to what they were currently doing. Catherine, Maddie, Ruby, and Libbey each articulated concern about the difficulty of teacher buy-in to research that they felt would shift back in a short amount of time, which Libbey worded as, “I’ve been around thirteen years, so I’ve seen the pendulum swing back and forth, so I don’t want to be an early adopter if this is just something that’s going to change again. I’m a teacher who does learn a lot, who does think a lot, and so before I jump on any bandwagon, I really want to think purposely about it.” Maddie described the pendulum of educational research-based practices saying, “I think sometimes people do get a little bit skeptical of it, or it’s such a revolving door…the research says this today and tomorrow it’s going to say something different. So I think it’s just hard for people to find that one thing to hold onto that…is actually going to work, or be willing to try new things when they know that two months down the road, that’s going to be scrapped and we’re going to have to try something else.” Ruby had a similar take on the pendulum when she said, “So many times we get to PD and it’s ‘Oh, we did that like four years ago – what’s the acronym
now?” indicating that the pattern of research-based practices is cyclic, only the labels change.

**Time.** An issue that was mentioned numerous times and by every participant throughout the interviews in the current study that leads to resistance on the part of teachers in moving research to practice was time. Time as a source of resistance had many meanings to the participants in the present study.

Kayla noted that some teachers can fall into a mindset of “Oh, one more meeting,” or “This is just a waste of our time, I got this,” and that one more thing to do might take away from time needed to do other things that meet more immediate classroom needs. Allie mentioned that it is time-consuming to implement research-based PD ideas, saying, “I know if you ask every single teacher about PD or what (were)…the challenges – it will be the time factor. It’s huge…there’s just not enough hours in the day I guess to get that information….you just wish you had more hours in the day.” Ruby suggested that “if I’m going to spend time reading, I’m going to have to apply it somehow,” therefore, PD readings and requirements need to be meaningful for her. When Evie mentioned teachers resisting research she said that time was a factor. Regarding research-based methods she might have learned about at SD, Evie said she needed time to work with those new tools, and added, “If I don’t implement it right away, I kind of forget about it,” stating that a teacher’s days “are jam-packed” already without having to think about adding in one more new thing. These sentiments were also delivered by Maddie who said that due to the added responsibilities teachers face, there is not time to think meaningfully about change, saying, “…there’s just mounting and mounting and mounting responsibilities. And then when you finally get time to sit down and think
about what you want to do or think about your lesson planning, it’s like ‘ok, I’m just
going to go back to whatever I’ve been doing because it’s working so far and I don’t have
the time.’ In her desire to have some of the “mounting and mounting and mounting
responsibilities” lifted, Maddie imagined being freed up from “bus duty or lesson
planning or checking to make sure nobody’s smoking in the bathroom…or somebody’s
not going the wrong way on the stairs.”

Mark also felt time was a factor in teacher resistance to working with research or
research-based methods, stating, “Teachers get overwhelmed with things, being put on
different committees, and also running their classroom. Not having the plan time to get
things done whether it’s using your plan time to make phones calls home, or take care of
situations in the classroom and…putting in so much overtime at home…then expecting to
also learn about the new research on top of that. I feel like the amount of time you’re
trying to squish into an eight hour day is so compressed, that teachers just don’t want to
put something else on top of them to increase their stress.” As Libbey observed,
“Teachers are overworked and every teacher I know takes a bag full of stuff that she
swears she’s going to do at home, but we don’t have time. When will most teachers have
time to dig in the research?” Libbey also suggested a once-a-month article club for
teachers to discuss research, but quickly added that implementing such a club would be
difficult because teachers simply do not have the time.

The time it may take to research, or read current research, can be daunting. Evie
noted that the sheer volume of research that exists is overwhelming and the time it takes
to sift through that to find useful, relevant studies is something most teachers do not have.
These veteran teacher participants had menial tasks that ate away at precious time that could have been used to improve instruction.

Other critical issues regarding time that the participants in the present study noted centered more on scheduled times SD and PD offerings were made, as well as opportunities to effectively collaborate with other teachers. Catherine suggested that holding SD and PD sessions after school placed an undue burden on teachers who would already be tired from a full day’s work, echoed by Maddie who said that when PD and SD are offered outside of the school day “people with families or other jobs or other obligations…if the person can’t make it there, then it’s not very meaningful.” Libbey reiterated the inconvenience of outside-of-the-school-day SD/PD when she said, “You can’t ask a new young teacher to not go work her second job so she can stay after school and go to book club.” Each of the participants stated that resistance to the implementation of research-based practices revolved, at least in part, around the time requirement, including time to collaborate. As Libbey put it, “As great as it is for me to think that teachers are just gonna get together for a cup of coffee and talk shop, they’re not. They’re not. Nobody has time.”

**Teacher characteristics.** Teacher characteristics were cited by the participants in this study as a possible cause for non-engagement with and resistance to research. Some participants in the present study suggested that being new to the craft of teaching created a burden that made the implementation of new, research-based methods difficult to incorporate. Elise and Mark both mentioned that new teachers feel “overwhelmed,” and Kayla thought especially newer teachers might struggle to use research in their classrooms because they were busy with issues of classroom management. Speaking of
new teachers being in “survival mode,” Kayla iterated, “They’re truly just trying to survive – minute to minute – they feel overwhelmed with all the outside tasks that they have to do in addition to the behaviors they’re trying to manage in the classroom.”

Referring to teachers who resist new ideas, Ruby said, “I’ve seen that from the younger set…when an offer of ‘Hey, would you like some help with this’ is made, “No, I’m good’” is the response, perhaps signaling that newer teachers feel either overwhelmed and cannot handle having one more thing on the pedagogical plate, or that they feel they have a leg up on older teachers – that their skills are refined and superior to veteran teachers who are temporally distant from their college days.

Just as some of the participants said that newer teachers become overwhelmed by teaching demands in the first year and resisted using new, research-based approaches, others thought that older, more experienced teachers may become set in their ways and, as a result, might not engage in research that challenges them. Mark proposed that older teachers become stuck in their ways, making them less likely to engage in newer research-based methods, offering that, “I feel like once you kind of get into your own groove and your own comfort level, that you’re afraid to kind of take a risk or take a chance on something, rather than when you’re starting out.” Kayla felt that more experienced teachers who attend mandatory SD/PD sessions sometimes enter with a mindset of “I got this, I learned this in college and I’ve got what I need. I’ve got my toolkit of what I need to teach and I’m good to go…I’m already doing what I need to be doing,” shutting down the potential to gain from new information.

Other characteristics the participants mentioned which might impede the ability to effectively engage with and use research in the practice of teaching included resistance to
change. Ruby commented that in general, “teachers hate change,” and iterated the familiar phrase “if it isn’t broke, don’t fix it” as a policy many teachers use to support continuing in comfortable habits. Catherine’s remarks seemed to agree with those of Ruby, as she said many teachers simply “are not willing to experiment,” they have an “unwillingness to give up the control,” and will resist change that pushes them out of their comfort zones, thinking “don’t rock the boat.” Allie’s comments also concurred with those of Ruby and Catherine, as she suggested that overall, teachers tend to do their own thing.

Elise posited that teacher resistance to research may be a result of motivation stemming from whether or not teachers work because “it’s a job,” or “it’s a paycheck,” versus being a passion. Her belief was that many teachers want to be better, but it takes hard work and some “don’t want to do the work.” Ruby asserted a similar belief, framing her idea in the question of is teaching a job or a profession? Is it a calling? She stated that for those for whom teaching is a calling, the work of using research is natural. If teaching is a job, she believed the mindset was more closed off to improvement, saying “If it’s a job, you’re going to do what you have to get done, you’re going to leave. If it is a profession or a calling, you’re going to always try to better yourself.”

In addition, other participants said that teachers may lack confidence necessary to tackle thinking about the use of research in practice. Libbey felt that possibly teachers hear the word research and think that it “must be smart and real and true” leading to self-doubt. She added that many teachers think research-based “means I have no power, I have no creativity. Something’s going to be done to me or for me without my consent.” Libbey added that teachers might not “trust their own judgment, then you get into a dicey
place where any feedback is tough feedback, and when you are told, ‘Well, the research says,’ then suddenly you’re not just questioning yourself, but you’re thinking ‘Am I not supposed to be a teacher? Am I not smart enough? What’s going on?’” This lack of confidence, or feeling of powerlessness may have teachers afraid to experiment, or as Evie said, they “don’t really step out of the box.” The lack of confidence may manifest itself in a number of ways. Mark said a lack of confidence may cause teachers to not take good risks, they may fear getting into trouble for trying new things. Speaking as if such a teacher, Mark imagined a scenario, “If they walk through my room and I’m not doing the exact same thing as that person next door to me, then we get written up.” Kayla expressed a different scenario, and imagined “nobody’s ever giving you feedback…nobody’s ever watching,” and wondered if no one is pushing teachers to be better, or to change – then why would they?

The sense of powerlessness or lack of confidence may also come from the knowledge that teachers are considered the lowest rung on the educational professional ladder. As Libbey said, “I think a lot of teachers don’t feel empowered in their classrooms because they’re feeling pressure from above. Whether above is the next grade up, whether above is the leadership at your building, or at your district, they’re feeling that pressure that they no longer have choice in their curriculum, they no longer have choice in how they deliver their content – that instead they’re being told what to do.” It can facilitate stagnation when teachers do not feel that they have control over choices in research-based methods and strategies that best fit their classroom contexts.

**Inapplicability of research.** Some participants discussed the inapplicability of research as a reason teachers may resist working with it. Elise said that even though researchers
(often) do not teach, teachers “are forced to do it based off of somebody else’s research,” leading to a disconnect between research and the classroom. Hannah thought that “Teachers become a little reluctant when they don’t feel like the research that is being implemented applied to their classroom,” adding that teachers also get discouraged when research-based methods do not work like a magic bullet. Teachers’ faith in research can be hampered by the lack of immediate results in classroom practices. Catherine noted that many times teachers who read research, or attend PD/SD sessions “get hung up on inconsistencies between where the research happened versus what our demographic and what our population looks like,” mentioning a scenario, “Where they might see it’s like ‘Oh this happened in the suburban school that was all white, nobody on free and reduced lunch, so it can never work here.’ Not necessarily, it just might look different,” but it stops the research-to-practice mindset.

Teachers in this study described teacher resistance to research and research-based methods as emanating from factors such as the sources of the research-based strategy pushes, a lack of time for searching, reading, and practicing with research-based methods, poorly scheduled SD/PD opportunities for learning about new research-based methods, certain teacher characteristics, and the inapplicability of research.

**Research-to-Practice in Action**

The participants in the present study were able to articulate practices in place that they felt were effective for moving research to practice in education. Among the features of the successful practices, the participants described teacher demonstrations, collaboration with other teachers, and administrative support as being key elements.
**Teacher demonstrations.** Participants in this study strongly supported their models in action that involved teacher demonstrations of research-based methods and strategies. Kayla, an instructional coach who simultaneously taught seventh grade, felt the model in her building that utilized instructional rounds worked well, in part because she practiced the methods in her own classroom before sharing them with other teachers. “I think you gain a little credibility when you can have those successes and those failures and be able to talk those through,” she said, adding that “I’m a teacher just in the thick of it just like everybody else in the building.” In the instructional rounds model her building used, Kayla said they focused on one research-based method or strategy, and “then let’s come in and watch other people using this strategy in different ways and take it back to your room and (determine) how can you apply it.” Kayla’s faith in the teacher demonstration model stemmed from her belief that through observing others, teachers may think, “What are you seeing that confirms what you’re already doing in the classroom, and what do you see that you might latch onto that you might like to try and bring back to your own classroom?”

Similarly, Elise opened up her classroom as a demonstrator so that other teachers could see her using research or another “rich task.” As one of seven teacher-demonstrators with a particular research-based strategy in math for her district, Elise also took part in observing those demonstrators (at different grade levels), sharing both sides of the teacher demonstration model – both demonstrator and observer. “It was actually very powerful and I truly enjoyed it because I saw the spiral within your grade levels vertically, seeing where I am in kindergarten and where they go for first, second, third.”
Libbey was instrumental in developing a network of teachers who could demonstrate for other teachers of the same grade throughout her district based on research-based skills and methods. Libbey also discussed effective use of instructional coaches, and how coaches could facilitate teachers observing other teachers as a means of developing comfort with new research-based methods. Evie expressed strong support for observing teacher demonstrations, citing the use of a literacy coach as a teacher-model, “If we had a question about something she would come in and model it…and then she would watch us teach it,” stating that this was a good way for her to learn new practices. As Elise mentioned, “Just like some students, you see to learn…if you can see the outcome, or if you can see what it might look like in your classroom, then you’re more willing to dig in.”

Collaboration. Teachers in the present study indicated that they preferred to learn about effective methods through other teachers, either by communicating with them directly, via Twitter, seeing a post on Pinterest, or by observing other teachers. Communication and collaboration between teachers who are trying new research-based methods and strategies through any means was important to the teachers in this study, and they preferred direct contact over other methods. When face-to-face was not an option, these veteran public school teachers had alternate ways to communicate with other teachers. In order to collaborate with teachers within and beyond her own district, Hannah mentioned the use of Google docs for on-going conversations about research-based topics, but she also added that “There’s six of us six exploratory teachers in every single school...we meet together like once a month – we talk.” Allie was the only ESL teacher at her building, but she found that collaboration was critical to her success with students, and
said, “I still collaborate with the other language arts teachers and there’s reading teachers out here (portables)...it gives you comfort in knowing...am I doing this right?” Kayla stated that the most powerful part of the instructional rounds model in her building was that there were teachers “in your room talking about the application of that research.” Elise noted that observations in other teachers’ classrooms lead to “deep heavy conversation” about how research can look in practice. In Elise’s elementary school, teachers decided topics to study and try out in classrooms throughout the year, leading to a presentation on each model as a way “to kind of enlighten everyone what these heavy topics are along with this is something that we feel is right for our school,” before deciding which model to adopt as a focus building-wide, adding that they wanted to enhance the sense of school community in the process.

Ruby used collaboration to ask her cohorts, “What’s out there? What are you doing that worked well? What are you doing that didn’t work well?” followed by her request, “Come into my room, tell me what I can do better.”

Evie stated that if she needed research-based information to help solve a classroom issue, she was likely to ask a veteran teacher, stating, “I feel like more than like going to look for it for myself, I would ask...veteran teachers,” adding that she preferred “advice from other teachers.”

**Building-level autonomy and administrative support.** Administrative support for research-based strategies cleared a path for the participants in the current study to try new things. Evie mentioned that her principal was an advocate for Kagan strategies, so when she expressed interest in learning about those strategies, her principal paid for her to attend a conference and purchased materials for her. Elise noted this as well, and said
about administrators, “all of them were once teachers too and I think to be a teacher, you have that willingness to help, and when someone asks you to help, you can’t just say no.” Elise further explained, “I don’t want to say you get special privileges, but you’re with those other people that have like minds, and I think more opportunities are open to you,” adding that “I know being a demonstration teacher, I have an open budget from one of the assistant superintendents, that if there is a book I want to study, he’ll buy it for me.”

Participants in the present study said they liked when the building took initiative over the district roll-out programs, often taking part in SD/PD, but declining implementation so that their building could focus on one research-based skill, method, or strategy for a longer period of time. In the current study, Kayla said, “You kind of have to pick one, one thing at a time,” and added that the district affords her building some “leeway” in choosing what district initiatives to use, and which they can table for another year.

Catherine and Maddie adamantly supported learning to do one research-based method or strategy at a time, allowing time for the method or strategy to become normalized at the building level. Catherine asserted that her building could choose to table district initiatives if those initiatives did not meet specific building needs, or if the building principal chose for all staff to continue to work on a previous initiative for more years. Catherine and Maddie both agreed that this was the case in their building, with Catherine declaring, “We’ve been pretty fortunate the principal has kind of shielded us from some of the turn keys and everything that are getting presented at (the district level) and going, ‘You know what? This is fantastic, and you guys do what you want to do, but we notice that there is a problem here, and so we’re just going to focus on that.’” This
building-level autonomy that affords time to experiment deeply with research-based programs was something that the veteran teacher participants desired.

**Proposed Practices**

The participants in the present study articulated strong support for models that encourage demonstration, observation, and collaboration amongst teachers. Teachers in this study suggested that strong research-to-practice models would also include teacher leaders, choice, administrative support and limits. These categories came together in the theme of *Proposed Practices*.

**Demonstration, observation, collaboration.** When making suggestions for how teachers could better utilize research in practice, the most resounding answer was to let teachers watch other teachers and collaborate (Kayla, Elise, Mark, Allie, Ruby, Libbey, Catherine, Evie). Kayla’s instructional rounds model provided a strong framework for allowing teachers to have a focus, then “(Let’s) come in and watch other people;” talking afterward about how the research practice teachers had just observed could work in their own classrooms. Elise suggested continuing the practice of demonstrating research-based strategies and methods for other teachers, and collecting feedback so that teachers could grow in their practices. She and Mark both recommended that more teachers connect through social media to share their real classroom experiences and hear about new ideas. Libbey echoed the importance of social media as a collaborative tool, saying, “I really think Twitter’s going to be a really great way for teachers to connect going forward because you can do it in the comfort of your home, and you don’t have to do it in the moment. You can download the Twitter chat about any given topic and read through
those research posts on your own,” enabling teachers to collaborate at a distance if necessary.

Allie also felt that connecting with other teachers was beneficial; “I think a big thing that they can do is to collaborate with each other. I think that’s so important.” Catherine imagined collaborative department meetings for which teachers “bring some research for a strategy that you’re using in your classroom and let’s talk about it,” because “having that exchange of the research and what different people are doing I think is powerful.”

Ruby asserted very directly that teachers should use days when they do not have students to “Get out and see other teachers,” then talk about what they observe and make it personal to their own contexts. Ruby also proposed that the best strategy for moving research into classroom practice was to “Do it backwards. Observe someone, see how they’re doing it – doing whatever – talk with them, and then look at the research for some other ideas that make it more yours, make it more personal for you.” Evie suggested teachers should “have somebody show you how to do it” when trying new research-based ideas, then take time to practice what they observe in other classrooms, and seek meaningful feedback.

In order for this to work, as Libbey suggested, schools must work on building relationships among staff members so that trust is present. Schools in which people build relationships “Empower teachers to let them not be afraid of the research.” Relationships also help establish a team mentality, which Libbey felt was important in implementing meaningful change. She recommended that teachers work as teams because “it’s hard to effect change in a school if your’re one person.”
**Teacher leaders.** Participants in the present study relayed an importance that SD/PD decision-makers should maintain a position (at least part time) in classrooms (Kayla, Elise, Catherine, Libbey), perhaps so they are not - as researcher Davis (2007) said of himself – “incrementally losing touch” (p. 571) with schools, children, and learning. Those who are knowledge makers or disseminators of research may be far-removed from the realities of public school classrooms, and the participants in the present study believed a powerful research-to-practice model includes SD/PD decision-makers and trainers who are current practitioners in the classroom. Libbey voiced this opinion, stating “The further you are away from being in the classroom, the easier it is to forget” what it’s like, what children’s needs are, and added that by being a teacher-leader, she has the advantage of knowing “I’m in the same boat” as other teachers.

Catherine also said that SD/PD leaders, as well as others who disseminate research-based ideas, should still be in the classroom. Catherine further suggested that all deans, principals, department heads, and everyone in leadership positions should maintain at least one course to teach, “Because it’s a lot harder to say, ‘Well, YOU should be doing this and this and this and this’ unless we can show ‘I’M doing this and this and this and this,’” adding “And if we’re not in the classrooms leading by example, what credibility do we have?” Both Libbey and Catherine felt that choosing the right leaders was very important, and that leaders should have a current classroom.

**Choice.** Veteran public school teachers in this study suggested that effective models for moving research into practice should emanate from teacher input, creating a contextually situated, and therefore meaningful, foundation for improving practice through evidence-based methods (Hannah, Libbey, Catherine, Maddie, Evie, Ruby). These teacher
participants indicated that if they could design effective research-to-practice models, they would include choice in SD and PD offerings. Evie said, “I think letting teachers choose what they want to learn about in in-services would be more helpful than just saying ‘Everybody’s going to learn this neat practice and we’re all going to do it’…because it might not work for what they want to do,” calling for SD and PD teacher sessions to be “practical to their situation.” Hannah suggested differentiated offerings for teachers, and Ruby recommended “specialized professional development or more choice,” saying that if teachers had choice “they could take ownership” of research-based classroom practices. Maddie also proposed “professional development that gives people options to go to these different sessions,” including options outside of the current practice of department or subject specific offerings, because as she suggested, to meet the needs of her students, “If my AP Comparative Politics kids can’t read, maybe I should be going to a literacy session instead of the social studies session.”

In addition, participants in the present study wanted SD and PD offerings to be convenient, including Catherine who said to make SD and PD offerings at a time “more accessible for teachers.” She added that such offerings should use time already set aside, such as plan times or faculty meeting times, not Saturdays or evenings after school.

**Administrative support.** Jessica suggested having more administrative support, which could translate into better resources for her students. Elise and Ruby suggested that whenever possible, administration should find ways to make staff development worth professional growth points or find ways to pay teachers for SD and PD. Both noted that pay can provide motivation for teachers to try more research-based ideas.
Administrators could support research-based practices by incorporating the language of research in feedback, according to Libbey who gave an example of such feedback. Using an imagined scene in which a kindergarten teacher used morning music during an evaluative observation, the administrator could say, “The research shows that when you use music with young children…” and elaborate to show support for - and to facilitate - the language of research use in the classroom. Maddie suggested also that administrators interested in promoting the use of research by classroom teachers should lift some of the extra responsibilities teachers have and allow time for teachers to collaborate and work deeply with research-based ideas. Jessica recommended that administrative support in terms of “more resources that supplement the research” would help teachers implement research-based practices.

**Pick one.** The participants in the present study felt very strongly that districts and schools must cut back on the number of initiatives, or research-based methods and strategies that are rolled out to teachers, and if that number is not cut, then buildings must be empowered to limit the number they choose as a focus (Kayla, Libbey, Ruby, Catherine, Evie). From Kayla who said, “Pick one, one thing at a time,” to Ruby who said to “implement one or two things at a time,” to Catherine who said to “focus on one area, do that really, really well, and then move on to the next one and add to it,” they all echoed the sentiments of Libbey who said, “When you think about just the trends that have gone – we grab onto something and we’ve thrown ourselves into it, and then we abandon it the next year for the next big thing” when instead, “We really want to do the same goal and really get really strong at that goal before we move on.”
In addition to limiting the number of new, research-based initiatives for teachers, the participants encouraged models that are not forced. Models that respect the input of teachers and acknowledge their levels of concern were preferred to forced systems by the veteran public school teachers in this study, including Evie, who bluntly stated, “No more ‘Everybody is gonna do this!’” Libbey also said that such initiatives should not have a forced timeline, but should instead be “thoughtful and purposeful” and not entail such talk as “Ok, tomorrow, everybody’s going to switch. Research says this is good, everybody’s going to switch.”

Through thoughtful discussion, the veteran public school teachers in the present study suggested that effective mechanisms for moving research to classroom practices include the use of teacher demonstrations and collaboration, effective teacher leaders, teacher choice in SD/PD offerings, administrative supports, and limits.
CHAPTER 5

DISCUSSION

Summary of the Themes

The purpose of this qualitative research study was to explore the perceptions of veteran public school teachers regarding the use of research-based methods in practice. The central question posed in this research was: What are veteran public school teachers’ beliefs about the use of research in public school teaching practices? Eleven veteran public school teachers from three states and varying levels of schools were interviewed using a semi-structured interview protocol. Interview transcripts were analyzed in a two-stage coding process into codes, then categories, and themes that ultimately expressed the ideas shared by the teacher participants.

The four themes that emerged from the data were Engagement, Resistance, Research-to-Practice in Action, and Proposed Practices. Consistent notions crosscut the data and had overlapping elements which were evidenced in codes and categories. Teachers believed that engagement with research in practice was a result of positive teacher characteristics, such as willingness to try new things and open-mindedness; administrative support for new ideas; access to research-based approaches through many sources; and a desire for better understanding of content and pedagogical strategies. Teachers in this study felt that teacher resistance to research-based practices was a result of being forced to adopt methods and strategies that were irrelevant to their practices or a result of a “pendulum swing;” a lack of time to learn or practice research-based strategies; negative teacher characteristics, such as being overwhelmed; and the incongruence of contexts between research and their own classrooms.
The teachers in this study articulated the elements of their successful research-to-practice experiences as the ability to watch other teachers through demonstrations, modelling, and peer coaching; the ability to collaborate with other teachers; and school-based autonomy and administrative support for adopting necessary research-based strategies, and abandoning unnecessary or extraneous ones. Veteran public school teachers proposed that in an effective model for bridging research into practice, teachers should use demonstration, observation, and collaboration with other teachers; research-to-practice decision-makers should always be people who have current teaching practices; teachers should have a choice in what SD and PD they attend; administrative support is important; and buildings should focus on one thing at a time until they do that one thing very well.

**Implications of the Research**

The initial inquiry of this qualitative study was to explore veteran public school teachers’ beliefs about their use of research in public school teaching practices. The participants’ examples of research or research-based materials indicated that they did use products that were based on research, and three participants (Libbey, Catherine, Maddie) cited the use of original studies to guide their pedagogical decisions. There were many reasons why teachers do and do not engage with research, as well as established practices that they felt enhanced their understanding of research-based methods. The teachers had many suggestions for improving research-to-practice in education. The feminist viewpoint illuminates a pushback perspective embedded in the responses of the participants, as well as an interpretation of the power behind teachers’ decisions and actions.
RQ1: What are veteran public school teachers’ perceptions of research? Like the beginning teachers in Gray and Campbell-Evans (2002), most of the veteran public school teachers in the present study were not reliant solely upon academic texts to inform their practices. Their concepts of research were wide and included an array of sources. The document analysis of materials that participants provided as examples of research or research-based items indicated that participants had selections of research-based materials that incorporated the use of educational research or cited examples of educational research, as well as academic texts. Examples of research and research-based items provided by the participants included educational publisher products (e.g., Kagan materials) which used or cited original research in suggested activities or strategies for teacher use. The teacher-provided examples also included textbooks from master’s level courses that cited original research (e.g., Dweck, C., 2006, *Mindset: The New Psychology of Success*). Only three participants in the present study (Libbey, Catherine, Maddie) mentioned using original research articles from scholarly journals to investigate topics deeply.

Little mention of original research articles by the participants, and the fact that all participants highlighted the use of sources other than academic research, may indicate a distancing between teacher practitioners and educational researchers. Teachers may prefer to receive research and research-based information in practical forms that are easy to consume. The jargon-filled and lengthy format of academic writing may be more in-depth than is necessary or desirable as teachers work to implement ideas into classrooms. Ekiz (2006) found that elementary teachers in Turkey preferred to engage with research when it appeared in “practical or applicative literature rather than academic articles” (p.
398), much the same as the teachers in the present study. Schneider (2014) advocated for research-based methods and strategies to be neatly packaged into existing curricula and practices for better absorption into current classrooms. Teachers in the present study mentioned other sources for information regarding research-based classroom strategies, such as the Internet, Twitter, or other teachers. Teachers work full days on full schedules with few breaks, and a preference for information that respects teachers’ time was indicated by the participants in the present study.

Veteran teachers’ perceptions of research (based on the majority of the selections they shared) differed from a traditional definition that an educational researcher might use. For the teacher participants in this study, the definition of research indicated that teachers accepted texts given to them by their districts or schools as research. These included materials that were mediated by educational publishers, and/or were selected for teachers by administrators overseeing them. As part of the reproduced social structure of the educational hierarchy in which teachers assume the lowest rung, teachers received new initiatives and were expected to implement them with fidelity and without question. Therefore, their perceptions of research included materials provided to them by schools and districts, which the public school teachers in this study often accepted without questioning the content or validity. In fact, Elise was certain that her district had done its “due diligence” in selecting research-based initiatives, an example of submitting the role of validating research to be used in practice to others.

To an educational researcher, research might be defined as the activity of knowledge-production, and the scholarly writing which communicates investigative
knowledge-producing activities. According to the AERA (2018), educational research is defined in this way:

Education research is the scientific field of study that examines education and learning processes and the human attributes, interactions, organizations, and institutions that shape educational outcomes. Scholarship in the field seeks to describe, understand, and explain how learning takes place throughout a person’s life and how formal and informal contexts of education affect all forms of learning. Education research embraces the full spectrum of rigorous methods appropriate to the questions being asked and also drives the development of new tools and methods (http://www.aera.net/About-AERA/What-is-Education-Research).

The discrepancy between definitions contributes to the perception of a research-to-practice gap in education. Teachers who feel they are using research-based methods in their classrooms may be employing strategies that have been mediated by publishers - potentially publishers who have had little or no direct contact with researchers of those strategies. Despite the AERA definition and vision that education research “drives the development of new tools and methods,” the multiple steps between the publication of original educational studies and the publication of teacher-friendly texts create an opportunity for miscommunication, loss of integrity of research results, misinterpretation, and a host of other problems in linking research to classroom practices. The steps themselves are a gap between the actual research and the actualization of it in classroom practices. Without direct conversations between researchers and teachers (as suggested
by McIntyre, 2005), there will always be a gap, a space for misinterpretation of research, or misapplication in classrooms.

Original research studies in education are often lengthy in terms of a quick read to be completed by a teacher during her plan period, and are replete with the specialized language of research. Statistical terms, formulas, and detailed histories are not essential for teachers, and the “dumbing down,” or condensing of text in mediated versions pushed first by publishers, then by districts, touted as “teacher-friendly,” are both insulting and may lose specific meaning in translations. The foreignness and perceived haughtiness of original research alienates teachers who feel the reiteration of their position as being incapable of understanding the research; therefore, they accept what they are given and told to do, rather than being lifted into an understanding that they are professionals who are also differently specialized and qualified. Libbey verbalized this, saying that teachers might not “trust their own judgment” in understanding the application of research in public school classrooms. Vanderlinde and Braak’s (2010) researcher participants noted that their educational research was intended for journal, publication, and proceedings audiences, not teachers. Similarly, Smith, Richards-Tutor, and Cook (2010) proposed that one reason teachers do not engage with research is because research is intended for a different audience, which solicits the question why? If educational research is intended to be used to change classroom practices, then why is it not written in a way that is consumable by teachers? Why are teachers not the intended audience of educational research?

The differences in the perceptions of research by teacher practitioners and educational researchers may also be about power as well as an actual difference in
definitions. West (2011) suggested that teachers may avoid the use of research articles as a means of pushback against educational research institutions, noted as “traditional gatekeepers of knowledge” (p. 90). Research institutions may maintain a high academic status by producing publications that are intended for other institutions of higher academics, not by aiming for an audience of teacher-consumers, although teacher consumers are the professionals who could potentially enact the results of research. Some research has suggested direct interaction between educational researchers and teacher practitioners as a means to communicate and collaborate to improve educational outcomes (Alber & Nelson, 2010; Wentworth, Carranza, & Stipek, 2016). Direct communication of the results of research with teachers who implement those research-based ideas would empower the research institution as one that brings about results and creates change in education; however, that empowerment, originating from a lower hierarchical rung is not as powerful or meaningful as accolades from another respected institution of higher education.

According to the National Center for Education Statistics (2018), “In 2011-2012, some 76 percent of public school teachers were female, 44 percent were under age 40” (https://nces.ed.gov/fastfacts/display.asp?id=28), and yet women at doctoral-level universities - ones that produce academic research - make up only 33 percent of faculty (Mason, 2011). With a clear majority of classroom teachers being young females, and a clear majority of university faculty (potential researchers) being male, there is an obvious space for the male-dominant power paradigm to be enacted. Female teachers in subordinate positions acquiesce to male researchers and suspend skepticism toward purportedly research-based published materials. In addition, female teachers in
subordinate positions acquiesce to male administrators - accepting what they are told to do without questioning orders, without challenging directives - even when female teachers are in a position to know more about the specialized context of the classroom than any authoritative power over them. Furthermore, since young women compose the majority of the public school teacher population, for teachers to become the primary consumers and critics of academic research, would upset the power paradigm – not only the institutional power hierarchy, but also the male-dominant power structure. Instead of institutions of higher learning (a male-dominated entity) producing academic texts for, and in competition with, other institutions of higher learning (other males), in producing texts for teachers that emanate from teacher practices, researchers would have to link themselves directly to teachers – women teachers. This linkage would challenge the male-dominated power paradigm that is not likely to be quickly or easily neutralized.

**RQ2: In what ways do veteran public school teachers access research or research-based teaching interventions, strategies, or programs?** Veteran public school teachers in this study accessed research both actively and passively. Active methods included using online resources such as Twitter and Pinterest, or searching online university libraries (Catherine and Maddie) for research information to inform their practices. More passive methods mentioned by the participants were SD/PD offerings or mandatory district initiatives; however, teachers also mentioned pathways that were blended between active and passive, like committee membership, graduate coursework, observing teacher demonstrations, and attending conferences.

Just as Williams and Coles’ (2007) participants felt that the Internet was a convenient source of information, the majority of the participants in the present study
(Jessica, Libbey, Evie, Elise, Mark, Hannah) mentioned the Internet and social media as places to learn about research-based methods. Hannah issued an apologetic confession regarding the use of social media sites, signifying that she understood that the education system adheres to a hierarchical structure through which research information is disseminated to teachers from an authority, and that seeking practical ideas and advice from other teachers was a method that was not deemed as academic, or as informative as that which traversed traditional academic pipelines. Evie noted Pinterest, social media or Google as places she checked for solutions to problems, indicating that her active means of searching for answers was self-directed and problem-based, unlike the district initiatives.

Other participants highlighted the use of Twitter as an effective way to learn about research-based classroom methods. In an article aimed at helping rural teachers collaborate, DeLay (2009) encouraged the use of Twitter as a means for teachers to reach other teachers at a distance. Similarly, Carpenter (2015) encouraged twenty preservice teachers to follow thirty Twitter accounts related to teachers’ content areas, send two tweets per week related to education, and participate in live chats. In a follow-up semester, Carpenter found that some preservice teachers were still using Twitter, and described it as a useful tool, much like Libbey, Mark, and Elise, who described themselves as active on Twitter.

Elise’s use of the preface “It might sound silly” regarding her use of social media, in particular, Twitter, like Hannah’s apology for using Pinterest, indicated that while Elise might have felt her use of Twitter was helpful and progressive, she realized that it co-opted a millennial tool that could also be non-academic. Since she was describing a
self-directed and active use of Twitter, she had to cast off any negative images first by remarking the contrast; implying Twitter can be silly, but her use was the opposite. Mark’s explanation of the weekly district Twitter chat, although a seemingly engaging use of technology and effective means of discussion, was mediated by the district. In a less-than-authentic connection amongst teachers, the district determined the topics and monitored the discussions.

The power enacted in this scenario was obvious in the fact that the district controlled the topic and talk, but in a less obvious way, the district also monitored who was “in” and who was “out” via participation and non-participation on Twitter. Teachers who elected to not have a social media presence, or who used their evenings differently, would not be noticed on Twitter discussions. A lack of presence by predominantly female teachers could be regarded by the male-dominant power authority as a lack of interest, a lack of knowledge, a lack of loyalty – and when opportunities arise for which candidates must be selected to participate, those who have been present, win favor. Participants on Twitter make themselves familiar to the district power authorities; they make thinking transparent in discussions. While it would be possible for a district employee to voice in opposition to concepts presented by the district on Twitter, knowing that their employer is not only watching, but can evaluate participating employees’ beliefs, it is likely that teachers put their most compliant foot forward in such talks. Female teachers are not likely to voice disagreement with powerful male employers/leaders, and those who have any hopes of advancing into leadership positions must not voice opposition. This tightly woven system that keeps the voices of the oppressed not only in check, but often in uniform agreement with the male power, reassures the leader of his power. The district
has essentially co-opted this millennial tool as a pulse-check: “Does everyone agree with me?”

The district expectation that teachers would engage in their selected Twitter discussion topics in the evening (after work hours), on a particular night of the week, and using the teachers’ own personal paid Internet access illustrates an intrusion that, albeit voluntary, emboldens their powerful hold over teachers. Since the majority of teachers are young women, a good portion of them would have to work second jobs and cannot participate in evening Twitter chats. Female teachers who have children typically have differentiated home-life responsibilities that consume early evening hours. How does a young mother who is a teacher ever earn favor with her building or district when the method of involvement with research topics takes place at this time? How do female teacher voices enter into this conversation in honest, revolutionary ways? Under the guise of involvement in research-based topical discussions, the perpetuation of this system ensures that teachers (predominantly female) remain subordinate to administrators (predominantly male).

As noted also in West (2011), most teachers in the present study suggested that they received access to research-based strategies through SD/PD and district initiatives (passive systems); however, throughout the interviews there were examples of accessing research and research-based strategies in methods that were a blend between active and passive research-seeking. Mark referred to being on a technology team which provided special access to research-based technology and ideas the district favored. Committee membership and the subsequent benefits of it were problematic, as membership was not an opportunity that just anyone in his building could have had. Membership was a power
brokered by an authority over teachers. Mark and Elise both described a method of committee membership in their district which involved an application (active) and selection (passive) process. This alone constituted an opportunity for an authority to exercise control over populating committees and promoting an agenda, and also limited the pool of teachers who would have, as Elise said, “more opportunities.” Since her committee membership as a demonstration teacher had technological, financial, and/or other benefits, the process of selection for membership onto it also created a system of have-nots among teachers who were not selected for that committee. Mark related the experience of having access to technology that others in his building did not have (because of committee membership). He expressed the disparity in access to research-based resources as he talked about bringing experiences back to his building to demonstrate, but feeling like “it’s going over their heads” because all teachers did not have access to the technology that he did as a result of committee membership.

The gifting of committee membership, in particular when accompanied by special resources such as technological devices, creates more rifts than between teachers. In Elise’s case, she described a potential technology roll-out in her district during which to avoid creating a financial crunch by implementing technology to everyone at the same time, only selected teachers would get technology in the first phase of the roll-out. This not only would divide teachers into haves and have-nots, but would also allow the power authority controlling the purse strings to determine which children receive an advantage and which do not. When committee membership is made selectively, it automatically discourages applicants who have families or second jobs, since committees often meet after hours. Such membership divides resources unevenly, allowing powerful
administrators to hand pick which teachers and which students will have access to research-based tools and resources.

Participants in the present study noted that they attended conferences and took graduate classes, but they also relied on other teachers as access points for information regarding effective research-based classroom practices. For example, Evie said that if she was seeking research-based ideas, she would ask veteran teachers or specialists for support, indicating that advice from other teachers was valuable to her. Allie and Ruby both described discussing newer technological tools and applications with a building teacher-expert. Libbey, Kayla, and Evie each mentioned accessing research-based ideas through math and literacy coaches (teachers) within their buildings.

In a study involving 50 teacher candidates, Smith, Richards-Tutor, and Cook (2010) found that when asked where they preferred to get best practice types of information, the teacher candidates indicated a preference for “other teachers,” because the narrative about real classroom practices was meaningful to them. The researchers asserted that the role of teacher-to-teacher narrative practices in teaching is an important element for moving research to practice. Neal et al. (2015) also suggested (citing Rogers, 1995) that “individuals are most likely to adopt something new if they learn about it through interpersonal relationships” (p. 423), and the smaller the social distance between parties, the greater the likelihood that communication can and will occur.

The social distance between parties appears to be a factor in accessing research-based classroom ideas; however, social distance is also a measure of power distance. Teachers appear willing to consult teachers who they deem to be of nearly equal power to themselves in matters of educational research. In academics, one would not consult a
person from a lower power for educational research information (as this person would be considered one with less experience or deemed less “intelligent”), and apparently teachers will not reach out to a person they determine to be from a higher authoritative power for research information (as this would make the one reaching out a person of considerably less experience or of less “intelligence”). This could also be the case because as a female, a teacher will consult another female with similar work-intelligence or experience, as it does not cross the line of the teacher considering herself on the same plane as a male administrator or male researcher, nor does it cause her to lower her dignity by forcing her to beg for something from someone – a simultaneous admission of failure for not already having what she needs, either in the form of knowledge or other resources. In an effort to maintain dignity and whatever power a teacher has established for herself, she must seek research information laterally. While privileging the teacher-to-teacher narrative, as suggested by Smith, Richards-Tutor, and Cook (2010), teachers may also seek research information from other teachers to conserve whatever social or power position they have earned through their education and experiences.

**RQ3: What conditions encourage veteran public school teachers’ engagement with research or research-based strategies?** The theme *Engagement* emerged from the data as participants talked about how and why they engaged with research and research-based methods. Veteran public school teacher participants believed that research was important to honing their skills as teachers, learning about content, remaining pedagogically fresh, and helping students attain skills. Teachers in this study used research or research-based materials to make informed decisions in their classrooms, to learn about content, to solve classroom problems, and to improve as teachers. Interviews were peppered with
examples of using research-based materials to improve literacy instruction (Allie, Mark, Catherine, Libbey, Ruby, Evie), to improve content knowledge for teachers (Jessica, Maddie, Ruby, Elise), and using research to take the initiative to try new things (Hannah, Mark, Kayla, Elise). Participants were working with numerous topics in their own classrooms, working to improve instruction, improve student behaviors, and improve student achievement. Echoing some of the findings in Willemse and Boei’s (2013) survey of 508 teacher educators, every participant in the present study mentioned using research or research-based strategies to help students become better, or specifically, to help students who struggled in some way. It was evident from the responses of veteran teachers in this study that they were engaged with educational research or research-based materials.

Teacher participants felt that certain characteristics made it more likely that they would engage with research, including open-mindedness, willingness to try new things, and being employed in buildings that supported their experimentation with research-based methods and strategies. Some (e.g. Mark, Allie) thought being a new teacher might lead to openness to engaging with new research-based methods as compared to veteran teachers who get in a groove; in contrast, others (e.g. Elise) thought veteran teachers might engage with research more than their less-experienced counterparts. Some participants (Kayla, Hannah, Ruby) felt that engagement with research emanated from the teacher mindset of always doing what a teacher can to improve.

Teachers in the present study felt that when they could observe other teachers using research-based methods, or collaborate with other teachers on the use of research-based methods, they were better able to engage with those strategies than other means of
learning about them. Like the participants in the present study, teachers in the study by Boardman et al. (2005) also called for opportunities to see research-based methods in action in other classrooms, and participants in a study by Smith, Richards-Tutor, and Cook (2010) also recommended a formidable collaboration component for effective research-to-practice models. Kayla described the instructional rounds model employed at her school for teachers to view other teachers using research-based practices and collaborating together, and Elise described a similar model in which teachers from different grade levels trying new research-based methods in math observed each other.

Teachers in this study engaged with research-based materials, but their engagement was fraught with inculcated helplessness that teachers experience as the underlings in a public school hierarchy that devalues their professional perspectives and expertise. Engagement with research was controlled by those in positions of authority over teachers. Typical talk during the interviews involved veteran public school teachers saying that they might receive something from an authority in the form of choice, resources, or opportunities in exchange for trust, or proof regarding the use of research-based practices in their classrooms. There was an underlying power disparity message in the statements teachers made, such as when Kayla said that her district gave her “leeway.” While Kayla was making a statement about being afforded choice in SD/PD offerings at her school, the point remains that this was given to her by an authority, and that it came with parameters. The choices were all pre-selected by the district, and did not emanate from the classroom level of concern. There was no actual teacher autonomy in her example.
In the case of Allie, her principal was a believer in Guided Reading, so she received Guided Reading materials easily. Evie received resources as a result of her principal’s affinity for Kagan tools. Elise said that being on different committees gave her access to resources and administrative purchases. By buying into methods that are favored by administrators, these teachers accessed resources for their students. It was not through teachers’ own ideas, or their own research that they decided to go with particular research-based methods, but instead, they went with methods their administrators preferred, perhaps earning favor with the administrator.

Elise spoke of a relationship of trust with her administrator, saying that she had built a trust so she felt she could “justify” or “defend” trying new ideas. The administrator who hired her had also bestowed her with enough self-doubt that Elise (and others like her) must justify the use of research-based methods in her classroom. Elise’s sense that her administrator trusts her shortens those conversations about using research-based methods in her kindergarten classroom and assures more acceptances than rejections, but the permission must be sought nonetheless. If administrators trust research, then it must be the implementation by teachers that they do not trust, and teachers know this. Educational researchers enjoy a higher status than teachers, and the procurement of research to use in classrooms must be obtained through careful navigation of hierarchical pathways to it. Skipping from the classroom level directly to educational research jumps over the hierarchical layer inhabited by administrators; therefore, teachers must be granted permission by administrators to use research.

Teacher professionals are educated and can understand educational research. They do not need the interpretation or permission of administrators to use research-based
methods appropriately in their classrooms. In the instance of the present study, the teachers were *highly* educated, yet they still sought permission to use research. They implemented initiatives that districts rolled out to them, and while teachers had conversations about the research-based methods and took part in observations and collaborations, they did not question the initiatives, nor did they seek conversations directly with research institutions about them. Engaged in this manner with research, veteran public school teachers remained complicit in their own oppression.

**RQ4: What challenges do veteran public school teachers face in applying research to practice?** According to the participants, challenges they faced in implementing research in practice included a lack of time, forced initiatives, challenging teacher attitudes, and the inapplicability of research to their classroom contexts. Challenges to using research in practice emerged from the data as the theme *Resistance*.

Every participant mentioned time as a factor that led to a lack of engagement with research or new research-based methods. Negative time factors included time needed to sort through and read research, time needed to implement new research-based ideas in meaningful ways, time used for SD/PD, responsibilities that chew away teachers’ time, and the times of day research-based SD/PD offerings are made.

Elementary teachers with varying years of experience in Turkey expressed time and lack of resources as reasons they did not take part in research (Ekiz, 2006), and while that correlates more with teachers conducting research than perhaps engaging with the corpus of education research that already exists, they also noted that the research that did exist did not necessarily suit the context of their teaching worlds. Williams and Coles (2007) also found that teachers preferred to interact with “predigested” research, rather
than source academic texts for themselves, citing a lack of time as a critical factor in making that choice. In a study by Tavakoli and Howard (2012), teacher non-engagement with research was also attributed in part to a lack of time (on the part of teachers), as well as cumbersome workloads. Carpenter (2015), who encouraged the use of Twitter with preservice teachers for the purpose of collaboration and learning about content, found that one semester after the required Twitter assignments, preservice teachers (then student teachers) who were no longer using Twitter said that “Time was an obstacle” (p. 222), as they were too busy with other tasks of teaching to continue use. Miretzky (2007) also found that teachers were frustrated by SD/PD offerings that were time-consuming and irrelevant to their practices.

Time challenges posed by a participant in the present study as “mounting responsibilities” included lesson planning and duties. While planning lessons is considered to be typical for teachers, for many they must submit detailed lesson plans at least one week in advance to an authority over them – typically a department head, dean, or principal. The tedium of that task is often described by teachers as a ‘waste of time,’ as written and submitted plans in actuality must change flexibly with what is learned about student learning from formative assessments along the way. Turning lesson plans in to an authority as a method of checking on a teacher professional is demeaning and signifies distrust. In addition to lesson plans, many menial tasks teachers often must do are not within a professional description of the career. One example by a participant in this study would be a teacher who must forego plan time to monitor a restroom for smokers and would not have time to plan for new, creative, research-based ideas. A second example included a teacher taken away from plan time or a classroom filling with students to
watch a stairwell for those going up when they should be going down, or vice versa, losing valuable plan time, or risking having an incident in an unmonitored classroom. Teachers who are not on duty for these tasks are chastised, reprimanded, and reminded that this is what they signed up for in teaching. The same teachers are reminded to use their time to implement research-based ideas in the classroom.

Time issues were highlighted also by participating veteran teachers who expressed disappointment with the timing of SD/PD opportunities. Comments regarding when SD/PD opportunities are offered illuminate a power concern. Administrators who do not teach, and who have time set aside during the work day for learning about new research-based methods, are in a position of authority over lesser paid teachers who do not have time during the work day for such opportunities. Teaching, which is generally a four-year undergraduate degree, carries with it the expectation that a new teacher, or one with a family, will not be paid adequately to cover life expenses and student loans. Time was an issue for the veteran public school teacher participants because they understood that if they were to incorporate research-based methods into their classrooms, the learning of those methods must take place outside the school day, and would infringe on either time needed for a second job, or time for families. Other professions that are the fruits of four-year degrees do not carry that burden. According to those interviewed in the present study, teachers resist engaging with research when they are faced with time challenges.

Teachers in the present study noted that another challenge that led to resistance to research-based methods was the imposition of SD/PD initiatives pushed out by districts, also an issue discussed in West (2011). Often administrators or policy-makers determine
what strategies and topics teachers must develop, not teachers themselves. In describing
district initiatives, participants in the present study used phrases such as “*throw all this*
professional development our way” (Allie), the district determines what is “*passed down*”
(Elise), district level “coordinators kind of *dictate*” what research-based methods will be
used (Mark), and “a lot of it, the district kind of… *throws at us*” (Evie) which spells out
the unfavorable subordinate position of teachers as those who are lower than the district,
and the targets of thrown objects and mandates. There is disguised anger in these phrases,
uttered not unhappily in the interviews, yet violent words of frustration.

Chicago teachers in Miretzky’s (2007) study expressed frustration when the
means of receiving research-based practice information came in the form of district
imposed workshops. Time investment and lack of choice were points of contention for
the teachers in Miretzky’s study, as well as a perceived disconnect between the context of
research and the situated practices of teachers. In addition, the teachers felt that not all
purportedly research-based PD was in fact a fair representation of results. One participant
in Miretzky’s study stated that “the research can say anything you want it to say” (p.
274), a criticism also voiced by participants in Boardman et al (2005), and the present
study by Maddie, who said, “You can find research to support practically anything if you
look hard enough.”

Some Chicago teachers in Miretzky’s (2007) study expressed frustration with the
lack of choice or relevancy in PD opportunities. This is not unlike the compliance with
PD/SD pushes by the participants in the present study, who often attended PD and SD
sessions to fulfill an obligation, but not to fulfill a self-generated query. Veteran staff
might be less willing to participate in SD/PD sessions because of what participants in the
present study collectively described as a negative mindset; however, it could be because veteran teachers reject being directed to do things that they have perhaps tried and know not to work, or because they know it is part of a cycle of events, or because they are pushing back against an authority over them telling them how to teach in their own classrooms. Experienced teachers know that pedagogical strategies cycle back around, and resist what they know did not work before under a different name. Veteran teachers who go through the motions of SD/PD experiences, but make their own choices about implementation are pushing back against prescribed SD/PD, as they have figured out that administrators in a position of power over educators do not understand teaching practices or classroom concerns.

Another challenge in implementing research in practice that emerged in the theme *Resistance* was teacher experience. Some participants mentioned that new teachers might be overwhelmed, and more concerned with classroom management than other topics, and thus operated in “survival mode.” Similarly, Gray and Campbell-Evans (2002) found that beginning teachers felt overwhelmed and were in a form of survival mode their first year, but expressed openness to potentially using research later in their careers; in fact, their results indicated that about one third of beginning teachers did not draw upon research skills in the first year of teaching. Along with feeling overwhelmed, the teachers in their study were not reading research journals and did not feel they had time to implement new, research-based methods the first year. In a study by Boardman et al. (2005), participants also had the perception that newer teachers (of EBD students) became overwhelmed by program training, and that a lack of time and resources lead to teacher disengagement with new programs for EBD students.
Teachers in the present study indicated that experienced teachers may not be inclined to dive into SD and PD opportunities, feeling that veteran teachers may be in a groove or comfort zone with current practices. This was also the finding of Tavakoli and Howard (2012) who found that “teachers who had obtained their qualification a long time ago were less likely to find research supportive of their practice” (p. 236). It is also in line with Miller et al. (2002) who suggested that veteran teachers may be more “set in their ways” than their novice counterparts, and that as a result, newer teachers may be open to new, research-based ideas as a means of establishing a more complete toolkit as beginners (p. 22). LD and EBD teachers in a study by Boardman et al. (2005) shared the perception that newer, less experienced teachers were more likely to experiment with new (research-based) methods than teachers who had more years of experience. Boardman et al suggested that veteran (experienced) teachers develop cynical attitudes about what are purported in PD/SD sessions as ‘research-based’ practices because they have already experienced district-level pushes of ‘research-based’ practices that were very different, only to have the old ones return again years later.

An additional challenge to implementing research effectively in the classroom stems from a lack of teacher confidence and a position of subordinance to administration. For example, as an instructional coach, Kayla felt a responsibility to not only know the research-based methods she was charged with helping to implement building-wide, she felt she needed to have experience with the methods in order to be believable as a coach. As a veteran teacher and colleague, it was interesting that Kayla thought she had to do something separate and extra to have credibility among teachers. Kayla believed that sometimes teachers want to hear from “the actual expert” and also believed that
administrators at her district administrative building were the “true experts” because they held doctorate degrees and were “working with the research day and day out,” immediately hedging her comment by describing herself as “a teacher just in the thick of it just like everybody else in the building,” and that lacking a doctorate degree somehow made her less credible to other teachers. Her use of the term “actual expert” indicated that she did not consider herself expert. She was complicit in her own subordination, dismissing the fact that she had worked with research-based tools in a classroom with children – something her administrators and those with doctorate degrees at the administrative building had not done – and mitigated her own role by referring to herself as “a teacher just in the thick of it just like everybody else,” taking all the other teachers down with her.

Kayla was embodying the role of the submissive female in this passage. As a female teacher, and representing other female teachers, she felt willing to forego her own expertise in favor of male superiors who did not teach, and most likely had not taught for several years. She felt that the male administrators - an already formidable power force - who held doctorate degrees must be more knowledgeable than practitioners of research-based methods. Kayla was acting in the role of the oppressed female and mitigating her own expertise, clearly marked by her notion that her years of experience did not equate to administrators’ Education Doctorates.

Since administrators control school purse strings, they become the gatekeepers for resources, and filters for new research-based practices teachers may choose to employ. It was problematic that Elise felt she had to defend her use of research in the classroom with her principal. The use of the word defend implies that even if research informed her
practice, the principal could tell her “no” to any new endeavors. If instead Elise had used the word *discuss*, it would indicate that she was engaged in a conversation about pedagogical strategies and had learned of a new research-based method she wanted to try. Even better, had she described her discussion as a voluntary act – rather than something she *had* to do – it would have conveyed more autonomy on her part. Having a voluntary conversation about instruction would imply a better opportunity for both interlocutors to be on an equal plane than one having to defend actions.

Mark described needing his principal’s trust so that he could try new research-based ideas in his classroom, using a term that indicated he could be told “no” by a principal, even if he presented valid, research-based ideas. Saying he would be *let* to do a new technique or strategy means the potential to be disallowed existed as well. The power position principals hold over teachers is validated in the inculcated speech teachers use that indicates teachers know they are in a subordinate position, even when they hold more knowledge about classroom strategies than the power authority.

Teaching, a profession that is traditionally female-dominated, reproduces the language of power that keeps them oppressed. The participants in this study were intelligent, experienced teachers who were unwittingly using speech that emboldened the power of traditionally male-dominated educational administrator positions, reproducing generations of subordination and oppression for their own profession. The challenges the participants faced in utilizing research in their practices were in part due to the power gap between them and the resources to implement change (administrators).

**RQ5: How can research be more effectively utilized by veteran public school teachers to improve their classroom practices?** The fifth sub-question led to interesting
revelations about how to bolster the use of research in practice, and was explicated in the themes *Research-to-Practice in Action* and *Proposed Practices*. The means suggested for improving research-to-practice implementation included offering choice to teachers, limiting the number of new initiatives for teachers, allowing for observation of teacher demonstrations, collaboration between teachers, having administrative support, and assuring that all decision-makers are classroom teachers.

Teachers in the present study wanted choices in SD and PD offerings so that they could become informed in methods that directly impacted their classroom contexts. In some cases, teachers were given options for SD/PD offerings. Options might have included pay (Elise) or choice in what was presented (Allie); however, options for SD/PD offerings, when available, were preselected by an authority. When a power authority *allows* teachers to have and make choices, it gives to the authority who *allows* it, more power. No teachers in the present study generated his or her own staff development topics. The level of concern addressed in SD/PD offerings came from administration, not teachers. For Allie, teachers could suggest a technology topic for weekly technology sessions, but those sessions would be delivered to everyone; therefore, the sessions were not illustrative of self-determined topics, as some teachers would not choose technology as an area to study, and those who would, may not choose the same as the topic of the week.

This is similar to the teachers in Miretzky’s (2007) study who disliked mandatory SD/PD sessions that were not self-selected. They felt that the material was irrelevant and time-consuming. Participants in the present study were adamant that the research-based methods and strategies that should be the foci of their practices were ones that were
contextually suitable and relevant, a point that echoes that of Anwaruddin (2015) who emphasized this, stating, “A thorough examination of the context where knowledge will be used has to be a priority for any effort to bridge the research-practice divide” (p. 11). Boardman et al. (2005) also discussed choice in PD offerings as something that might enhance teachers’ positive attitudes toward those sessions, as did the participants in Miretzky’s (2007) study.

Participants in the current study preferred teacher demonstrations as a means to learn about research-based methods in the classroom, a finding which mimics the findings of Boardman et al. (2005), who found that teachers like to see new practices modelled by other teachers. This may indicate pushback against principals who do not teach, but who direct teacher learning opportunities. It may also indicate a pushback against research institutions, as teachers prefer contextually similar environments for learning about new strategies, and also hearing about those strategies from educational experts – teachers. This could also indicate that female teachers have developed a sisterhood among colleagues, a web of support to guard against negative feelings of subordination, and a protective shield in the power of numbers.

Some teachers used social media to connect with other teachers about research-based practices. Kelly and Antonio (2016) found that teachers who used open social media groups (such as on Facebook) did so to support one another in practical ways, but not to engage reflectively, demonstrating the preference for the stories and experiences of teachers who understand the classroom context over academic research topics. When discussing her use of Twitter in the present study, Libbey said, “I’m able to connect with a real kindergarten dual language teacher and she’s telling me the resources that she
really uses that are really helpful.” The emphasis on real and really by Libbey indicated a clear attempt to separate from directive powers of those in authority over teachers, as if sources other than teachers were not real – an endorsement of the sisterhood.

Components of what teachers believed were the best parts of their research-to-practice in action and what would be best in a research-to-practice model are included in the discussion of the Proposed Research-in-Practice Model.

**Proposed Model**

As a result of the interviews, the following proposed Self-Directed Teacher Research-in-Practice Model for moving research-to-practice in public schools (Figure 1) takes into account the suggestions made by participants for a model that would engage teachers and serve to move research into practice effectively, and while it would not be
transformative to the structure of power within schools, the model is a bridge that also brings teachers closer to autonomy and agency.

As subjects in a paradigm in which they are relegated to fulfilling obligatory SD/PD sessions, teachers in this study collectively urged a model that would allow teacher agency. In the proposed model, teachers would determine which research-based strategies or methods they intend to employ. Choice was attractive to the participants in this study, and they preferred research-based ideas that were contextually relevant; therefore, teachers should be able to address needs that are situated in their practices and be given time to fully explore those ideas. Teachers in this study desired a limit of new research-based initiatives they employed, and did not want to adopt such initiatives only because they were forced to do so. With the proposed model, teachers would self-select the initiatives and the number of initiatives to explore.

Some participants in the study said that new, young teachers had skills in technology that were conducive to adopting technological research-based methods, but were also often overwhelmed in the early years of their practices. With the proposed model, newer teachers could implement research-based technology at a self-directed pace, so that they would be working within a comfortable skill set without the pressure of tackling more than one SD/PD concept at a time.

To secure administrative support, these research-based explorations would supplant SD/PD session attendance (unless such offerings were attractive to the teacher and suited his/her needs) and would be reflected in professional growth points or credits. Teachers’ plans for moving research-to-practice in meaningful ways could become part of teacher evaluation procedures.
Veteran teacher participants in this study said that pay was a motivator for engaging with research, and if professional growth experiences move teachers on the pay scale, then the model provides necessary cash incentives. In addition, teachers in this study felt that some veteran public school teachers become comfortable and complacent in their practices, not wanting to change. Having the autonomy to select an area of focus, and being able to replace mandatory SD/PD sessions with self-directed investigations into research-based topics might motivate veteran teachers to adopt practices that transform their classroom teaching. In addition, there would always be an option to take part in building or district-directed SD/PD for those who have not or cannot decide on a focus, or who want to explore many topics. Time for researching strategies and methods, as well as time for developing implementation of the research-based ideas would be within the school day during planning periods, faculty meeting times, or during work days when no students are present.

The proposed model also calls for opportunities for teachers to continually collaborate with others. Collaboration may be based on grade level, content, classroom need, similar research-based methods, or experience. Collaboration that is face-to-face with other teachers would take place during the work day at times that are already set aside for other meetings or planning periods, and would be orchestrated by collaborators, not dictated by administrators. Teachers could also partake in online or social media outlet opportunities that afford the experience of collaboration without being face-to-face. Within the structure of collaboration, teachers would initiate and conduct or attend teacher demonstrations, modelling sessions, or observations in an on-going cycle of practicing, watching, and talking about the use of research-based strategies and methods.
Finally, all decisions about research-based methods or strategies for teachers would be made only by teachers and teacher-leaders. Administrators and instructional coaches who hope to influence research-based initiatives must also serve their school or district as daily classroom teachers, and must enter the research-in-practice cycle in the same manner as other teachers and teacher-leaders.

Through implementation of this model, teachers as knowledge consumers gain ground in spaces of authority over classroom practices. The model places more (and relevant) decision-making power in the hands of teachers, removing the passivity not only expressed by the participants in the interviews, but also evidenced in the documents and sources of documents the participants in the present study supplied as research-based materials. The proposed model encourages active engagement on the part of teachers, includes teacher preferences for practicing with research-based tools and methods, invites on-going collaboration and observation, and capitalizes on the social aspect of teaching and learning; therefore, the model is transitional, but not transformational. Administrators ultimately have evaluative authority over teachers and teaching practices; therefore, teachers would remain in subordinate positions.

**Persistence of the Gap**

In the absence of a transformation in the power structure of decision-making in schools, the channels of SD/PD delivery systems will remain as they are, and research-to-practice will enjoy very little change. Researchers, policy-makers, and administrators all hold dominant positions over teachers; in fact, the term research-to-practice implies that researchers deliver information and that practitioners are the recipients; active participation on the part of teachers is not implied.
Research in practice, or the research in practice cycle as terms for teachers’ use of research-based ideas in the classroom would imply that teachers have active roles in generating research and providing feedback about those methods as partners in educational research. However, missing from the interview transcripts of the present study was any mention by any participant regarding direct connections with researchers. It is possible that the teachers in this study did not consider communication with researchers as a viable or desirable option, or the questions in the interview protocol did not evoke that line of thinking, or that none of the participants actually wanted to communicate with researchers. Teacher participants in this study may have perceived the power distance to be too great between the classroom and researchers, such that bridging that distance was not something they thought about or thought necessary. As instrumental characters in education, teachers must see themselves as equal partners in garnering useful research-based methods for the classroom, and must become willing participants in conversations with researchers. The reverse is also true; researchers must regard teachers as equal partners in, and the primary audience for, educational research. Perhaps the paradigm for academic writing should shift so that the knowledge generated by research which impacts student learning is concisely reported with the teacher-audience as the most important consumer of that knowledge.

The veteran public school teachers in this study had ideas for ways to move research into practice, but they responded in ways that respected the current hierarchical system for the dissemination of research-based methods, that system being predominantly SD/PD sessions and mandatory district initiatives. They did not challenge being told what research-based methods to use, they merely voiced a desire to have a better system within
which to engage with those methods (the proposed model). The participants wanted choice among research-based SD/PD offerings, self-selected means of learning about research-based methods and practices (e.g., demonstration, conferences), and limits on the number of research-based initiatives they must implement at a time; however, in the current research-to-practice SD/PD channels, the selection as to what is available to teachers remains limited, as publishers ultimately determine which research-based methods to package and sell to schools.

The cumulative model the teachers in this study proposed would work within the current power structure of public schools, but it would not transform the power structure or the role of the teacher; therefore, it would not be transformational for research-to-practice in the classroom. As they did not challenge the structure, what the teacher participants proposed was a variation within an inculcated system that merely stretches what they perceived to be limits in the current dynamic; therefore, teachers would continue to be in the position of those who are directed, not self-directed. In Freire’s (1970) terms, they remained *oppressed*, in a state of ambiguity as ones who do not act with the awareness of the power holding them static, while at the same time they perceive that they are exercising decision-making power. The participants did not express an awareness of or a desire to change the power dynamic, they merely wanted agency within it. Teachers who are compliant with current power strata are complicit in their own oppression.

When a teacher takes a position in a public school, the teacher at the same time takes on the role of the *institution of teacher*, an embodiment of the past - of what is meant by the institution of teacher. As Bourdieu (1991) stated, “the person instituted feels
obliged to comply with his definition, with the status of his function” (Bourdieu & Thompson, 1991, p. 121), which for the institution of teacher entails many things, including maintaining a position subordinate to school administration. Instead of becoming an independent professional, entrusted to make one’s own choices, the public school teacher becomes an instrument of reproduction. As public school educators, teachers become what they are expected to become, and the spaces in which freedom exists to redefine the position are erased in the role assumed:

“The work of inculcation through which the lasting imposition of the arbitrary limit is achieved can seek to naturalize the decisive breaks that constitute an arbitrary cultural limit – those expressed in fundamental oppositions like masculine/feminine, etc. – in the form of a sense of limits, which inclines some people to maintain their rank and distance and others to know their place and be happy with what they are, to be what they have to be, thus depriving them of the very sense of deprivation” (Bourdieu & Thompson, 1991, p. 123).

A teacher, given choice and autonomy within the rank and position of teacher, will be satisfied – happy with what he/she is – serving both to keep the teacher subordinate to the hierarchical power of the administrator, and to embolden the power and authority of the administrator. School administrators and those who design SD/PD sessions, must control education to continue a culture of dominance and power. This control is not merely over research-based delivery and content in the classroom – it is over the very embodiment of all that is teacher.

In the culture of American public schools, to embody all that is teacher is to accept the submissive role of the female. Male teachers may enjoy a slight reprieve from
full oppression as members of the fraternity with a greater chance than females to break into power ranks. Administrative layers are male-dominated, and administrators cling to both their hierarchically superior status as the echelon for decision-making and higher salaries, and also to male-majority. Token women are selected or appointed into administrative posts occasionally, but their power is not equal, and those who govern with a power “equal” to a man are given negative, unfavorable monikers. The essence of teacher is that of oppressed female.

When the administrators in the buildings of a few select participants (Libbey, Catherine, Maddie, Kayla) defied district initiatives in favor of letting staff become more comfortable with a new initiative already in practice, the administration was hand-feeding staff and gaining their favor, thus improving the administration’s own status. Teachers’ appreciation and admiration for such administrators grew and the teachers felt they had gained time and respect, but through their compliance, they did not improve their own status. They did not improve their agency, instead they became tamed as Freire (1974) warned, “And when men try to save themselves by following the prescriptions, they drown in leveling anonymity, without hope and without faith, domesticated and adjusted” (p. 5-6). When the oppressed (female teachers) allow themselves to be given favors, to be given time, the oppressed are manipulated and the oppressors (male administrators) are anointed. As long as solutions and permission must be sought from the current power, there can be no transformation, because the dominant authority will always protect its power. “As the dominant social class, they must preserve at all costs the social ‘order’ in which they are dominant. They cannot permit any basic changes which would affect their control over decision-making” (Freire, 1974, p. 12). According to Freire, change must
come from the oppressed. Without such change, the SD/PD and other top-down systems of research-based methods dissemination will remain the gold standard in education.

Induction of new teachers into systemic methods of research-based SD/PD is part of educational reproduction and the continuation of the power paradigm. Every new wave of teachers is ritually exposed to the process, and though Biesta (2006) referred typically to the education of the child, his description of educational reproduction processes were completely applicable to new teacher induction:

“Many educational practices are configured as practices of socialization. They are concerned with the insertion of newcomers into an existing cultural and sociopolitical order. This is not unimportant, since it equips newcomers with the cultural tools needed for participation in a particular form of life and at the same time secures cultural and social continuity. But we cannot be too naïve about this, because these processes also contribute to the reproduction of existing inequalities – unwillingly or in those cases in which education is utilized to conserve particular practices and traditions, also willingly” (p. 2).

The system of SD/PD, even when such offerings afford teachers to choose a session of interest, is initiated by or must be approved by an authority over teachers, which maintains the hierarchical chokehold on teachers. As oppressed beings, teachers (women) must recognize this and work together to resolve the power inequalities between themselves and levels of administration (men) exercising authority over them. “It is absolutely essential that the oppressed participate in the revolutionary process with an increasingly critical awareness of their role as Subjects of the transformation. If they are drawn into the process as ambiguous beings, partly themselves and partly the oppressors
housed within them – and if they come to power still embodying the ambiguity imposed on them by the situation of oppression…they will merely imagine they have reached power” (Freire, 1970, p. 127). The simple situations described by the participants of the present study in which teachers asked for resources or requested limits on the implementation of initiatives is precisely what Freire described as ambiguous beings. Teachers making such requests believe they are enacting their own power within their buildings, receiving a favor in return for hard work and justification for the requests; however, the dominant power (male administration) gains influence through those actions. As the authority who must be asked, as the authority who may reject such requests, as the authority who evaluates teachers – the dominant power ultimately controls what research-based methods are employed in schools, and by whom. Teachers as oppressed beings are subordinate to administrators who impose their own ideas on them, control resources, and have final ‘say’ on classroom research-based methods. The female-dominant teacher class must constantly beg permission from, provide justification to, and acquiesce to the male-dominant administrative class in seeking to implement research in practice. As long as this is the paradigm, there will be a research-to-practice gap. Perhaps this is also part of the reason behind the clear preference of the participants in the present study for learning about research and research-based methods from other teachers. No permission needed to be sought or granted, teachers welcomed the opportunity to share expertise, and to learn from each other.

Female teachers who truly desire transformation cannot operate inside the male-dominated paradigm. They must not demand changes, must not demand power, must not demand anything. Making demands is simply asking for permission loudly and firmly,
and that permission must no doubt come from a male authority. Female teachers who wish to transform the image of teacher and the practice of education, including the use of research in practice, must simply do.

Teachers have ideas for collaborating – they should do them. Teachers have concepts for SD/PD offerings – they should develop them. Teachers do not naturally gravitate to academic articles, so they should position themselves to write knowledgably for teachers. Teachers should take charge of electing from among themselves representatives at all levels of governance, so that policies at all levels reflect a new reality. As Freire asserted, change must come from the oppressed. Teachers - female teachers - must do.

To change – to transform teaching practices and break the mold of the power paradigm - is to let go of the idea of what is meant by “teacher,” and to redefine the institution of teacher. For teachers to be true professionals, fully in charge of classroom practices and curriculum, they must strike a completely new identity; “Finding a new identity means giving up an old identity, and quite often there is no way back” (Biesta, 2006, p. 22). Within this new identity, female teachers must see themselves in those who conduct educational research and enter into dialogue with researchers in a regular and collegial manner. Female teachers must also become policy-makers, with a new and clear vision of education for all children which removes barriers, and removes language from educational policy that others and marginalizes. Teachers as equals in policy-making positions must create policy that serves to, in Biesta’s (2006) terms, bring forth the child. Though differently specialized, teachers must also see themselves as no longer subordinate to administrators, so that teachers gain access to resources, allocate their own
time, and re-imagine classrooms that utilize research-based methods to benefit all children.

As Ball (2012) noted about the research-to-practice gap in her address to the AERA, the veteran public school teachers in this study lacked a “forum for equal collaboration” (p. 285) between themselves and educational researchers. The teachers in the present study used materials from SD/PD offerings and the expertise of other educators as their primary means of learning about research or research-based methods and strategies, neither of which required direct contact with researchers or research articles. Whether they were privileging the narrative, as suggested by Smith, Richards-Tutor and Cook (2010), or fore-fronting pedagogical knowledge over propositional knowledge (McIntyre, 2005), the teachers in this study desired to learn from one another over other methods of research dissemination.

Veteran public school teachers in this study expressed a collective desire to learn through all types of collaboration with other teachers. Other research has suggested that collaboration between teachers and researchers would help bridge the research-to-practice gap (Alber & Nelson, 2010; Ball, 2012; Cooper, 2007; Hedges, 2010; McIntyre, 2005; Schneider, 2014; Wentworth, Carranza & Stipek, 2016), but the present study suggests that veteran public school teachers prefer to collaborate amongst themselves, in their own way, and through their own preferred mediums. Inserting meaningful, contextually relevant, and important research into these interactions – as through the proposed model – is a step toward bridging the research-to-practice gap in education.
Limitations and Delimitations

Limitations of this study included the location of participants, time of year for interviews, and limited methods of data collection. The sample size was typical of qualitative research, and despite the small number, there was data redundancy, as well as representation from three levels of public schools (elementary, middle, and high schools). While there was not a single participant who identified his/her setting as a “rural” school, there were participants from three states; therefore, while the specific location category descriptors were distributed amongst suburban, urban and inner city urban, the multi-regional aspect afforded variety within those categories. It is noted that rural participants may have brought interesting narratives to the story of research-to-practice; however, none were recommended to me.

With the actual teaching population being approximately twenty-four percent male, the addition of one more male participant would have given my study proportional representation to the teaching world. In addition, if participants had represented all aspects of school population categories (suburban, urban, and inner city urban) at all levels of public schools (elementary, middle, and high schools), it would be perhaps a better representation of teacher perspectives.

All interviews were conducted in the spring of a school year. Spring is typically a high stress time of year for teachers who must conduct state testing, which many noted in the interviews (Kayla, Allie, Elise, Mark, Ruby, Catherine, Maddie, Libbey), but it also positioned the interviews to occur while school-year memories were fresh – before summer’s rest had erased the real practices of teachers. In addition, the end of the year is a time for reflection and evaluation in the school employee process, perhaps improving
the opportunities for teachers to think critically about the use of research-based materials and strategies in their classrooms. It is possible that teachers would deliver a different message about research-to-practice at different times of the year, and in particular, different times in the school year.

The method of data collection was limited. The use of interviews as a primary source of information was adequate, but observations over multiple visits combined with interviews might have yielded a more complete picture of what teachers experience in research-to-practice events. In lieu of multiple visits, document analysis was conducted for the purposes of triangulation, as well as for a deeper understanding of teacher’s definitions of research-to-practice.

Finally, the pool of participants was very educated and articulate. Eighty-one percent of the participant pool in this study held a master’s degree, while in 2011-2012, according to IES, 56% of public school teachers held master’s degrees - though the data was not disaggregated for years of experience (Institute of Education Sciences, National Center for Education Statistics, from https://nces.ed.gov/fastfacts/display.asp?id=55). Teachers and acquaintances who recommended names for this study did so intending to provide excellent, willing participants, and by virtue of those filtering processes, the participant pool delivered on that mission.

Future Research

Future studies in research-to-practice in education should include qualitative inquiries that further develop the understanding of teacher beliefs about linking directly with researchers or researching institutions. Rural area veteran public school teachers should be included in future studies of research-to-practice in education. In addition, after
implementing the proposed Self-Directed Teacher Research-in-Practice Model, follow-up studies evaluating the successes and challenges of the model must be conducted to improve the model and fine-tune it to different settings. Additional research should explore ways the Self-Directed Teacher Research-in-Practice Model could work to assist teachers in redefining the institution of teacher, as well as ways the model can connect teachers directly to research and researchers.

Research should be directed to examine teacher beliefs about the power structure in public schools regarding policy-making, assessment practices, and ways in which teachers could better incorporate research to inform decision making that directly link teachers to research and researchers. Methods of empowering teachers as trusted professionals should be explored, as well as means of equalizing the authority of specialized professionals in roles of educational researchers, policy-makers, administrators, and teachers - eliminating the power distances and increasing communication among those groups, and providing better learning environments for students that are truly research-based.
References


Ball, A. F. (2012). To know is not enough: Knowledge, power, and the zone of generativity. Educational Researcher, 41(8), 283-293. doi: 10.3102/0013189X12465334


http://dx.doi.org/10.1080/02619768.2011.643398


Appendix A: Informed Consent Form

INFORMED CONSENT FORM

Title of the Project: Veteran Public School Teachers’ Perceptions of Research-to-Practice Methods and Effectiveness: A Qualitative Inquiry

Purpose of the Research: The purpose of this qualitative research study is to determine the perceptions of veteran public school teachers regarding how they infuse research-based methods into practice. This research is aimed to help teachers see opportunities to use research, and to help researchers understand how to make studies available to teacher-consumers.

Procedures: Participation in this study will require approximately 30 to 45 minutes of your time. You will be asked questions in a semi-structured interview about your experiences using research in your practice. The interview will take place in the location of your choice. You will be provided a copy of the interview questions prior to the interview as well as the transcripts of the interview for clarification and elaboration.

Participant Inclusion Criteria: Participants must be public school teachers who have been teaching for five or more years in public schools. Participants must be 19 years of age to take part in this study.

Risks and/or Discomforts: There are no known risks to participation in this study.

Benefits: There are no direct benefits to participating in this study; however indirectly, raised awareness on topics of research-to-practice may lead to classroom changes and positive impact of research on student success.

Confidentiality: Participant identity will be kept in confidence. Any identifying information collected during the interview will only be reported in aggregate form.

Opportunity to Ask Questions: You may ask questions about this research at any time. The number to reach the primary investigator, Lesa Brand is 402.618.1292. My committee chairperson is Guy Trainin who can be reached at 402.472.2231. You may direct questions about being a research participant to the University of Nebraska Lincoln Institutional Review Board at 402.472.6965 as well.

Voluntary Participation/Freedom to Withdraw: Your participation is voluntary and you are free to decide not to participate, or to withdraw at any time without adverse effects regarding a relationship with the researcher, Lesa Brand, or with the University of Nebraska.

Optional Online Survey: The University of Nebraska-Lincoln wants to know about your research experience. This 14 question, multiple-choice survey is anonymous; however, you can provide your contact information if you want someone to follow up with you. This survey should be completed after your participation in this research. Please complete this optional online survey at: https://ssp.qualtrics.com/SE/?SID=SV_eYv1NCIf0U1vse5a
Consent, Right to Receive a Copy: You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate, having read and understood the information presented here. You will be given a copy of this consent form to keep.

___________ Please check here if you agree to be audio-recorded during the interview.

Signature of Participant:

Signature of Research Participant ___________________________ Date ___________________________

Investigator Contact Information:
Lesa L. Brand: 402.618.1292 or email to lbrand@huskers.unl.edu
Appendix B: Recruitment Email Template

**Recruitment Email Template**

Dear 
My name is Lesa Brand and I am a teacher in Omaha, and also a doctoral student at UNL conducting a study regarding the use of research by public school teachers. Teacher voices in matters of research-based education are very important. You were recommended as an excellent person to interview for this study!

As you are aware, many educational mandates state that public schools are to use research-based or evidence-based best practices. My study will investigate how veteran public school teachers access and use research to meet this goal, as well as what teachers feel are some of the challenges in doing so.

If you consent, I will email the interview questions to you and then come to you for a brief interview (about 30 minutes) at your convenience.

Please let me know your willingness to participate, as well as any other colleagues who would like to join the study!

I appreciate your consideration and look forward to hearing from you,

Lesa Brand
lbrand@huskers.unl.edu
Appendix C: Interview Protocol

Participant
ID________________

Assigned Pseudonym_________________________________

Interview Protocol: Research-to-Practice Study

Day and Date: ________________________________
Location: ________________________________
Interviewer: ________________________________
Interviewee: ________________________________
Time of Interview: ____________ ____________
   Start time   End Time

Thank you for agreeing to meet with me today for this interview. I intend for this interview to be a conversation, and want you to feel comfortable throughout our meeting. Please feel free to ask questions as we go. Before we get started with a few basic demographic questions, we need to go over the informed consent form and have you sign it. As you are aware, this form provides some basic information as to how we will proceed, what the study is about, your role, my role, etc.

Review Informed Consent

Do you have any questions before we move forward with our conversation? Turn on the tape recorder(s)

To begin, will you please answer a few broad demographic questions about yourself and your current position?

Age: _____

Sex: Male   Female

Ethnic Background: Asian American
Black/African American
Hawaiian or Pacific Islander
Hispanic/Latino
Native American
White/Caucasian (European American)
Other(s) __________________

What is your highest level of education? ______________________________________

What is the name of the school district for which you currently work:
______________________________________________

What is the name of the school at which you are currently employed:
________________________________________________________

What are the grades served within your school _________________

What is your current position in your school: __________________________

What are your total years of teaching in public schools, including all grades and subjects:
____

Would you describe your school as rural, suburban, urban, inner city urban or
something else ________________________?

What do you estimate to be your school’s total student population: ______

What subject(s) do you teach in your current position: __________________________

Initial Open-Ended Questions

1. Please describe a typical day for you in your current position. What are your responsibilities?

Intermediate Questions

2. What do you view is the role of research in serving your students in your current position?

3. Tell me about a time you used research to change your classroom practice.

Probe: How do you decide what research or research-based practices to use?
Probe: In your position, how do you access current research, or learn about research-based practices?

Probe: To what professional organizations do you belong?

Probe: To what education publications do you subscribe?

4. Some teachers say that research does little to inform practice. Why might that be?

5. What are the major challenges you feel public school educators face in utilizing research in practice?

6. What strategies do you feel are or would be most effective for linking research to practice?

Closing Question(s)

7. Are there any other suggestions you have for how public school educators can better utilize research to improve practice?
Appendix D: Participant Demographics

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<th>Participant</th>
<th>Age</th>
<th>Sex</th>
<th>Reported Ethnicity</th>
<th>Highest Level of Education</th>
<th>Grades Served in Participant’s School</th>
<th>Participant’s Position in the School</th>
<th>Years in Public School</th>
<th>Category of School</th>
<th>Population of School</th>
<th>*Verified via School Website</th>
<th>Interview Recording Time</th>
<th>** Shared Interview</th>
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<td>White</td>
<td>Partial Master’s Degree</td>
<td>9-12</td>
<td>Teacher, Department Chair: Fine Arts, Visual Arts</td>
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<td>7-8</td>
<td>Grade 7 Social Studies, Instructional Coach</td>
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<td>Years in Public School</td>
<td>Category of School</td>
<td>Population of School</td>
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<td>Population of School</td>
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<td>Master's Degree Administration, Endorsements in ESL, Math, and beginning ECE</td>
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<td>White</td>
<td>Master's Degree</td>
<td>9-12</td>
<td>ESL Teacher and ESL Department Chair</td>
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<td>Maddie</td>
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<td>F</td>
<td>White</td>
<td>Master's Historical Studies, Master's Political Science, PhD student</td>
<td>9-12</td>
<td>Social Studies Teacher</td>
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<td>Evie</td>
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<td>White</td>
<td>Bachelor's Degree with ELL Endorsement</td>
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### Overarching Research Question:
What are veteran public school teachers’ beliefs about their use of research in public school teaching practices?

<table>
<thead>
<tr>
<th>Research Question 1</th>
<th>What are veteran public school teachers’ perceptions of research?</th>
</tr>
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</table>
| **Interview Questions** | • What do you view is the role of research in serving your students in your current position?  
• Do you have an example of research or research-based materials you could share with me? |

<table>
<thead>
<tr>
<th>Research Question 2</th>
<th>In what ways do veteran public school teachers access research or research-based teaching interventions, strategies or programs?</th>
</tr>
</thead>
</table>
| **Interview Questions** | • In your position, how do you access current research, or learn about research-based practices?  
• To what professional organizations do you belong?  
• To what education publications do you subscribe? |

<table>
<thead>
<tr>
<th>Research Question 3</th>
<th>How do veteran public school teachers engage with research or research-based strategies?</th>
</tr>
</thead>
</table>
| **Interview Questions** | • Tell me about a time you used research to change your classroom practice.  
• How do you decide what research or research-based practices to use? |

<table>
<thead>
<tr>
<th>Research Question 4</th>
<th>What challenges do veteran public school teachers face in applying research to practice?</th>
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</thead>
</table>
| **Interview Questions** | • Some teachers say that research does little to inform practice. Why might that be?  
• What are the major challenges you feel public school educators face in utilizing research in practice? |

<table>
<thead>
<tr>
<th>Research Question 5</th>
<th>How can research be more effectively utilized by veteran public school teachers to improve their classroom practices?</th>
</tr>
</thead>
</table>
| **Interview Questions** | • What strategies do you feel are or would be most effective for linking research to practice?  
• Are there any other suggestions you have for how public school educators can better utilize research to improve practice? |
Appendix F: Member Checking Email Template

Dear ____ ,

Thank you for taking part in my dissertation study on research to practice in education. Conducting interviews has enlightened my understanding of what teachers do to bring research into the classroom. I have learned a tremendous amount about fantastic practices in public schools through you and others.

Attached, you will find the transcript from our conversation. As you read through the transcript, please disregard any *uh, um, you know*, or other similar “filler” phrases, as they are simply a natural part of speech and do not detract in any way from the meaning of what was said. In addition, remember that all identifiers (names, schools, districts) will be removed during analysis to secure confidentiality. Please look it over and let me know any additions or corrections by June 7, 2017, as analysis will be well underway by that date.

I truly enjoyed our discussion and have learned much from all the interviews. I cannot thank you enough for participating in this study!

Many thanks!

Lesa Brand