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INTERVENTIONS TO INCREASE  
PROSPECTIVE TEACHER CANDIDATES'  
PRAXIS II CONTENT EXAM SCORES

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A Dissertation  
Presented to  
the Graduate School of  
Clemson University

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in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education  
Education Systems Improvement Science

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by  
Kara Illana Hart  
December 2021

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Accepted by:  
Dr. Reginald Wilkerson, Committee Chair  
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Dr. Kristen Duncan

## ABSTRACT

Teacher shortages are a pervasive issue in South Carolina's public schools. Some prospective teacher candidates have shown obstacles in meeting the minimum required Praxis II Content exam score. The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions to improve scores for six prospective teacher candidates in South Carolina. All participants were trying to meet the licensure exam requirement for various alternative certification programs. Malcolm Knowles' Andragogy Adult Learning Theory guided the study as a theoretical framework, and Lev Vygotsky's Socio-Cultural Constructivism provided the conceptual frame. Descriptive coding and analysis, using Dedoose software, were used to categorize codes to identify emergent themes. Prospective teacher candidates needed targeted support to improve their licensure exam scores. Findings indicated all participants received more points, in at least one category of the Praxis II Content exam, after participating in the intervention workshop sessions. Therefore, it was recommended that a further longitudinal study be conducted with a larger sample population to improve Praxis II Content exam scores. The improvement of participant scores could lead to classroom vacancies being filled in South Carolina's public schools.

## DEDICATION

I dedicate this research to the memories of my Mother

*Persephone Polite McDuffie* (1959-2015)

&

Grandmothers

*Della Mae Wright* (1931-2020)

*Myrtle E. Hart* (1945- 2019)

I thank-you three women for showing me the pathway, and giving me the courage to  
make the journey.

## ACKNOWLEDGMENTS

I thank God for grace, mercy, and patience. I acknowledge my soul mate, Demetrius, for supporting me, forever and always. I acknowledge my four daughters: Jasmine, Kamryn, Alexandra, & Paityn for encouraging me every single day and night. My goal was only to make you proud. I acknowledge my Dad, Terry, for his encouragement on behalf of Mama. My family, friends, church members, and co-workers have helped, even when you didn't know it, I thank-you all.

I acknowledge and eternally thank Dr. Kimberly McLaren for being a distinguished role model. Becoming an educator became a reality when I met you. You inspired me to make education a career. I acknowledge Dr. Larry Daniel for supporting my first conference presentation. I appreciate you for the relentless attempts to teach me the nuances of SPSS, thus a qualitative research study follows. I acknowledge Dr. Kathy Brown for inspiring me to become a doctoral scholar. You instilled a foundational understanding of the *systems of education*. I truly appreciate my chair, Dr. Reginald Wilkerson – words will never be able to express... family, forever! Thank-you to my committee members: Dr. Roy Jones, Dr. Renee Jefferson, and Dr. Kristen Duncan. Your feedback and guidance were instrumental in completing this journey.

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## CHAPTER ONE

### INTRODUCTION

Occupational licensing and obtaining passing scores on exams are common methods of regulating professional career fields such as law, medicine, and education. An implicit purpose of licensure exams in education is to ensure a minimum level of quality and competence by preventing under qualified teachers from entering the profession. State policies such as teacher certification and licensure requirements are presented as impartial, applied to all individuals equally without regard to race or other demographic identities, and based on notions of teacher quality (Sleeter, 2017). The Praxis I Core exam assesses general reading comprehension, grammar and writing skills, and computational ability. In contrast, the Praxis II Content exam is discipline-specific content knowledge and pedagogical skill and is the most commonly used assessment for teacher certification (Graham, 2013; Pendergrass, 2017).

Licensure exams are a critical step of professional matriculation for prospective teacher candidates. The exams directly shape racial demographics due to disparities in passer scores and are an additional contributor to the shortage of teachers as well (Ingersoll & May, 2011; Petchauer, Baker-Doyle, Mawhinney, & Ciarkowski, 2015; Taylor, Pelika, & Coons, 2017). The Praxis Exams are used as a warrant for candidates to demonstrate a specified knowledge of content and pedagogy about the subject and students they will teach. However, prospective teacher candidates may experience difficulty passing and need to retake the Praxis II Content exam multiple times before passing (Gitomer, Brown, & Bonett, 2011; Pendergrass 2017). There is a gap in

educational practice and research of the specific methods to improve Praxis II Content exam scores for prospective teacher candidates. Research was needed to determine mitigating factors barring the academic success of prospective teacher candidates with regards to licensure exams to develop, and then implement support.

*A Nation at Risk* (1983) declared persons preparing to teach would be required to meet high educational standards, demonstrate an aptitude for teaching, and to demonstrate competence in an academic discipline. This indirectly led to the implementation of new accountability measures and standardized assessment tests for teachers, and therefore impacted the number of candidates to be fully certified. The Educational Testing Service (ETS) is a private company and main developer of teacher licensure exams. They emphasize that teacher licensure assessments are designed to measure the knowledge and/or skills thought to be important for beginning practice and nothing more (Goldhaber, 2007). However, for those that choose a career path in Education, licensure exams have presented obstacles to candidates in pursuit of teacher certification. A gatekeeper is an obstacle or hurdle preventing any future progression. Standardized-teacher licensure examinations, which are designed and administered by testing agencies such as ETS, are gatekeepers to most teacher education programs in the United States (Petchauer, 2012).

Numerous scholars and researchers have argued for those identifying with minority and lower socioeconomic populations, licensing exams and Kindergarten through Post-Secondary instruction have deterred potential educators from entering

classrooms as certified teachers (Albers, 2002; Graham, 2013; Petchauer, 2018; Sleeter, 2017). Unfortunately for some students, the lack of an effective education received at the K-12 level may have deprived these students of the requisite skills needed to be successful on standardized tests and licensure exams. Brooks & Matthews-Somerville (2013) concluded inadequate K-12 schooling leaves students ill-prepared for higher education, teacher training, and teacher certification programs. Their findings signified the need for interventions to improve licensure exam performance for prospective teacher candidates.

Through continued research, obstacles relating to the struggles of prospective teacher candidates with licensure exams can be identified. This could in turn lead to the development of interventions and strategies to improve licensure exam performance rates and scores. What remains largely absent in the research are the voices and experiences of prospective teacher candidates when engaging with licensure exams. These perspectives could strengthen the educator pipeline and deter the elimination of quality teachers who come from strong professional schools of education (Albers, 2002; Haddix, 2017). There are strategies and solutions to providing South Carolina's public school districts with an adequate supply of highly qualified educators. The lack of access to these educators reflects further limitations on the potential achievements of the schools, students, and the communities they represent. Therefore, this qualitative phenomenological study aimed to provide targeted support to improve the Praxis II Content exam scores of six prospective teacher candidates in a tri-county region of South Carolina.

## **Background of the Study**

There were policies instituted to ensure that teachers have an appropriate background in the content they teach (Gitomer & Qi, 2010). The 1998 reauthorization of Title II of the Higher Education Act (an Amendment to the Higher Education Act of 1965) mandated teacher preparation programs to report the licensure test results of their program completers. Colleges and universities offering teacher preparation programs would be judged by how well their graduates met established criteria. Currently, these provisions of Title II are still in place with continued data reporting and collection. The United States Department of Education (USDE) maintains a website that includes secure portals to report Title II data, public accessible data about teacher preparation and certification, and technical assistance materials (USDE, 2020). These accountability efforts at the national level have had a trickle-down effect on state and local teacher legislative mandates.

At the state level during the 111<sup>th</sup> Session of the SC Legislature (1995-1996) House Bill H 4800 was introduced stating, “No student shall be allowed to participate in student teaching before passing the examinations; and the selection of appropriate teacher licensure examinations which measure the knowledge and skills required for effective teaching”. This new accountability measure impacted all South Carolina colleges and university teacher preparation programs. The South Carolina State Board of Education (SCBE) further declared that any candidate seeking initial teacher certification in South Carolina would be required to submit qualifying test scores for both subject area and

pedagogy assessments for eligibility. Effective September 1, 2018, the South Carolina State Board of Education implemented S.C. Code Ann. Section 59-36-30 to adopt “nationally recognized educator assessments for certification purposes and to establish qualifying scores on each assessment” (SCBE, 2018). Like other states, South Carolina chose the Praxis Exam series to be administered as prospective teacher assessments for licensure. At the federal, state, and local levels the requirements of licensure exams have had, and will continue to have wide reaching effects on the education profession and teacher pipeline.

### **Problem of Practice**

The Praxis II examination appears to serve the function of eliminating and screening out individuals with poor test performance with a single measure of a score serving as the standard of pass or failure outcome (Pendergrass, 2017). This further contributes to the weakened educator pipeline and the shortage of teachers in South Carolina’s public schools. Teacher candidates enrolled in traditional education programs in South Carolina are unable to participate in the required student-teaching component without successful scores on the Praxis II Content exam. However, few teacher education programs, or school districts, offer exam preparation programs designed to prepare teacher candidates for licensure exams (Wall, Johnson, & Symonds, 2012). Also, candidates with bachelor’s degrees and seeking alternative certification are denied admittance to programs due to failing scores on mandated Praxis II Content licensure exams.

Prospective teacher candidates must possess content knowledge and test-taking strategies to perform optimally (Wall et al., 2012). Researchers have decried the need for further investigation into support for the Praxis exams. Longwell-Grice, McIlheran, Schroeder, & Scheele (2013) suggested further investigation of exam remediation strategies that are most effective in meeting the needs and developing the skills of a diverse population. Wall et al. (2012) recommended further research on test preparation programs and strategies. McAdoo & Harrison (2018) determined a structured program to gather students on a consistent basis to focus on Praxis content, additional assistance regarding testing areas, and supplemental instruction. This was because a program or plan that provides structure for students to learn is more successful than allowing students to attack this test on their own. Because of barriers of the Praxis exams, some teachers of color will fail to find employment in public schools (Graham, 2013; Madkins, 2011; Wakefield, 2003). Therefore, the problem of practice has been identified as the inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools.

### **Purpose of the Study**

The purpose of the certification of teachers and accreditation of the programs in which they received their training is to provide information on whether teachers possess the minimum proficiencies that are required from the teaching function (Darling-Hammond, 2002). Yet, the inability of teacher candidates to pass the Praxis exams serves



as a barrier to becoming fully certified and a teacher of record. Gitomer et al. (2011) found a disproportionately large number of African-American candidates do not pass licensure exams. This led some to conclude that basic skills tests unfairly restrict the opportunities of prospective candidates who want to enter the profession, and questioning root causes.

In coordination with the Educational Testing Service (ETS) and National Education Association (NEA), Tyler (2011) conducted a study to determine why and how minority candidates struggle with teacher licensure assessments in order to improve interventions that could help address the problem. The study found the largest pass rate gaps between White and African-American test takers were found on the subject-specific tests, Praxis II, in English (-42.3%), Mathematics (-47.3%), Social Studies (-36.3%), and Science (-49.1%). The joint study acknowledged the need for significant intervention for prospective teachers when engaging with Praxis exams. This need stems from their lack of preparation and academic deficiencies in either their K-12 or post-secondary educational experiences, or both. The findings exemplified the need for continued research in providing test preparation interventions for prospective teacher candidates.

The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. The study aimed to improve participants' scores in order to meet requirements to become fully certified or admittance to an alternative certification program to teach in South Carolina's public schools. The study was conducted in a tri-

county region of South Carolina and limited to six participants in order to provide targeted, 1:1 intervention support and test-taking strategies. This research study has the potential to fill teacher vacancies and alleviate shortages in South Carolina's public schools through improved Praxis II Content exam scores.

### **Significance of the Study**

Multiple researchers have reported on America's failure to ensure elementary and secondary classrooms are fully staffed with qualified teachers (Ingersoll, 2003; Sutchter, Darling-Hammond, & Carver-Thomas, 2016). The inability of prospective teacher candidates to achieve minimum score requirements on a specific Praxis II Content exam, weakens efforts to diversify the educator pipeline and contributes to teacher shortages. This research was significant because of its implications to extend previous studies, improve educational practice, and provide future policy direction with regards to prospective teacher candidates, teacher licensure exams, and teacher shortages in South Carolina's public schools.

It is impossible to perfectly detect the impact licensing has on the quality of individuals in the teaching labor force because we cannot observe the individuals who do not enter teaching (Shuls & Trivitt, 2015). Nationally during the 2017-18 academic years, there were 455,947 candidates enrolled in a teacher preparation program, but there were only 152,803 completers (NCES, 2019). Candidates who have completed an accredited program, but fail Praxis I or Praxis II, will not be certified to teach in South Carolina. In South Carolina, fewer than 1,650 students graduated with a bachelor's degree eligible for

teacher certification during the 2017-18 academic years (CERRA, 2019). Additionally, there were also at least 300 students that graduated with a degree in education or completed an alternative certification program, and did not enter the profession at all. A problem is clearly evident when only a quarter of candidates complete teacher preparation programs. The failure to pass these exams can nullify approximately two-four years of college courses and prevent licensure (McNeal & Lawrence, 2009; Wakefield, 2003). McNeal & Lawrence's (2009) findings supported the need to provide additional support to teacher candidates as they prepare to take the Praxis II exam. It is not known if and to what extent, traditional teacher preparation or alternative certification programs provide specific Praxis II Content exam support. Thus, this research aimed to fill the gap through providing interventions for prospective teacher candidates.

A great majority of states use one or more of the Educational Testing Service's (ETS) Praxis Exam series to certify prospective teachers. According to the South Carolina Department of Education (2019), qualifying scores in South Carolina range between 143-169 depending on the candidate's specific content area and academic grade-level. The SCDE provides a detailed listing of qualifying scores for each required Praxis II Content exam including correlating academic grade levels. For example, the qualifying scores are differentiated between what is acceptable for a high school English teacher needing to obtain a 168, a middle school language arts teacher needing to obtain a 164, and an elementary language arts/reading teacher needing a 157. Also, the SCDE (2018) noted high-need content areas at all grade levels have a wide range of scores such as Math (150-165), Special Education (143-163), Science (130-152), and English (157-168).

Tyler (2011) noted “in some states, candidates who score above a state selected score on the SAT, ACT, and/or GRE tests are exempt from taking Praxis I Core tests”. In South Carolina, if a teacher candidate obtains a minimum score of 22 on the ACT or a score of 1100 on the SAT, they may be exempt from taking one or more of the Praxis exams (SCDE, 2018). However, recent studies have shown that minority and low-income students are not achieving minimum required scores on standardized tests nor teacher licensure exams.

Although fewer individuals are entering the teaching profession, there are debates of whether or not schools and districts in the United States are experiencing teacher shortages. Community, research, and media outlets' attention raise significant concerns about our public schools system's ability to staff all classrooms with a diversified and qualified teacher. In the 2015-2016 school years, 48 states and the District of Columbia reported shortages of teachers (Berry & Shields, 2017). Thus, there is a need to ensure effective strategies are in place to reduce teacher shortages. South Carolina is obviously not immune to the crisis affecting the ability to attract and retain teachers. There is a growing disparity between the rate at which teachers are entering the profession and the rate at which they are leaving. The dire shortage of teachers facing many public school districts in South Carolina is annually documented. Approximately 7,300 teachers left their positions during or at the end of the 2017-2018 school years and there were an additional 621 vacancies at the beginning of the 2018-2019 school years (CERRA, 2019).

What continued to be absent in the literature were strategies to support those individuals with a bachelor's degree, a desire to teach in South Carolina's public schools, yet are unable to pass the state-mandated teacher licensure exams. Researchers have declared a need for interventions and remedial support for Praxis exams (Szecsi & Spillman, 2012; Wall et al., 2012). Therefore, this qualitative research study developed and implemented Praxis II Content exam workshops capable of supporting prospective candidates in passing teacher licensure exams. This was in a continuous effort to reduce the number of vacant teaching positions in South Carolina's public schools.

### **Research Questions**

In light of the stated purpose, problem, and significance between prospective teacher candidates, licensure exams, and teacher shortages, the following research questions guided this phenomenological study:

*RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

*RQ2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?*

*RQ3: How can improved licensure exam scores impact teacher vacancies and shortages in South Carolina's public schools?*

### **Nature of the Study**

Phenomenological research was selected to guide the research study because it differed from other modes of qualitative inquiry. Phenomenology attempts to understand

the essence of a phenomenon from the perspective of participants who have experienced it (Eddles-Hirsh, 2015). A quantitative study would require close-ended questions with statistical analysis, and therefore would not be appropriate for this study. The focus of hermeneutic phenomenology is toward illuminating details and seemingly trivial aspects within experiences that may be taken for granted in our lives, with a goal of creating meaning and achieving a sense of understanding (Kafle, 2011). This study aimed to illuminate the lived experiences of participants as they navigate preparing for Praxis II Content exams.

Phenomenology is a genuine manner of representing the realities that participants experience in their lives (Padilla-Diaz, 2015). This phenomenological study intended to investigate the perspectives of prospective teacher candidates in a tri-county region of South Carolina with regards to their experiences with the Praxis II Content exam. This study used purposive sampling to intentionally target potential participants needing to improve their scores on the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095) exams. Data was collected from six prospective teacher candidates using semi-structured interviews, virtual intervention workshops, and official Praxis II score reports. There was an application of Improvement Science to develop and test interventions with the use of multiple Plan-Do-Study-Act (PDSA) Cycles to improve their Praxis II Content exam scores.

## **Theoretical Framework**

In quantitative research, theories are tested, or confirmed, or rejected; however, in qualitative research, theories provide a context in which the phenomenon under investigation can be understood (Ngulube, Mathipa, & Gumbo, 2015). The focus is on the exploration of the theory and its applicability to explaining the phenomenon, rather than a deductive explanation. Social learning theories integrate the concept of behavior modeling with those of cognitive learning, so that the understanding of the performance of a task is strengthened (Ngulube et al., 2015). This research aimed to apply the principles of Knowles' Andragogy Adult Learning as a theoretical lens to examine and apply intervention strategies provided to study participants in improving their Praxis II Content exam scores.

Andragogy was initially defined as the art and science of helping adults learn, in contrast to pedagogy, the art and science of helping children learn (Knowles, Holten, & Swanson, 2005; Merriam, 2001). There was a need to address the specific characteristics and needs of adult learners. The five assumptions underlying andragogy and the adult learner as someone who:

- (1) has an independent self-concept and who can direct his or her own learning,
- (2) has accumulated a reservoir of life experiences - a rich resource for learning,
- (3) has learning needs closely related to changing social roles,
- (4) is problem-centered and interested in immediate application of knowledge, &
- (5) is motivated to learn by internal rather than external factors (Knowles, 1984).

What is significant, Houle writes as cited by Merriam (2001), is that andragogy has alerted educators to the fact that they should involve learners in as many aspects of

their education as possible. A critical component of the Praxis II Content exam intervention workshops was building a rapport with each participant and working collaboratively to determine a plan for each session. A variety of theories may be used when one monolithic theory may be inadequate to explain and describe a multi-faceted phenomenon (Ngulube et al., 2015). Thus, in addition to theoretically framing Knowles' Adult Learning Theory, this qualitative phenomenological research study analyzed Lev Vygotsky's Socio-Cultural Constructivism to conceptualize the phenomenon of adult learners engaging with licensure exams.

### **Conceptual Framework**

Lev Vygotsky was the first scholar in Socio-Cultural Constructivism, a social theory of learning which emphasized the broader socio-historical and situated dimension of learning and development (Mukhalalati & Taylor, 2019). He stated the importance of cultural and social context for learning because cognitive development stems from social interactions. For Vygotsky, the environment in which children grow up will influence how they think and what they think about (McLeod, 2018). The three principles of socio-cultural constructivism include Social Learning, a More Knowledgeable Other (MKO), and the Zone of Proximal Development (ZPD). Knowledge is actively constructed based on a learner's environment, the physical and social world, which makes it relative (Mukhalalati & Taylor, 2019). With regards to this research study, five of six participants received their K-12 and Post-Secondary education in South Carolina's schools. Continued research may provide insight if there is a potential correlation between prior

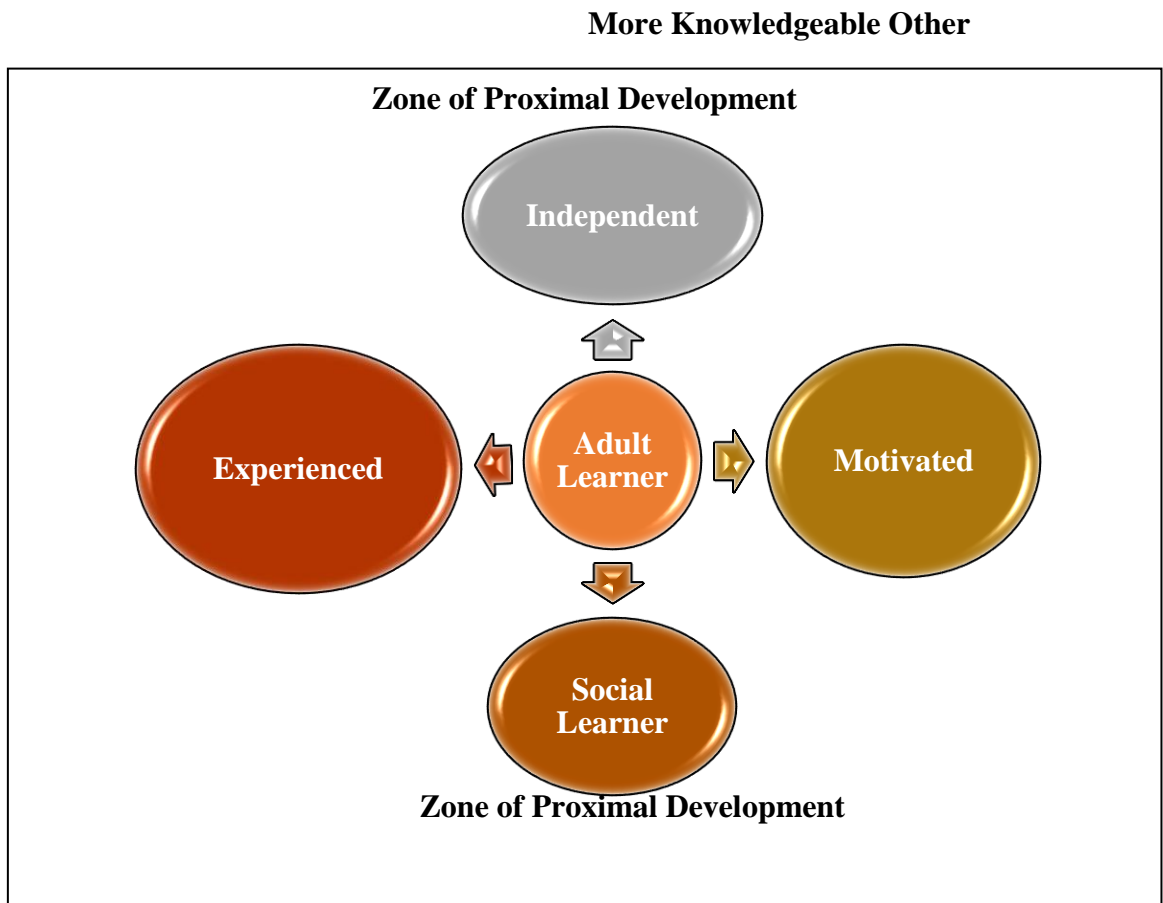


school environments in South Carolina and participants' failing performance on the Praxis II Content exam.

Vygotsky's Socio-Cultural Constructivism principles state social learning occurs through interactions with others, the more knowledgeable other (MKO) is needed as a collaborative teacher and support system, and the zone of proximal development (ZPD) reflects the distance between guided practice and independent study. This is the zone in which learning occurs. Constructivism is about learning being an active, contextualized process of constructing knowledge rather than acquiring it. The learner brings past experiences and cultural factors to a current situation and each person has a different interpretation and construction of the knowledge process (Vygotsky, 1978). Each theory places significant importance and value on the experiences of learners. This qualitative phenomenological research study inquired specifically about the experiences of each participant with relation to the Praxis II Content exam. Using these theoretical and conceptual lenses, the Praxis II Content exam scores of prospective teacher candidates may be improved.

Figure 1. *Conceptual Framework* reflects the conceptualized lens used for the study. The adult learner is at the center. It depicts the concepts of the learner being independent, motivated, experiential, problem-centered, and a social learner. Facilitating this process is a More Knowledgeable Other (MKO), the researcher. The adult learner is surrounded by their Zone of Proximal Development (ZPD). This allows the MKO to collaborate and support with the adult to enhance learning.

**Figure 1. Conceptual Framework**



## **Operational Definitions of the Study**

For the purpose of this study, a clarification of terms is as follows:

African-American - A person having origins in any of the black racial groups of Africa (National Institutes of Health, 2015).

Alternative Certification – In 1984, to address critical teaching shortages in South Carolina, the South Carolina General Assembly provided for the establishment of an alternative route to certification to enable individuals who do not meet the regular certification requirements to be eligible for employment in the public schools (SCDE, 2016). Examples include Teach for America (TFA), Teachers of Tomorrow (TOT), PACE, etc.

Andragogy - The art and science of helping adults learn, in contrast to pedagogy, the art and science of helping children learn (Knowles et al., 2005).

Caucasian / White - A person having origins in any of the original peoples of Europe, the Middle East, or North Africa (National Institutes of Health, 2015).

Licensure / Certification Exams - Typically given after completion of a teacher preparation program; sometimes required for student teaching; mandated to become a teacher in SC public schools. Examples include Praxis I Core, Praxis II Content Exam, Principles of Learning and Teaching (PLT).

Prospective Teacher Candidate – An individual not yet licensed or certified to teach.

Teacher Shortage - Higher demand versus the number of qualified teachers available.

Traditional Certification - Traditional certification includes a four-year degree or an MAT Program, with student teaching at a college or university; requires a licensure exam for certification (Praxis II Content exam).

## **Assumptions**

It was assumed that participants in this study had a genuine need for targeted interventions on a specific Praxis II Content exam to meet South Carolina's requirements to become a certified teacher. Providing support to these participants was needed to ensure they met alternative certification program requirements to be eligible for a teaching certificate for the upcoming 2021-2022 school year. It was also assumed that this study was an accurate representation of the current situation plaguing prospective teacher candidates in South Carolina. The study included prospective teacher candidates wanting to fill classroom vacancies. However, the Praxis II Content exams were providing obstacles along their pathways.

## **Limitations**

This study had clear limitations with regards to the sample population, data collection process, and methodology. With regards to the sample population, the researcher chose purposive sampling in order to recruit participants. This requirement limited the prospective participant pool to those having authentic experiences with the phenomenon. As a result, data was collected from a total of six prospective teacher candidates, in a tri-county region of South Carolina, needing to achieve passing scores on a specific Praxis II Content exam.

The study aimed to provide intervention strategies to improve Praxis II Content exam scores. Official Praxis reports provided one source of data. However, the official

score report provided by ETS lacked specific details of exam questions missed, the score value of each item, or feedback on the constructed responses. Therefore, the researcher was limited to using the official score report as a source of baseline data to provide content support in the outlined exam categories for Middle School English, Secondary English, and Physical Education.

With regards to methodology, an unavoidable limitation was presented in the beginning stages of the study. Initially, the study was to be conducted in a face-to-face format to allow for more personalization of the intervention. However, due to the pandemic, the intervention workshop sessions were reformatted and conducted virtually via Zoom.

### **Delimitations**

There is a vast array of Praxis II Content exams available to prospective teacher candidates based on their specific content area. The researcher delimited the scope to three specific Praxis II Content exams: English (Secondary) Language Arts: Content and Analysis(5039), Middle School English Language Arts (5047), and K-12 Physical Education (5095). This was necessary to ensure the researcher would be able to effectively and efficiently support each candidate individually.

### **Researcher Assumptions**

The researcher chose to investigate the topics of teacher shortages, diversity, and licensure exams due to personal experiences. The researcher is an African-American

female and native South Carolinian. The researcher's undergraduate degree was in English from a large, public SC university. The researcher entered the teaching profession, six years later, through the South Carolina Department of Education's PACE (Program to Alternatively Certify Educators) Program. The researcher failed the Praxis II Content exam by three points on her first attempt, therefore delaying initial acceptance to the program. A year later and subsequent achievement of the minimum cut score, the researcher became employed as a high school English teacher in a large, suburban SC school district for over ten years. The researcher then became a district level employee for the past four years. Teacher shortages due to lack of education graduates, retirements, and resignations were widely reported across the state via news outlets and CERRA's *Annual Supply and Demand* Reports. The researcher was also keenly aware of the lack of teacher diversity locally and statewide. Therefore, this research targeted prospective teacher candidates, attempting to become alternatively certified, and needing to improve their Praxis II Content exam scores to become certified teachers in South Carolina's public schools.

## **Chapter 1 Summary**

Chapter 1 provided an introduction, background, identified the problem of practice, and stated the purpose of the study. Subsequent sections included the significance, research questions, and nature of the study. The chapter concluded with a brief overview of the theoretical and conceptual frameworks, limitations, as well as operational definitions. The problem of practice was identified as inability of prospective

teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools. The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. This was significant because prior qualitative and quantitative research studies (Albers, 2002; Graham, 2013; Pendergrass, 2017; Petchauer, 2018; Wall et al., 2012) recommended future research into practical strategies to overcome the obstacles prospective teacher candidates face in achieving the minimum required score on Praxis exams.

Natural sciences largely depend on one theory, while social sciences have multiple, and at times competing, theories to explain a set of data, in order to achieve fidelity (Ngulube et al., 2015). This research aimed to apply the learning theories of Knowles' Andragogy and Vygotsky's Socio-Cultural Constructivism as a theoretical and conceptual frame respectively. Social learning theories focus on social interaction, the person, context, community, and the desired behavior, as the main facilitators of learning (Mukhalalati & Taylor, 2019). Failing to meet arbitrary benchmarks on standardized testing, this leads to college (SAT and ACT for example) and career (Praxis for example) access, narrows the scope and pool of potentially qualified candidates. The same can be said for those failing to meet required cut scores or meet arbitrary benchmarks on the Praxis II Content exam, resulting in loss of employment opportunities for prospective teacher candidates. The inability to obtain minimum qualifying scores on the state's

required assessments can have far reaching consequences for filling teacher vacancies across many public schools in South Carolina.

The remaining chapters of the research will be organized in the following manner: Chapter 2 provides an in-depth literature review and discussions of the theoretical and conceptual frameworks. The review of the literature includes an historical background, a discussion of teacher candidates, the obstacles of teacher licensure exams, and the impact of teacher shortages. Chapter 3 describes the research methodology and design, sources of data, data collection, and data analysis procedures. Chapter 4 presents the findings and results of the study. Chapter 5 addresses a discussion of the findings, implications of the research, and future recommendations for practical and academic application.

## CHAPTER TWO

### LITERATURE REVIEW

#### **Introduction**

The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. The problem of practice was identified as an inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam. This problem could be an underlying cause of teacher shortages in South Carolina's public schools. Achieving the required cut score on a Praxis II Content exam



may be the only barrier the study participant must overcome to be certified as a teacher or admitted into an alternative certification program in South Carolina.

This review of literature includes critical issues that form a framework for understanding the impact teacher licensure exams have on prospective teacher candidates and teacher shortages in South Carolina's public schools. EBSCO Host, Education Full Text, ERIC, Google Scholar, and ProQuest scholarly databases were accessed to gather scholarly journals and seminal works to aid in the synthesis of this literature review. Within the existing literature, the salient themes of licensure exams and teacher shortages have been highlighted as potential factors influencing the lack of teacher diversity in public schools (Chen, 2017; Haddix, 2017; Ingersoll, 2003). Adults also have unique characteristics and needs when engaging in learning. It was significant to provide deeper exploration into these pressing issues to benefit not only prospective teacher candidates, but also the students, schools, and districts they will support in the future.

The remaining components of the chapter have been organized in the following manner: the theoretical and conceptual frameworks are outlined, followed by an historical background, a discussion of minority teacher candidates, and accountability measures. Subsequent sections will review K-12 and Post-secondary education, standardized tests, teacher licensure exams, empirical research studies, and the impact of and responses to teacher shortages.

## **Knowles' Andragogy**

Educational philosophy and learning theory underpin all educational practices, because they provide the conceptual frameworks describing an individual's acquisition of knowledge, skills, and attitudes to achieve changes in behavior, performance, or potential (Mukhalalati & Taylor, 2019). This qualitative phenomenological research study aimed to theoretically frame the principles of Knowles' Andragogy Adult Learning Theory to improve the Praxis II Content exam scores of six prospective teacher candidates in a tri-county region of South Carolina.

The first assumption of andragogy requires the learner to be able to direct their own learning. Initial survey data and semi-structured interviews allowed the researcher to gain background information from participants to determine the scope of future Praxis II Content exam intervention workshops. Participants were able to verbalize strengths and obstacles with the exam and provide documentation of past performance via official Praxis II Content exam score reports.

The second assumption of andragogy and adult learning theory recognizes that adult learners bring a wealth of knowledge and past experience to the learning environment (DiLello and Vaast, 2003). All study participants had previously taken a Praxis II Content exam for certification in a specific content area. However, as a prerequisite of this study, none of the participants had achieved the required score set by South Carolina legislation to pass. Their prior experiences and Praxis II Content exam score reports provided the basis for intervention workshop sessions.

The third assumption of andragogy reveals an immediate need to engage in the learning process due to a life or professional change. All participants were engaged in the study because as a requirement for teacher certification in South Carolina, they must achieve the set minimum score on a specific Praxis II Content exam. Initially, all participants were required to pass the exam in order to teach in South Carolina for the 2021-22 school years.

The fourth assumption of andragogy reflected adult learning is problem centered with an immediate application of knowledge. The participants' common problem was centered on their inability to pass a specific Praxis II Content exam. They attended intervention workshop sessions to address perceived obstacles with the exam. DiLello & Vaast (2003) suggested placing tasks in a real-world context to create learning that the student can use immediately. Most participants had an immediate need to retake the exam in order to be hired as a teacher of record for the 2021-2022 school years.

The fifth assumption of adult learning theory deems the learner is motivated to learn by internal rather than external factors. Based in humanistic psychology, Knowles' version of andragogy presents the individual learner as one who is autonomous, free, and growth-oriented (Merriam, 2001). With regards to this qualitative phenomenological research study, the participants were both internally and externally motivated to improve their Praxis II Content exam scores. Internally, all participants expressed a desire to become a certified teacher in South Carolina's public schools. However, external factors such as alternative certification program requirements, a set minimum score to achieve,

and a looming deadline of June 30, 2021 the South Carolina State Department of Education (SCDE) also provided motivation.

Critics of andragogy have pointed out that there is little or no acknowledgment that every person has been shaped by his or her culture and society, that every person has a history, and that social institutions and structures define, to a large extent, the learning transaction irrespective of the individual learner (Merriam, 2001). In response to this criticism, this qualitative phenomenological study conceptualized the work of Vygotsky's socio-cultural constructivism.

### **Vygotsky Socio-Cultural Constructivism**

According to constructivism, individuals construct new knowledge through the interaction between their previous skills and knowledge, the skills and knowledge gained from social interaction with peers and teachers, and social activities (Mukhalalati, & Taylor, 2019). Vygotsky was the first scholar in socio-cultural constructivism, a social theory of learning which emphasized the broader socio-historical and situated dimension of learning and development. The constructivist theory approaches pedagogy and learning holistically, focusing comprehensively on the internal cognitive mechanisms that underlie the learning processes, participation, and social interaction (Mukhalalati & Taylor, 2019). Vygotsky saw cognitive functions and development, even those carried out alone, as affected by beliefs and values (McLeod, 2018; Verenikina, 2003). Therefore, this research provided targeted, 1:1 remedial intervention support to prospective teacher candidates needing to improve their Praxis II Content exam scores.

Vygotsky viewed social interactions as crucial for development from the very beginnings of life (Verenikina, 2003).

Nasir & Hand (2006) believed early approaches to understanding culture and race in learning processes and outcomes were rooted in the discriminatory social philosophy of their time and sought to explain racial differences on IQ tests and school achievement by attributing these differences to both biological and cultural factors. This research aimed to conceptually frame the principles of Vygotsky's Socio-Cultural Constructivism theory within the work of providing remedial interventions to adult learners. Vygotsky developed three principles associated with socio-cultural constructivism: Social Learning, More Knowledgeable Other (MKO), and the Zone of Proximal Development (ZPD).

The first principle of socio-cultural constructivism is Social Learning. Vygotsky believed that learning was a social process rooted in an individual's culture, society, and environment. For Vygotsky, learning occurred on a level that required interactions and relationships with others. Within this qualitative phenomenological research study, participants needed support to improve their Praxis II Content exam scores. The purpose of the semi-structured interviews and intervention workshops were to provide targeted support and build relationships between the researcher and participants.

The More Knowledgeable Other (MKO) was somewhat self-explanatory; it referred to someone who has a better understanding or a higher ability level than the learner (Vygotsky, 1978). This was an important concept that relates to the difference between what a learner can achieve independently and what a learner can achieve with guidance and encouragement from a skilled partner. Within this study, the researcher

served as the MKO to assist participants in improving their Praxis II Content exam score. The concept of the More Knowledgeable Other (MKO) was integrally related to the second important principle of Vygotsky's work, the Zone of Proximal Development (ZPD).

The Zone of Proximal Development (ZPD) may be applied in any situation in which while participating in an activity individuals are in the process of developing mastery of a practice (Verenikina, 2003). Vygotsky (1978) emphasized the collaborative nature of learning by the construction of knowledge through social negotiation. Study participants engaged in the research study in an effort to gain content and test-taking skills on their journeys to becoming certified teachers in South Carolina's public schools. The ZPD was not a context independent attribute of an individual rather it is constructed in the interaction. To instruct in the ZPD was to be responsive to the learner's current goals and stage of development. In addition, it provided assistance that enables them to achieve those goals and to increase their potential for future participation (Verenikina, 2003). The participants were required to provide prior Praxis II Content exam score reports to serve as a baseline in determining previous performance on the exam. Vygotsky emphasized the social and cultural nature of development claiming that psychological development happens within social interactions not through the unfolding of innate structures (Verenikina, 2003). Social interactions occurred between the researcher and participants during each intervention workshop as well as after participants retook the exams to gain additional follow-up experiences.

Nasir and Hand (2006) posited, socio-cultural theories offer frameworks for the conceptualization of multiple factors, processes, and levels of analysis. Therefore, this qualitative phenomenological research study attempted to theoretically frame Knowles' Andragogy Adult Learning Theory and Vygotsky's Socio-Cultural Constructivism to conceptualize and gain a deeper understanding of the stated problem of practice. The problem was identified as the inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools.

There was an understanding that there may be barriers to learning for older adults that may impede their progress toward obtaining stated goals. Findsen (2002) acknowledged Darkenwald and Merriam's (1982) system of categorizing such barriers as situational, institutional, informational, and psychosocial. Situational is related to an individual's life context at a particular time within their social and physical environment (Findsen, 2002). With regards to this study, participants attempted to obtain the set cut score on the Praxis II Content exam before South Carolina's Department of Education certification deadline of June 30, 2021 for the upcoming 2021-22 school year. This was necessary in order to obtain alternative certification program entrance or meet said programs requirements. Institutional barriers are related to those erected by learning institutions or agencies that exclude or discourage certain groups of learners (Findsen, 2002). Participants encountered institutional barriers such as a lack of available or affordable exam support, the high cost of retaking exams, and the length of time to receive scores. Psychosocial (attitudinal or dispositional) barriers are related to

individually held beliefs, values, attitudes or perceptions that inhibit participation in organized learning activities (Findsen, 2002). With regards to this study, participants were apprehensive about taking the Praxis II Content exam again due to previous poor scores and outcomes. For older adults, all levels of barriers may pertain and for some individuals each category may have relevance in decision-making (Findsen, 2002).

### **Historical Background**

Engaging in diverse settings and groups can improve school and future student outcomes. Diverse racial, economic, religious, and social interactions can promote growth and prepare students for the future 21<sup>st</sup> century global economy. Increasing the number of teachers from diverse backgrounds, and providing them with support will allow them to best use their cultural knowledge to positively influence the educational outcomes of minority students (Madkins, 2011; Sutton, 2016). However, prior to the late 1950s, diverse settings and groups were not the norm in the United States, especially in relation to education in the South. Discussions about the lack of diversity in the teaching profession should include an analysis of the *Brown v. Board* (1954) decision, and the consequences of desegregating public schools in America. While this landmark decision on school desegregation has been heralded as an important milestone in efforts for equality for all Americans, it has been a mixed blessing for Black educators (Myers, 2001).

*Briggs v. Elliott*, originated in Clarendon County, SC and was filed by NAACP lawyers in U.S. District Court in 1950. Plaintiffs challenged the court to provide Black



children in the county with equal schools and resources (Gold, 2005). The original case ruling was appealed to the United States Supreme Court. By 1952, state cases including *Briggs v. Elliott*, *Bolling v. Sharpe*, and others would be joined as *Brown v. Board of Education*. The *Brown v. Board of Education* (1954) landmark decision produced unforeseen consequences for the Black community and the Black teaching force (Farinde, Allen, & Lewis, 2016; Ingersoll et al., 2019). Before the Supreme Court's decision, approximately 82,000 African-American teachers were responsible for the education of the Nation's two million African-American public school students (Tillman, 2004). Over a decade later, more than 38,000 African-American teachers and administrators had lost their positions. The desegregation of schools caused the closing of numerous Black operated schools, the loss of employment, and the displacement of many students. While intended to improve America's educational system, the consequences of the historical decision may have caused more harm than good. Now over sixty-five years later, retention trends and the low representation of Black teachers in U.S. public schools are disconcerting issues that indicate a minority teacher shortage (Farinde et al., 2016).

Latham, Gitomer, & Ziomek (1999) found that the gender and ethnic composition of the teaching force does not come close to matching that of the K-12 student population and that this trend does not appear likely to change anytime soon. While this was suggested in 1999, twenty years later, racial demographics are approximately the same. There were proclamations that the nation's public school student population was becoming increasingly diverse, and the teaching force was becoming less diverse (Albers, 2002; Ingersoll et al., 2019; Tillman, 2004). The country's inability to attract and maintain

a diverse teacher workforce is reflective of the growing diverse student population in America. According to the National Center for Education Statistics (NCES) in 2015–2016, the percentages of public school teachers who were White and Black were lower in 2015–2016 than in 1999–2000, when 84% were White and 8% were Black (NCES, 2018). The United States is struggling to balance the demographics of their public school students in comparison to the educator workforce. Although more minority teachers are being recruited across the Nation, the pace of increase is slow and attrition rates are high. The educator pipeline of prospective teacher candidates seems almost empty.

The persistent diversity gap between teachers and students in the U.S. school system is increasing (Ingersoll et al., 2019; Marshall-Jackson, 2017). Student enrollments in public schools have been on the rise over the past decade, and continue to persist. The shortage of Black teachers is not an isolated event in higher education, but rather reflects all college students' declining interest in choosing education as a career (Myers, 2001). At the national level, NCES (2018) provided data detailing the disproportionate levels of minority teachers when compared to the number of minority students. The decreasing pool of prospective teacher candidates can be attributed to many conditions, including high school completion rates, college enrollment, and degree attainment. Teacher education programs in predominantly Black and majority White public colleges and universities are experiencing a decline in the number and academic ability of education majors as well (Myers, 2001). This was reflected in the disproportionate number of minority graduates of university teacher preparation programs. A potential contributor to this disparity may be the requirements of teacher licensure exams.

Intelligence tests became popular during the 1920's, as a result teaching aptitude, subject matter competence, and general knowledge were also measured (Wilson, 1985). Although licensure exams were not a form of intelligence testing, they were used to gauge teacher quality and competency for certification. The National Teachers Examination (NTE) system that was introduced in the 1930s, were based primarily on surveys of teacher education curricula, focused almost exclusively on content, and were disconnected from modern theories of teaching and learning (U.S. Department of Education, 2010). In 1938 Ben Wood, director of Educational Research at Columbia University, began developing standardized exams. However he stressed, objective examinations could not measure the total subtle complex which we call teaching ability (Wilson, 1985). These exams were initially developed to assist in hiring decisions due to an oversupply of teachers at the time. However, making this claim did not prevent extensive teacher testing then and now.

The National Teachers Examination (NTE) was created by a private company, the Educational Testing Service (ETS) as a minimum competency test for the purpose of teacher licensure in some states and was first administered in 1940 (Longwell-Grice et al., 2013; Wilson, 1985). The exam was first used in South Carolina as an element in the certification of teachers in 1945 (McDaniel, 1977; Bartels, 2005). Candidates completed teacher education coursework for extended periods based on university requirements with hopes of achieving success on the NTE tests. By the beginning of the 21<sup>st</sup> century, the NTE teacher certification exam was replaced with the Praxis Series tests. The Praxis tests focus on basic reading, writing, and math skills, subject-specific content knowledge, and

teaching pedagogy. Most states and universities position “basic skills” licensure exams as entrance requirements into teacher licensure programs and content area exams as exit criteria for program completion (Petchauer & Baker-Doyle, 2019). These various Praxis exams are usually required before, during, and after teacher training courses in the United States. In South Carolina, teachers must pass the Praxis I Core exam prior to entrance into a teacher preparation program (SCDE, 2019). Also, the Praxis II Content and PLT (Professional Learning and Teaching) exams are taken by every prospective teacher candidate seeking licensure in South Carolina. Regardless of the certification pathway, traditional or alternative, at some point, Praxis exams will determine a candidate’s licensure status.

### **African-American Teacher Candidates**

There are approximately 3.8 million teachers in the United States, and minority teachers account for only 20% of the total teaching profession. For the 2015-2016 school years, the population of U.S. teachers tallied 80% White, 9% Hispanic, 7% Black, 2% Asian, and 1% two or more races (NCES, 2018). During that same timeframe, South Carolina reported a total of 50,443 full time classroom teachers in public schools. The demographics of those teachers include the following approximations: 39,760 (79%) White; 7,505 (15%) Black; 695 (1%) Hispanic; 484 Asian (1%); 88 Indian (0.2%) and 1,911 (4%) were not reported (South Carolina Department of Education, 2017). The notable disparity between the number of White and minority teachers in K-12 public schools is an indicator of the lack of diversity within the teacher pipeline.

The National Center of Education Statistics (2019) report provided the racial and ethnic profile of public school students for 2017-2018 to include 23.7 million White students, 13.9 million Hispanic students, 7.7 million Black students, 2.7 million Asian students, and 2.7 million other races. These statistics show that racial/ethnic minority students are the demographic majority of students attending public schools in the United States (Cherng & Halpin, 2016; Ingersoll et al., 2019). With the increase of more diverse student enrollments, it is necessary that the teaching profession reflects the demographic shift currently underway in public schools.

An increase in diversity of public school teachers has been the goal of many states and university education programs for decades. In 2014, the National Education Association spoke of the nation's compelling need to recruit and retain teachers of color, noting specifically that a diverse teaching force is "advantageous to the academic performance of students of all backgrounds, and for minority students specifically" (Holmes, 2015). The Nation's ability to fulfill this compelling need has been challenging. A potential contributor to the lack of minority teachers in public schools is their low performance and passage rates on required standardized assessments (Graham, 2013; Petchauer, 2012; Petchauer, Bowe, & Wilson, 2018). While there are a variety of pathways to becoming a certified teacher, almost all include a component requiring Praxis licensure testing prior to certification.

When minority candidates do seek to enter teaching, the growth of licensure entry tests, coupled with lower pass rates, has meant fewer candidates are successful (Albers, 2002; Dinkins & Thomas, 2016; Ingersoll & May, 2011; Ingersoll, May, & Collins,

2019). Teacher licensure exams, particularly Praxis I Core and Praxis II Content exams, negatively impact minority candidates and traditionally produce lower passage rates than White candidates (Dinkins & Thomas, 2016; Graham, 2013; Taylor et al., 2017).

Licensure exams can act as a barrier or deterrent directly impacting the goals of diversification for people of color and disrupt the educator pipeline (Floden, Richmond, Drake, & Petchauer, 2017; Taylor, 2013). Lower performance rates for minority teacher candidates may reflect the impact of deficiencies in K-12 school content areas and experiences. Thus, these students are at a disadvantage when engaging in future college and ultimately teacher preparation programs' academic and testing requirements.

Research has shown minority test-takers are roughly half as likely to pass basic skills tests on their first attempt compared to White test-takers. Licensure examinations have been identified as a gatekeeper that directly impacts the racial demographics and cultural diversity of the teaching profession (Holmes, 2015; NCTQ, 2019). There could be a correlation between exam failure rates for minority teacher candidates and their absence in the teacher pipeline. Mechanisms to support prospective teacher candidates were needed to improve licensure exam scores.

Baker-Doyle & Petchauer (2015) considered institutional support as a centralized means of preparation available to test-takers to help them to persist. However, many candidates are no longer affiliated with their degree-granting institution. Therefore, targeted strategies and systems must be implemented to ensure prospective teacher candidates are able to receive support when undertaking teacher licensure exams. If teacher knowledge and skill about both content and pedagogy is important, as

substantiated evidence suggests it is, the most sensible policy goal is to work to improve preparation opportunities (Darling-Hammond, 2002). Because prospective teacher candidates face barriers in obtaining specified scores on licensure exams, it was imperative to provide exam interventions.

The lack of access to quality educators further widens the educational, opportunity, and prosperity gaps of racially diverse and/or lower socioeconomic communities and their suburban counterparts. This reality also makes it a strategic necessity to employ more teachers of color into education because they embody a promising solution to solving the problem of hard-to-staff schools (Brown, 2014). Latham et al. (1999) declared the need for effective ways to increase both the overall supply of teachers and the relative percentages of minority teachers, particularly in specific content areas. This call to action came over twenty years ago, and is still an unresolved issue in public schools. Although there is a need for more diverse teachers from all backgrounds, there has been specific emphasis in much of the literature about the shortage of Black teachers entering and remaining in the profession (Farinde et al., 2016, Ingersoll & May, 2011; Madkins, 2011; Petchauer, 2018; Taylor et al., 2017). It should be acknowledged that prospective minority teachers encounter unique barriers to entering the profession. If minority teacher candidates are able to reach college graduation, disparities in passage rates on licensure exams may contribute to the gap in the number of minority teachers who become certified teachers in South Carolina classrooms. As a result, this work intended to provide Praxis II Content exam interventions to prospective

teacher candidates. This was in an effort to improve exam passage rates and strengthen South Carolina's teacher pipeline.

### **Accountability**

There was an expansion of teacher licensure testing to ensure that all teachers demonstrated competence to teach specific subject matter as specified in the Highly Qualified Teacher provisions of the federal Elementary and Secondary Education Act (2002). The federal involvement in state testing and certification requirements was drastically noted in 2002 with the reauthorization of the Elementary and Secondary Education Act of 1965, known as No Child Left Behind (NCLB). The policy mandating 100% of core content discipline teachers to be "highly-qualified" required full participation by the 2005-2006 academic years. NCLB also required a series of standardized student and teacher assessments. This was in spite of extensive research documenting the negative impacts such tests would have on people of color, low-income people, and English language learners (Rogers-Ard, Knaus, Epstein, & Mayfield, 2012). This federal legislation, NCLB, also had a profound effect on the number of minority teachers entering and remaining in the classroom. The trickle-down effect of standards set at the federal level became apparent when state legislatures began to adopt increased standards as well.

When teacher candidates complete or have nearly completed a teacher preparation program, they undergo state certification exams to assess pedagogical and content knowledge according to their certification field (Clark, Kara-Soteriou, & Alfano, 2017).



In South Carolina, the Praxis exams serve as a requirement to become a certified teacher. The Praxis Exam series is the most widely adopted series of tests used for teacher licensure in 44 U.S. States and the District of Columbia (Albers, 2002; ETS, 2019; Graham, 2013; Shuls & Trivitt, 2015). As a result, in theory and practice, the Praxis Exam series is a gatekeeper to becoming a certified teacher in over 85% of states in America. Certification is a relatively crude measure of teachers' knowledge and skills, since the standards for subject matter and content knowledge embedded in certification have varied across states, measured differently, and enforced differently depending on place (Darling-Hammond, 2002). States have considerable variations among their certification requirements. Although efforts have been made to nationalize the exam process, such as the NTE and the Praxis exam, no substantial progress has been made (Ludlow, 2011). There is a consensus to provide South Carolina's students with educated, well-qualified, and highly-effective teachers. School officials and legislators have long been concerned with the possibility of declining teacher quality (Angrist & Guryan, 2004). However, the manner in which these individuals are certified causes much strife between stakeholders. The literature lacked a consensus on a conclusive coherence between assessments and teacher quality.

Recent years have seen accelerations in the use of standardized tests to certify teachers. Eliminating accountability standards would remove the mechanisms states have been developing and improving to be sure that teachers know their content well, how to teach content, and how to meet the special needs of learners (Darling-Hammond, 2002). Standardized testing and exams allow accountability measures for teachers and schools,

the analysis of data across variables, and objectivity when scoring. Although it is true that some very committed individuals are unable to pursue their desired career, there are also potential consequences of having teachers in classrooms who have not mastered basic skills or the content they are teaching (Gitomer et al., 2011). There are proponents and opponents on each side of the teacher licensure exam debate.

Proponents of licensure exams believe by allowing marginal students to teach, we run the risk of oppressing a new generation of students. If teachers do not have well-developed basic skills and if they do not have a good mastery of their content, then their students are denied the opportunity for a full education (Gitomer et al., 2011). In response to these beliefs, policies were instituted to ensure that teachers have a specified and approved background in the content and grade-level in which they intend to teach. In addition to teacher requirements, increased accountability of teacher preparation programs were required for colleges and universities. Proponents hope these measures will increase quality, but economists have long been skeptical of entry barriers that may shift supply and discourage otherwise qualified applicants (Angrist & Guryan, 2004; Shuls, 2018).

Continuous discussions about the ineffectiveness and barriers caused by licensure exams have opponents speaking out as well. Opponents of teacher licensure exams believe the assessment tests do not accurately assess content knowledge, much less the skill-sets required of teachers to actually teach such content (Goldhaber & Hansen, 2009). Additionally, opponents fear standardized testing is a barrier to college access for

minority students and those from lower socioeconomic backgrounds (Rogers-Ard et al., 2012; Stewart & Haynes, 2015). Further, opposing viewers believe certification exams are generally seen as only weak predictors of student outcomes, fail to capture potential classroom performance based on a timed assessment, and may also filter out minority teacher candidates (Goldhaber, 2007; Goldhaber & Brewer, 1999; Hill, Umland, Litke, & Kapitula, 2012).

Test requirements may establish a minimum achievement standard, as their proponents hope. On the other hand, testing and other certification requirements may deter some qualified applicants from teaching if these requirements are perceived as barriers-to-entry (Angrist & Guryan, 2004). Opponents believe this change could potentially reduce the number of minority teachers and lead to negative outcomes in disadvantaged schools. African-American test-takers are roughly half as likely to pass basic skills tests on their first attempt in comparison to White test-takers. Therefore, opponents of licensure examinations identify them as a gatekeeper that directly impacts the racial demographics and cultural diversity of the teaching profession (Holmes, 2015; Putman & Walsh, 2019). It is debatable as to whether increased requirements for certification have better prepared teacher candidates or even led to better student performance (Clark et al., 2017). Licensure exams were not intended to be predictors of performance in the classroom. Unfortunately, these exams may screen out some individuals who may be highly effective teachers (Dinkins & Thomas, 2016; Shuls & Trivitt, 2015; Wakefield, 2003). This study acknowledges the fact that licensure exams are mandated by South Carolina law for teacher certification. As a result, mechanisms

should be implemented to ensure that prospective teacher candidates receive interventions and support to fill the educator pipeline.

Quality is determined by requiring certification through licensure testing before admittance to teacher education programs and/or participation in the public school's labor market (Graham, 2013; Madkins, 2011; Shuls & Trivitt, 2015; Taylor et al., 2017). Historically, federal and state governments have implemented licensure exams, legislation, and additional credentialing mandates to improve the quality of the teacher workforce. Policymakers typically want to ensure that teachers have an appropriate level of content knowledge in the subject they wish to teach. Locally created tests with basic skills such as spelling, grammar, math, and history served as initial forms of teacher tests. Accordingly tests of basic skills, content knowledge, and pedagogy are currently required to become certified in most states. Certification requirements differ in the amount and substance of coursework requisites, quantity of field experience obligations, and length of time spent student-teaching (Ludlow, 2011). Regardless of the variations, prospective teacher candidates will not become fully certified educators until all set requirements are met, including licensure exams.

### **K-12 Education**

There is a need to ensure America's public school students are exposed to diversity, beginning with the teacher in the classroom. However before becoming a teacher, minority and low-income students must learn to navigate the K-12 school system. Gitomer et al. (2011) concluded, P-12 schools provide inadequate education for

many students, which then manifests on the administration of tests for entering teaching. Unfortunately, prospective teacher candidates encounter these barriers at disproportionate rates.

While it is considered the job of K-12 public education to impart foundational content knowledge, results consistently show many minority students reach 12th grade with major gaps in their knowledge and skills (NCTQ, 2019; Putman & Walsh, 2019). Educational policies and practices have traditionally viewed low-income students and students of color from deficit points of view (Harlep, 2009). Minority students tend to experience lower teacher expectations, overrepresentation in special education, excessive exclusionary disciplinary practices, high-poverty, least experienced teachers, and school segregation (Taylor, Kyere, & King, 2018). For example, the U.S. Department of Education Office for Civil Rights (OCR) reported, racial disparities are particularly acute in schools where uncertified and unlicensed teachers are concentrated; nearly 7% of the nation's black students – totaling over half a million students – attend schools where 80% or fewer of teachers meet these requirements (2014).

### ***Standardized Tests***

Large scale standardized tests are designed, administered, and scored to provide comparative and performance level data of test-takers. All public school students in America are subjected to a variety of standardized tests during their K-12 academic experience. These standardized tests can begin as early as kindergarten, and can be used for a variety of reasons by district and school administrators. In South Carolina, students

annually undergo Reading/Math Inventories (K-10th), SC READY ELA/Math (3rd- 8th), SC PASS Science (4th & 6th), End-of-Course exams (9th-11th), and more. While the intent and use of standardized tests have evolved over the years, there are still barriers created by these knowledge and skills-based tests.

Deficits were clearly evident when analyzing the performance of minority students on standardized tests in elementary, middle, and high schools in South Carolina. Students leaving K-12 education in America appear ill-prepared for the rigorous curriculum of higher education (Brinkley, 2015). In South Carolina, this finding is consistent with data showing minority students are consistently ranked at the bottom of every academic measure in comparison to their White counterparts (CHESC, 2018; SCDE, 2019). This includes all K-12 educational testing content indicators, high school graduation rates, and college enrollment. According to the Nation's Report Card (2017), South Carolina's Black students (196R / 219M) had an average score that was -29 and -26 points lower than that for White students (225R / 245M) in both 4th grade Reading and Math respectively (NCES, 2017). The data also reflected that the score gaps were not significantly different from the -29 points for the same demographics in 1998. With disparaging standardized scores at the K-12 level, it seemed indicative of continued struggles at the Post-Secondary level.

In a continuous effort to improve the status of education in South Carolina's public schools, stakeholders have joined to assess and report needed improvements. The South Carolina Education Oversight Committee (EOC) is a legislative agency, works

closely with members of the SC General Assembly, providing data and recommendations regarding programs, policies and funding based upon the level of achievement for students, schools, and programs. The agency’s website purports that it provides information and analyses of student performance, educational programs and educational funding; information to impact decisions at the state and local level focused on improvement of student achievement; and services and information that encourage public engagement in the success of students and schools as well as continuous improvement of the accountability system (EOC, 2021). In the past few years, the committee has released annual news briefs in reference to student performance on the ACT in South Carolina’s public schools.

### ***SAT & ACT***

For those students choosing to matriculate to a college or university, additional standardized tests such as the SAT or ACT are required. For example, the purpose of the ACT test is to measure a high school student’s readiness for college, and provide colleges with one common data point that can be used to compare all applicants (ACT, 2019). The test is divided into four sections consisting of English, Science, Math, and Reading. Students may choose and colleges may also require the Writing portion of the test. Each section is scored individually on a 1-36 scale, and then averaged to generate a composite score on the same scale (ACT, 2019).

In 2018, the SC Education Oversight Committee (EOC) released their findings that approximately 20% of South Carolina's 2018 graduating class were deemed “college-

ready" on the ACT. Findings showed the percentage of students meeting at least three out of four of the ACT College Readiness Benchmarks in reading, English, science and mathematics in the US was 38% compared to South Carolina with 22%. This also reflected South Carolina ranking 18 of 19 reported states in which 98% of the students were assessed (SCEOC, 2018).

In 2018 the Education Oversight Committee (EOC) Chairman Neil Robinson stated, "Almost three-fourths of SC students want to attend college but unfortunately many do not enroll or are not academically prepared". Further, only 6% of African American students in the 2017 graduating class met three or more college readiness benchmarks. The practice of taking a college admissions test multiple times has grown over time, as "repeat-testers" often improve their scores. Nationally, 44% of 2018 ACT-tested graduates took the ACT more than once. In South Carolina, that number was only 26.4%. This data concurred with the study's participants being required to retake the Praxis II Content exam multiple times in order to improve their overall scores.

In 2019, South Carolina had over 36,000 graduating students take the ACT exam averaging a composite score of 18.8. This is in comparison to over 25,000 graduates from four years prior with a composite score of 20.4 (ACT, 2019). In 2019 when South Carolina's ACT scores were disaggregated by demographics, it reflected 18,359 White students with a composite score of 20.8; 9,642 African-American students with a composite score of 15.6; and 2,934 Hispanic students with a composite score of 18.0 (ACT, 2019). With the lack of academic achievement in some of South Carolina's K-12



schools, if students, Black or White, attend postsecondary schools, they are more likely to encounter barriers to graduation.

In 2020, the South Carolina Education Oversight Committee (EOC) released their findings that South Carolina ranked as the lowest state in the nation among those who did not test all students on the ACT exam. It reflected that only 14% of SC students met all four subject-area benchmarks compared to 26% nationally in the same four areas. The composite score for South Carolina's 2020 Class of public-school students was 18.1 (out of 36 points) (SCEOC, 2020).

In 2020 Education Oversight Committee (EOC) Executive Director Matthew Ferguson stated, "These ACT scores emphasize our state has to improve the teaching and learning of reading and mathematics". He further stated, "Students need to be encouraged to take the ACT multiple times if they aspire to attend a two or four-year college or university in our state". There was great reason for concern when looking at the racial and ethnic achievement gaps among SC's 2020 graduates. Only 5% of SC African American students met the college readiness benchmark in mathematics, compared to 12% nationally. Only 6% of SC African American students met the college readiness benchmark in Science in 2020.

Despite being underprepared for college in many cases, some Black students are still able to attend colleges and universities (Madkins, 2011). Oftentimes, many students are entering colleges and universities lacking the prerequisite skills to be successful. Minority candidates generally score lower on many of the current selectivity metrics used

by teacher preparation programs (Partelow, Spong, Brown, & Johnson, 2017; Taylor et al., 2017). Students exhibit deficits in math, reading, and basic writing content stemming from inadequate K-12 academic experiences and performance. This content is also tested on standardized tests for students as well as licensure exams for teachers.

On average, minority teacher candidate exam scores are disproportionately on teacher licensure exams (Goldhaber & Hansen, 2009; Shuls, 2018). The Black-White score gap is a phenomenon seen at every grade level and in the results of nearly every type of standardized test including state teacher licensure examinations, as such fewer minority candidates are successful (Holmes, 2015; Ingersoll et al., 2019). For example, the U.S. Department of Education's (2010) research found "those who pass Praxis exams have higher SAT scores, higher grades, and are more likely to have stronger content course work". Data has shown that South Carolina's students do not perform well when compared to their peers on national tests such as the SAT and ACT. The average SAT/ACT scores of college students pursuing education degrees have historically been lower than those of students entering other professions (Partelow et al., 2017). Further, NCES (2019) reported the 6 year graduation rate for first-time, full time undergraduate students who began pursuit of a bachelor's degree at a 4 year degree-granting institution in fall 2010. The results were: Asian (74%), White (64%), Hispanic (54%), Biracial (60%), Pacific Islander (51%), Black (40%), and Indian (39%). Clearly, there was over a 30% point difference between the highest and lowest graduation rates.

This qualitative phenomenological research study aimed to support participants who initiated the process to become certified teachers. They were unable to achieve the minimum score on a specific Praxis II Content exam. The success of these participants could fill vacancies in urban areas, isolated geographic regions, and high-need content courses in South Carolina's public schools.

### **Teacher Licensure Exams**

For well over a century, there have been significant concerns about the academic quality of those who choose teaching as a profession. These concerns have focused on both general verbal and mathematical abilities as well as specific content knowledge (U.S. Department of Education, 2010). There was heightened public and professional discontentment about the quality of our nation's schools and the competence of the teachers who worked within them. This led to growing interests in implementing lawful policies and using tests for teacher assessment and certification (Wilson, 1985). In response to state and federal mandates, South Carolina began to require improvements to teacher quality.

To meet growing demands for quality, colleges and universities increased certification and academic requirements for all beginning teachers to be fulfilled prior to graduation (Clark et al., 2017). Currently, teacher candidates are required to display appropriate levels of content and pedagogical knowledge by exceeding the minimum cut score on specific Praxis II Content licensure exams. Prior to acceptance into a teacher preparation program, candidates may be required to complete tests in reading, writing,

and computational skills. The Praxis II Content exam is one of a series of national teacher certification examinations written and administered by the Educational Testing Service (ETS). South Carolina ultimately chose the Praxis I Core and Praxis II Content Knowledge exams to certify teacher candidates. The Praxis I Core assesses skills needed to enter the education profession such as basic writing, math, and reading (Graham, 2013; Madkins, 2011; Shuls & Trivitt, 2015). In South Carolina, students meeting acceptable scores on the SAT or ACT during high school may be exempted from the Praxis I Core exam. In addition, the Praxis II Content exam is also required for prospective teacher candidates. The Praxis II Content exam is intended to gauge teacher quality and test teaching-field knowledge, as well as general and subject-specific pedagogical skills. It is a two-part, multiple-choice and essay test lasting approximately four hours. Currently, South Carolina has no exemptions in place for the Praxis II Content exam. Therefore, all prospective teacher candidates are required to meet passing score requirements on this exam. The Praxis II Content exam can be the only barrier for a student to be able to advance in a teacher preparation program, completing alternative certification requirements, or being hired as a certified teacher of record.

How well an individual performs on a licensure exam should correlate to how effective they are in the classroom (Shuls, 2018). There are assumptions of lower quality for those failing to pass licensure exams, potentially leading to questions and reservations of the candidate's ability. Standardized tests and teacher licensure exams repeatedly have been shown to be biased and disproportionately exclude teacher candidates of color despite little evidence that these exams predict teacher effectiveness (Goldhaber, 2007;

Ludlow, 2011; Rogers-Ard et al., 2012). Although prospective teachers who fail have taken the exams multiple times, they tend to miss the minimum cut score by approximately one to three points.

While an individual who earns a score equal to or above the cut score is deserving of a teaching certificate (Shuls & Trivitt, 2015; Wakefield, 2003). The logic behind the usage of cut scores implies that an individual who fails the exam by one question is not fit to teach. Discussions of a cut score for teacher certification began in 1969 when South Carolina adopted new regulations that required applicants to achieve a composite score of 975 on the NTE for professional certification (McDaniel, 1977). At that point, many minority teachers had not achieved the required score. In 1975, the National Education Association (NEA), the South Carolina Education Association (SCEA), and nine Black teachers joined the U.S. Department of Justice in a class action suit against South Carolina and all of the state's school districts. The plaintiffs charged that the use of the NTE discriminated against Blacks and therefore violated the Equal Protection Clause of the Fourteenth Amendment and Title VII of the Civil Rights Act of 1964 (McDaniel, 1977). A three judge federal district court panel handed down a ruling in *U.S. v. South Carolina* (1977) upholding the authority of South Carolina to employ the National Teacher Examination (NTE) in certifying and determining pay scales for public school teachers.

While states differ in how much emphasis they place on testing teachers, they tend to use a uniform approach to determine the cut score that candidates must achieve to

become a teacher. In 1975, South Carolina collaborated with ETS to conduct a validation study to determine the use of validated NTE scores for both initial certification and salary purposes (McDaniel, 1977). Across states, after conducting standard-setting studies and state adoption procedures, there shows to be a wide variance in cut scores for most Praxis tests (Hill et al., 2012; U.S Department of Education, 2010). Based on an analysis of pass rates on Praxis I and Praxis II used in 28 states, there were very large score gaps between African-America and White teacher candidates on selected Praxis I and Praxis II tests (Nettles et al., 2011). In addition, Latham et al. (1999) researched if increasing the passing (cut) scores on Praxis I and II would alter the face of the teaching profession. They came to three notable conclusions: raising barriers to entry in the profession would disproportionately limit the number of minority candidates who become teachers, it would eliminate more effective than ineffective teachers, and there were no improvements to teacher quality once the cut scores were raised (Latham et al., 1999). On both the Praxis I and Praxis II, teachers who failed the licensure exam were likely to be minorities. Given this reality, researchers and practitioners must adopt solution-oriented stances to empower Black teacher candidates to pass licensure exams in route to becoming licensed teachers (Petchauer, 2012). This research study aimed to provide interventions to prospective teacher candidates facing challenges in obtaining the minimum cut score on the Praxis II Content exam.

### ***Empirical Research Studies***

Research studies about licensure exams have been conducted over the past few years focusing on a variety of issues. Those varied topics have included the impacts of

remedial interventions (Mild, 2014; Petchauer, 2018), the disproportionate passage rates of minority test takers (Angrist & Guryan, 2004; Gitomer et al., 2011), trends in exam scores (U.S. Department of Education, 2010), and the experiences of test-takers (Albers, 2002). Because licensure exams create arbitrary measurements and obstacles for teacher candidates, synthesizing prior research was imperative to finding solutions. The purpose, research design, and findings of each of these studies provided guidance and insight in conducting this research.

Mild (2014) designed a study in Pennsylvania to address the performance of teacher candidates because annual data showed they were unsuccessful on the Pre-Professional Academic Performance Assessment (PAPA) exam. The PAPA, like the Praxis I Core, assesses reading, writing, and math content proficiency and was used as an entrance requirement for teacher certification programs. Mild (2014) stated the problem is “the college’s education department has found that some of its pre-service teachers were not sufficiently prepared to take their teaching exams” (p. 5). The researcher chose a quasi-experimental study using the pretest-posttest with control group study design in order to determine if the intervention introduced to the treatment group was effective. The researcher identified a gap within the system due to the college not having processes in place to assist teacher candidates with test preparation before and after multiple unsuccessful attempts.

The PAPA exam, similar to the Praxis exams, stipulates that failure on any one section of the exam will result in denial of entry to the education program, and

subsequently denial of official certification for prospective teacher candidates. While able to consistently retake PAPA and Praxis exams, teacher candidates would not receive certification until all exam requirements are met. The same holds true for prospective teacher candidates in South Carolina. Further analysis showed candidates met or exceeded other requirements; however, did not have the prerequisite skills needed to pass the exam (Mild, 2014). This study was significant because it addressed an issue of study participants lacking sufficient content knowledge or test-taking skills. It also highlighted the lack of available support for teacher candidates when engaging with licensure exams.

Gitomer et al. (2011) found consistent evidence that basic skills tests were more than an unnecessary obstacle for otherwise qualified and committed individuals. This echoed Angrist & Guryan's (2004) belief that there was no evidence to suggest testing hurdles raise the quality of new and inexperienced teachers. They further determined that the achievement gap between White and African-American test takers could largely be explained by deficient academic preparation associated with P-12 schooling. Additionally, Black and Hispanic applicants were less likely to pass the Praxis II and perhaps other teacher tests as well (Angrist & Guryan, 2004). Ultimately they concluded, for candidates that do not pass licensure exams would be unlikely to pass, even after taking the test multiple times (Gitomer et al., 2011). These findings decry the need for an intervention to ensure prospective teacher candidates undergoing licensure exams have the necessary tools to be successful.



According to the U.S. Department of Education (2010), the Educational Testing Service was given permission from the states to conduct an analysis of Praxis II exam testing data. Conditionally, the data analyses could only involve the aggregation of test scores from multiple states and not identify the names of individual states. Gitomer & Qi (2010), researchers in collaboration with ETS, conducted the study of licensure candidates who took one or more of the eleven selected Praxis exams to include: English Language, Literature, and Composition: Content Knowledge (0041) and English Language, Literature, and Composition: Pedagogy (0043). The purpose of the study was to identify trends in Praxis scores on a select number of tests across states. This study was significant because Praxis scores provide the most complete available picture of the population of those entering teaching (USDE, 2010). From 1994-2006, seven states raised the passing scores for the English Language, Literature, and Composition: Content Knowledge (0041) (U.S. Department of Education, 2010). The comprehensive analysis also confirmed that White candidates score higher than African-American candidates on the English Language, Literature, and Composition: Content Knowledge exam (U.S. Department of Education, 2010). The relevance of this study confirms what has been reported in a multitude of other studies since the inception of standardized tests: minority students consistently score lower than their White peers. The U.S. Department of Education's study provided a component focused specifically on the Praxis II Content exam in English. Likewise, this research aimed to provide interventions for participants facing Praxis II Content exam obstacles in English.

Because prospective teacher candidates faced Praxis II Content exam barriers, it was necessary to synthesize prior research that utilized and analyzed their experiences. Albers (2002) conducted a study that included interviews with four teachers regarding their experiences with the Praxis II English Language, Literature and Composition: Content Knowledge exam. The exam is mandated for licensure as a beginning teacher of English in a public secondary school. The two-hour timed test contained 120 multiple-choice questions, including approximately 66 reading and texts questions, 18 language and linguistics questions, and 36 composition and rhetoric questions. While this study was conducted almost twenty years ago, it highlighted the authentic feelings of participants when engaging with licensure exams. The study found these tests were inherently discriminatory and biased, and did not focus on what teaching entails: skills, attitudes, and understandings (Albers, 2002). However, accusations of testing bias are difficult to substantiate empirically, and the very idea of bias can be subject to different meanings (Petchauer, 2015). Developers and proponents of teacher licensure exams will purport that licensure exams are constructed and scored with the highest levels of integrity and ethical procedures. However, the voices of test-takers within Petchauer's (2015) study signified the bias they felt when engaging with the test. The lack of success coupled with perceived test bias, may lead to prospective teacher candidates choosing other occupations. This choice could be an underlying cause of teacher shortages in South Carolina's public schools.

## **Teacher Shortages**

*A Nation At Risk* (1983) was a commissioned report by the United States Secretary of Education T. H. Bell. The committee's top priority was to examine the quality of education in the United States and report their findings within 18 months. In many ways, the report refocused the nation's attention on education, but painted a picture of America's education system as dysfunctional (Taylor, 2013). With regards to the teaching profession, the committee determined there were not enough of the academically able students being attracted to teaching, teacher preparation programs needed substantial improvement, and that a serious shortage of teachers in key fields existed (*A Nation At Risk*, 1983). Their conclusion still holds true entering the second decade of the 21st century. Teacher shortages pose a direct threat to the day-to-day operations of schools. There continues to be a shortage of teachers in specific content areas and geographic locations in South Carolina public schools.

A great deal of alarm is raised about the nation's capacity to provide quality educators for its students at the beginning and throughout each school year (Sutcher et al., 2016; Taylor et al., 2017). Teacher shortages have recurred in the United States over many decades. Teacher shortages occur in labor markets when the demand for teachers exceeds the supply of teachers and employers are unable to fill the desired number of positions (Castro, Quinn, Fuller, & Barnes, 2018). In some areas of the United States, there are just not enough certified teachers applying for teaching jobs. The nationwide shortages of teachers in the high-need disciplines of math, science, and special education, coupled with localized teacher attrition and universal teacher retirements, exacerbate the

staffing challenges of some geographic regions more than others (Ludlow, 2011; Schafft, 2016). The severity of the shortage differs by the particular dynamics of state and local teacher labor markets with some regions and states experiencing more severe shortages than others (Castro et al., 2018).

### *Causes of Shortages*

Each school year typically spurs reporting on the shortage of teachers in national and local publications (Cowan, Goldhaber, Hayes, & Theobald, 2015). A shortage is defined in terms of supply and demand theory. With relation to the education profession, a shortage exists when there is an inability to fill teacher vacancies with enough qualified individuals. Due to economic growth, retirements, and decreases in Education majors over the past few years, recent studies suggest that there is a pending large-scale teacher shortage nationally (Ingersoll, 2001; Malatras, Gais, & Wagner, 2017; Petchauer, 2012; Sutchter et al., 2016). Economic and social growth is evident with the increase of student enrollments in public schools. Baby-boomers are now retiring from the education profession after 20-30 years of employment. The pipeline of teacher applicants is also stagnate, judging by the sharp decline in the number of U.S. college students enrolling in teacher certification programs from 684,000 in 2011 to 419,000 in 2015 (Miles & Katz, 2018). As recent as the 2007-2008 school years in the midst of the Great Recession, South Carolina public school districts were experiencing budget cuts, layoffs, and reductions-in-force of teachers. However with increasing student enrollments now, more teachers are needed.

According to the National Center for Education Statistics (NCES), the number public elementary, middle, and high schools in America for the 2019-2020 school year is approximately 50.8 million (2019). Student enrollments in public schools are also increasing in the midst of school districts attempting to lower class sizes. Projections show a growth of over 3 million students in the next decade (Berry & Shields, 2017). However, fewer individuals are entering the teaching profession causing a projected imbalance in the student to teacher ratio. Due to different shifts in population across states, some states have a constant surplus of teachers (Gitomer & Qi, 2010). Unfortunately, South Carolina is not one of the states with a constant surplus of candidates in teacher preparation programs, content, or geographic areas.

At the beginning of each school year, the Center for Educator Recruitment, Retention, and Advancement (CERRA) administers the South Carolina *Annual Educator Supply & Demand Survey* to all 82 public school districts in the state. The purpose of this survey is to collect data on rates of students graduating from teacher preparation programs, certified teachers entering and leaving the profession, needs of geographical regions, and specific content area needs in public schools. As a result, South Carolina can be seen as proactive in collecting the CERRA reported data to address the problem of teacher shortages. The annually reported shortages public school districts face, clearly show the dire circumstances. Based on the analysis of available quantitative agency data, South Carolina has faced obstacles staffing public schools due to high levels of teacher shortages. These shortages are in critical content and geographic areas across the state.

As a result, there are a plethora of vacancies in high-need geographical locations and core content areas.

### ***Content Areas & Geographic Locations***

Like many challenges in public education, the pain of teacher shortages is not distributed equitably. The communities that suffer the most from teacher shortages are often low-income and under-resourced (McVey & Trinidad, 2019; Miles & Katz, 2018). With the increasing enrollments of students in South Carolina's public schools and the lack of teachers produced by teacher preparation programs, local school districts are left with shortages. Yet, these shortages are in specific content areas and geographic locations. In South Carolina, vacant teaching positions are mostly found in content areas such as Business, Special Education, Early Childhood, Math, and English/Language Arts (CERRA, 2019). Areas such as Social Studies and Industrial Technology were removed from the list due to an adequate available supply. In 2019, the *Annual Supply & Demand Report* concluded geographic areas such as the Pee Dee, Midlands, and the Low Country regions as having the highest number of teacher vacancies in the state. This pervasive problem of teacher shortages is in dire need of a comprehensive solution.

The shortage of teachers is of chronic concern, differs greatly based on geographic region and content area, and unfortunately is more prevalent in poor school districts (Ludlow, 2011). Specifically in South Carolina, the number of students who completed a teacher preparation program declined by 32% over the past four years, and approximately 7,300 teachers left the classroom (CERRA, 2019). Fewer new teachers entering the field, in addition with veteran teachers departing the field through

occupational shifts or retirements is a recipe for chronic shortages (Dinkins & Thomas, 2016). Due to the variety of struggles rural areas endure, these communities can account for higher rates of teacher vacancies. South Carolina's Pee Dee region, for example, accounted for nearly 30% of all teacher vacancies reported at the beginning of the 2018-19 school year, but makes up only 16% of the state's total number of teaching positions (CERRA, 2019). Because of these factors in addition to urban areas' lower socioeconomic levels, rural communities also face an obstacle of attracting and retaining highly qualified educators to their isolated areas for core content.

Teacher shortages pose a major challenge for legislators, district leaders, communities and students on a local level as well. The traditional and alternative routes to teacher certification cannot and are not providing enough teachers for the increasing student populations (Ludlow, 2011). The time is now for policymakers, teacher preparation colleges, and alternative certification programs to create and implement a strategic plan. The realities associated with filling teacher vacancies in urban and rural schools as well as high need content areas make the problem of passing licensure exams and diversifying the profession more difficult to solve. Therefore, an examination of how policymakers respond to teacher shortages was needed.

### ***Responses to Shortages***

With authority over teacher licensure, states have been able to establish policies and regulations governing eligibility to teach in public education (Ludlow, 2011; Petchauer, 2012). In response to years of shortages, South Carolina policymakers have

attempted to fill teacher vacancies through a myriad of programs and initiatives in public schools for over 30 years. As a result, state-level actions to address teacher shortages have risen to the forefront of teacher staffing discourse (McHenry-Sorber & Campbell, 2019). Due to severe teacher shortages, school district administrators have sought teachers via international and alternative certification programs. State regulated teacher preparation programs have been essential in filling the need for teachers. South Carolina has created and sanctioned multiple pathways into the profession. According to CERRA (2019), 8.5% of all new hires for the 2018-19 school years were participating in one of the several alternative certification pathways offered in South Carolina. Through policies and programs implemented as early as middle school, South Carolina policymakers have made attempts to fill the dwindling supply of teachers.

The dominant policy response to school staffing problems has been to attempt to increase the supply of available teachers through a wide range of recruitment initiatives (Ingersoll, 2001). The state of South Carolina introduced the Minority Access to Teacher Education (MATE) program through collaborations between Benedict College and CERRA. High school and college students received full tuition and a summer residency in exchange for teaching in a rural community or critical subject area for a minimum of five years (Triplett, 1990). The *Call Me Mister Program* was developed in 2000 at Clemson University to attract minority male candidates to the teaching profession. It works to increase the pool of Black male teachers through a comprehensive system of support (Carver-Thomas, 2018). The program is also active in several other colleges throughout the South. South Carolina Department of Education's (SCDE) Committee on



Educator Retention and Recruitment recommended additional funds be provided to the program due to the incredible retention rate of African American males in SC classrooms (SCDE, 2017). In addition, the *Teacher Cadet* program encourages students who possess a high level of academic achievement to consider teaching as a career, is a state-funded project, and sponsored by CERRA at Winthrop University. High school students are provided with college credit to explore a course in the teaching profession (Bartels, 2005; Berry & Shields, 2017). The 2020 *Educator Supply & Demand Report* by the Center for Educator Recruitment, Retention, and Advancement (CERRA), found that 699 teaching positions were vacant at the beginning of the 2020-21 school years. In response, the SC State Superintendent of Education provided a myriad of proposals. Most notable, with regards to this research, was to support and increase awareness of successful grow-your-own initiatives such as *Call Me MiSTER*, *ProTeam*, and *Teacher Cadets* programs (WCBD News, 2020). These are several examples of South Carolina responses to filling the educator pipeline; however, more needs to be done to address the growing teacher shortages in public schools.

State-level responses to the teacher shortage are essential, but as local news headlines demonstrate, the teacher shortage is manifest most acutely at the district level, requiring local action (McHenry-Sorber & Campbell, 2019). At present, there is a nationwide increase in Grow-Your-Own (GYO) programs to improve the teacher pipeline. They serve as a collaborative method of recruiting, training, and employing teachers which builds local and community capacity (Castro et al., 2018). Alternative certification programs are another method of filling the teacher educator pipeline.

Alternative routes enable teachers to begin teaching before completing all the requirements for certification, and oftentimes require less education coursework than traditional teacher preparation routes in the same states (IES, 2013). Attention to GYO initiatives have been part of general recommendations to address teacher shortages and increase the racial diversity of teachers (Gist, Bianco, & Lynn, 2019; McHenry-Sorber & Campbell, 2019). Some alternative certification programs are sponsored by school districts seeking to address their particular staffing needs (IES, 2013). South Carolina's school district leaders have gone a step further in recent years by sanctioning additional programs such as the Program of Alternative Certification for Educators (PACE), Teach Charleston, Greenville's GATE, Teachers of Tomorrow (TOT), and Project Create are available to prospective educators.

Typically, GYO programs include classified employees such as teacher assistants, coaches, social service workers, and paraprofessionals. The participants tend to have deep roots in their communities and schools, giving them strong connections to the students and families they serve (Morrison & Lightner, 2017). They already have deep ties with their communities and some classroom experience, but oftentimes lack specialized knowledge and licenses. The design of most GYO programs include common structures such as offering small cohorts, academic, social, and test preparation workshops (Gist et al., 2019). Targeting these prospective candidates into alternative certification programs can help to alleviate shortages at the local level. The use of these existing programs can serve as a resource to provide rigorous courses of study and a pathway to certification for potential teacher candidates (Morrison & Lightner, 2017). These initiatives and programs

have shown degrees of success and provided South Carolina's public school districts a temporary solution to a long-term problem. South Carolina must strategically identify root causes, systematically develop strategies, and implement a plan of action to improve the teacher pipeline.

## **Chapter 2 Summary**

Three major issues are threatening South Carolina's educational teacher pipeline - the lack of minority teachers, licensure exam passage rates, and teacher shortages. The historical background detailed the unintended consequences of the *Brown v. Board of Education* (1954) Supreme Court decision, accountability measures, K-12 and Post-secondary education, teacher licensure exams, related empirical research studies, and the impact of and responses to teacher shortages. Teacher shortages are attributed to potential candidates being unable to pass licensure exams, and research has shown that licensure exams negatively impact minority teachers (Petchauer, 2012; Wakefield, 2003). The lack of diversity caused by licensure exam failure rates has led many states to experience teacher shortages as well. Efforts and strategies to improve pass rates on certification exams date back to the early 1980s. Large numbers of Black education graduates were failing to make passing scores on standardized tests (Cooper, 1986). From that point and currently, the number of minority teacher education graduates being certified to teach continues to decrease. While this decrease can be attributed to greater opportunities and salaries in other professions, consideration should be given to the barriers that teacher licensure exams pose.

In reviewing the literature, emerging and related concepts included the shortage and lack of diversity within the profession, their academic experiences in K-12 and Post-Secondary institutions, as well as lower passage rates on standardized tests and licensure exams. The lack of success and/or support in educational settings experienced by some prospective teacher candidates, have deterred them from entering the teaching profession. Standardized tests throughout grade school and those required for post-secondary matriculation may not have reflected their true academic ability. Although remediation and interventions may be provided at the post-secondary level, little research exists indicating which ones are the most effective in remediating underprepared teacher education students (Brinkley, 2015).

The application of Improvement Science to implement Plan-Do-Study-Act (PDSA) cycles relies on rapid tests of change to guide the development, revision and continued fine-tuning of new tools, processes, work roles and relationships (Bryk, Gomez, Grunow, & Lemahieu, 2015). This study aimed to identify the barriers prospective teacher candidates face with licensure exams. With the use of Improvement Science, the research also aimed to develop and implement effective strategies to increase exam scores and the supply of prospective teachers. This was in an effort to overcome the barrier of licensure testing and its negative impact on diversifying South Carolina's teacher workforce.

This research targeted prospective teacher candidates engaging in the Praxis II Content exam to provide targeted support and exam interventions. A phenomenological

inquiry into the individual experiences of participants dictated that results would not reflect a representative sampling, nor could generalizations be made about the types of participants involved. Findings of this research were not intended to be generalized to all prospective teacher candidates undergoing Praxis II Content exams. Rather it aimed to give a voice, support, and assistance to prospective teacher candidates finding a licensure exam as the final hurdle to becoming a certified teacher in South Carolina's public schools. This research study aimed to provide interventions with rapid feedback in order to make needed improvements. The goal of this qualitative research study was to yield results that could ultimately strengthen the educator pipeline in South Carolina's public schools. The development and implementation of strategies tested through a rapid, PDSA improvement cycle was imperative to improve the educator pipeline for prospective teacher candidates in South Carolina and their passage rates on licensure exams. Chapter 3 will include a detailed description of the research methodology and design, participants, sources of data, data collection, and data analysis procedures.

## CHAPTER THREE

### METHODS

#### **Introduction**

Within the literature, studies suggest prospective teacher candidates struggle with licensure exams such as the Praxis II Content exam. The inability to achieve minimum cut scores on this exam contributes to teacher shortages in South Carolina's public schools. In order to better understand the disparities of prospective teacher candidates

when engaging with the Praxis II Content exam, a qualitative phenomenological research design was applied to this study. A review of the literature indicated that developing effective preparation programs may be beneficial to students when preparing to take standardized tests (Graham, 2013; Petchauer, 2018; Polzin, 2018). The research aimed to answer the following questions:

*RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

*RQ2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?*

*RQ3: How can improved licensure exam scores impact teacher shortages in South Carolina's public schools?*

Therefore, the purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. The problem of practice has been identified as the inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools. There was a need to provide intervention strategies to improve prospective teacher candidate scores on the Praxis II Content exam. This was in an effort to improve the overall passage rates of study participants, prospective teacher candidates, when retaking the Praxis II Content exam after initially failing to meet the required cut score. The intervention was necessary because there were few resources available to study participants needing targeted, 1:1 support when engaging with Praxis II Content exams. This study aimed to provide both practical and authentic methods for prospective teacher candidates to receive exam interventions. Their success could result in improved

Praxis II Content exam scores, and can contribute to the reduction in teacher shortages in South Carolina's public schools.

Chapter 3 provides an introduction, research design, research methodology, and participant selection. This is followed by an explanation of the sources of data, procedures, validity and reliability, data collection, data analysis, and a phenomenological analysis. It concludes with an overall summary of the chapter.

### **Research Design**

Phenomenological research in educational settings generally embodies lived experience, perception, and feelings of participants about a phenomenon (Yuksel & Yildirim, 2015). The researcher employed a phenomenological approach to the qualitative study focused on the experiences of and interventions provided to prospective teacher candidates undergoing the Praxis II Content teacher licensure exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095). Graham's (2013) study cited that students either were unaware of how to prepare for the exam or did not possess the resources necessary to secure assistance with exam preparation. This assertion was evident during the initial meeting and subsequent interviews between the researcher and participants. Therefore, the intervention workshop sessions were designed to provide specific and targeted 1:1 support to six prospective teacher candidates.

It was necessary to have a clear understanding of the format of each exam. The Praxis website, ETS.org, provided a detailed outline of the format for each exam. An

understanding of the formats of each exam aided the researcher and participants in creating a study plan and targeting specific content areas for support. The weightings of each category was also significant; specifically once participants received their official score reports.

The Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam included 130 selected response choice questions and two constructed response questions. The exam was administered via computer, and participants were given 150 minutes to complete the selected response questions and 30 minutes for the constructed response questions. The Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam contained the following subsections with approximate number of exam questions and percentage of the total exam: Reading with one Constructed Response question (48; 40%); Language Use and Vocabulary (33; 19%); and Writing, Speaking, and Listening with one Constructed Response question (49; 41%).

The Praxis II Content Middle School English Language Arts (5047) exam included 110 selected response choice questions and two constructed response questions. The exam was administered via computer, and participants were given 130 minutes to complete the selected response questions and 30 minutes for the constructed response questions. The Praxis II Middle School English Language Arts (5047) exam contained the following subsections with approximate number of exam questions and percentage of the total exam: Reading with one Constructed Response question (50; 46%); Language



Use and Vocabulary (16; 11%); and Writing, Speaking, and Listening (26; 18%); and English Language Arts Instruction with one Constructed Response question (18; 25%).

The Praxis II Content exam in K-12 Physical Education (5095) included 90 selected response choice questions and two constructed response questions. The exam was administered via computer, and participants were given two hours to complete. The Praxis II Content exam in K-12 Physical Education (5095) contained the following subsections with approximate number of exam questions and percentage of total exam: Content Knowledge and Student Growth and Development (27; 23%); Management, Motivation, and Communication (23; 19%); Planning, Instruction, and Student Assessment (23; 19%); Collaboration, Reflection, and Technology (17; 14%); and Instructional Design with two Constructed Response questions (2; 25%).

Phenomenology was appropriate for this qualitative study because phenomenological researchers are interested in observing, recording, and interpreting the lived experiences of phenomenon by individuals in their everyday world, and therefore are more concerned with first hand descriptions of a phenomenon (Eddles-Hirsch, 2015; Magrini, 2012; Yuksel & Yildirim, 2015). The voices and experiences of study participants were necessary to gain a deeper understanding of their interactions, strengths, and weaknesses when engaging with licensure exams. Human actions are meaningful, and the outcomes of those actions constitute meaningful material which calls for interpretation (Magrini, 2012), therefore, phenomenology was an appropriate research design. This study began with a problem of practice centered on the lack of diversity in the educator pipeline with a potential contributor being teacher licensure exams.

The collection of descriptive data via surveys aided the researcher in assuring a purposive sample of prospective teacher candidates was selected. Semi-structured interviews were then conducted with each participant. The initial interviews reflected their prior experiences with the Praxis II Content exam. Participants were also required to provide an official Praxis II Content exam score report to serve as an indicator of prior exam performance. The predicted success of the participants within the intervention workshops would ideally transfer to their performance when retaking the Praxis II Content exam, and thereby fill a classroom vacancy in a South Carolina public school for the upcoming school year.

### **Research Methodology**

Marshall-Jackson (2017) identified the need for intensive and comprehensive support to address testing issues and to ensure that a larger number of applicants had the tools and skills necessary to successfully meet Praxis score requirements. The research methodology applied within this study included components such as semi-structured interviews, workshop sessions, and the analysis of participants' score reports. This qualitative phenomenological research study's intervention consisted of Praxis II Content exam intervention workshop sessions, offered to prospective teacher candidates, who did not meet the required cut score for their selected Praxis II Content exam, English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095).

Initial meetings began with a review of the consent form. The researcher allotted time at the beginning to answer any participant questions relating to the consent form. Most participants expressed concern about time availability and potential cost. The researcher assured each participant flexible scheduling was available and there were no fees required for their participation. However, participants were informed of the time commitment and the need for independent study as well. If the participant agreed and signed the consent form, semi-structured interviews were conducted or scheduled. The semi-structured interviews provided the researcher with opportunities to explore the experiences and needs of each participant when engaging with the Praxis II Content exam.

In addition to survey and interview data, public and private documents were collected. The public documents included the online Praxis II Content exam Study Plan and Companion in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), and K-12 Physical Education (5095), and the *Test at a Glance* provided by the ETS website. Additional score reports allow for comparisons to be made on a case-by-case basis with regard to test sections (Moser, 2012). The private documents included official Praxis II Score Reports. This was requested of each potential study participant to aid in the accuracy of reporting actual scores, and assisted in understanding the content and format of the exam.

The workshops consisted of PowerPoint presentations, practice questions, test-taking strategies, and study skills. The workshops for English provided strategies and

resources for each section of the English (Secondary) Language Arts: Content and Analysis (5039), and Middle School English Language Arts (5047) exams (Reading; Language Use and Vocabulary; Writing, Speaking, and Listening; and Constructed Response). The workshops for Physical Education provided strategies and resources for each section of the exam K-12 Physical Education (5095) exam (Content Knowledge and Student Growth and Development; Management, Motivation, and Communication; Planning, Instruction, and Student Assessment; Collaboration, Reflection, and Technology; Instructional Design; and Constructed Response).

Material resources include documents explaining the content and format of the tests; study materials that contain sample questions, answers, and explanations, and instructional materials that dissect content into basic parts (Petchauer, 2012). Additional material resources were equally beneficial to the researcher and study participants en route to improving teacher licensure exam scores. The materials and resources were designed to give participants information about the actual exam, including the types of questions they would encounter, eliminating incorrect responses, and time constraints, etc.

## **Participants**

A phenomenological study usually involves identifying and locating participants who have experienced or are experiencing the phenomenon that is being explored (Rudestam & Newton, 2014). This study was conducted in a tri-county region of South Carolina. The study included six prospective teacher candidates, from three different

school districts, needing to achieve the minimum set score requirement on the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095). Participants were recruited through prior work-related interactions, posted flyers (Appendix B), social media, and referrals from others. Following the phenomenological tradition, participants were selected based on their experience with the phenomenon being researched, the Praxis II English Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095). Participants were recruited based on willingness to participate in the research study to include interviews, intervention workshops, and taking the actual Praxis II Content exam. Participants were employed in the same and two other neighboring school districts as the researcher.

Qualitative research promotes the use of investigations into the experiences of those encountering obstacles. There is not a fixed set of methods to conduct qualitative research, but purposive sampling with information rich cases is highly suggested (Kafle, 2011). Purposeful sampling, within a phenomenological research study, is a strategy used in qualitative research to specifically choose an experienced participant group that can best inform the researcher about the research problem under examination (Creswell & Poth, 2018; Eddles-Hirsh, 2015). Therefore, participants should have meaningful and significant experiences when undergoing Praxis exams. This was a small purposive sample, and not intended to be representative of an entire population. However, this was a potential area of strength of the study by creating a participant pool representative of

the targeted population and able to provide authentic perspectives with respect to the phenomenon, undergoing the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095).

Approval was granted by the International Review Board (Appendix A) and the employing school district of the researcher in November 2020 to conduct this study. This study took place over a 10 month time frame (November 2020 – September 2021). There was a variation, by candidate and specific exam, between the initial and subsequent attempts on the Praxis II Content exam, as well as the number of actual workshop sessions conducted with each participant.

Culturally sensitive approaches use qualitative methods such as interviews and observations to investigate and capture contextualized pictures of the educational factors that affect the everyday existence of African-Americans (Tillman, 2002). Before semi-structured interviews were conducted, all participants were required to read and sign the consent form. The consent form was sent via email prior to the initial meeting. It provided specific details and the procedures required for prospective teacher candidates if they voluntarily participated in the research study. Informed consent was read and reviewed again with each participant at the beginning of the initial interview. This was to ensure participants were aware of the study requirements and could withdraw from the study at any time. For the confidentiality of study participants, each was provided with a pseudonym. For the confidentiality of study data, audio recorded intervention workshop

sessions and official score reports were kept in a secured hard drive accessible only by the researcher.

### **Sources of Data**

Longwell-Grice et al. (2013) conducted a study to examine the effect tutoring had on Praxis I exam scores using test scores and descriptive surveys as sources of data. The sources of data for this phenomenological study was collected from six prospective teacher candidates in South Carolina using a descriptive survey (Appendix D), semi-structured interviews (Appendix E), official Praxis II Content exam score reports, workshop sessions, and CERRA's 2020 and 2019 *Annual Supply & Demand Reports*.

The collection of survey data provided background information about participants such as demographics, college major, and teacher preparation pathway. Semi-structured interviews provided the researcher with opportunities to explore the experiences of each participant when engaging with the Praxis II Content exam. Empirical research studies signified the need to develop effective data sources and strategies to support prospective teacher candidates that struggle with the Praxis II Content exam. Participants were required to provide official Praxis II Content exam score reports that served as an initial baseline of prior exam performance. Initial score report analyses, in conjunction with workshop sessions, yielded vital data in determining the type of interventions that could be implemented to increase participants' Praxis II Content exam scores. The collection of past and current CERRA *Annual Supply & Demand Reports* put into perspective the need for interventions to improve licensure exam scores that could impact teacher shortages in

South Carolina's public schools. The sources of data aided the researcher in responding to the research questions as outlined below:

*RQ 1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

Descriptive survey data provided general demographic information such as gender, age range, race, education level, and the number of times the participant had taken the exam. Semi-structured interviews allowed the researcher and participants to have discussions about their prior test experiences and effective strategies to improve their Praxis II Content exam score. Official Praxis II Content exam score report(s) provided an opportunity for the researcher and participants to work collaboratively to analyze scores and performance in specific exam categories. Then, a study plan and schedule was created to facilitate future intervention workshop sessions. Qualitative data was continuously collected during virtual, audio-recorded workshop sessions. Participants were encouraged to express questions, feelings, and feedback during each session. Probing and follow up questions were asked by the researcher to glean a deeper understanding of participants' experiences, as well as determine additional strategies to facilitate continued learning toward the improvement of their Praxis II Content exam scores.

*RQ 2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?*

Vygotsky's Socio-Cultural Constructivism requires social learning and a more knowledgeable other to support adult learning. Through the use of Improvement Science



and PDSA cycles, the intervention workshop sessions allowed the researcher and participants a specified time to review and analyze English and Physical Education content, instructional strategies, test questions, time management, and test-taking skills. Discussions with participants aided in developing a study plan to target specific areas. Follow-up interviews provided necessary feedback for future adjustments. In adherence to pandemic guidelines, all intervention workshop sessions were conducted virtually via Zoom. Semi-structured interviews and intervention workshops were audio-recorded and subsequently transcribed using Dedoose software.

*RQ 3: How can improved licensure exam scores impact teacher vacancies and shortages in South Carolina's public schools?*

The analysis of CERRA's 2019 and 2020 *Annual Supply & Demand Reports* provided quantitative data about teacher shortages and attrition in South Carolina's public schools. This data was a key element to understanding the critical situation of the teacher pipeline in South Carolina's public schools. This study used a small purposive sample of six prospective teacher candidates in an effort to improve their Praxis II Content exam scores. If study participants were able to achieve the set minimum score for their required exam, the participant would be one step closer to fulfilling the necessary requirements to becoming a certified teacher in South Carolina's public school system.

### **Data Collection**

In hermeneutic phenomenological research for data generation, multiple tools can be utilized that include interview, observation, and protocols (Kafle, 2011; Yuksel & Yildirim, 2015). The sources of data collection for this study consisted of descriptive

survey data, semi-structured interviews, official Praxis II Content exam score reports, virtual intervention workshop sessions, and CERRA's *Annual Supply & Demand Reports* for 2020 and 2019. Data can be collected from different kinds of informants for the purpose of triangulation (Yuksel & Yildirim, 2015). Descriptive survey data provided general demographic and background data such as gender, race, age range, college/major, etc. The semi-structured interviews provided participant perspectives with regards to their previous exam interactions. The researcher and participants were able to build a rapport, analyze score report(s), and create a study plan for subsequent intervention workshop sessions. The analysis of the Praxis score report(s) provided baseline data. The official Praxis II Content exam score report(s) served as initial benchmarks of participant areas of strength and needs for improvement. Most participant perspectives of their performance aligned with the scores reflected on the official Praxis II Content exam score report(s).

The specific exam English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095) determined by participant need and choice, limited the content of focus for the Plan-Do-Study-Act (PDSA) Cycle to be conducted. The workshop sessions served as a strategic intervention for study participants needing to improve their Praxis II Content exam score. Through continuous feedback from study participants and the collection of data, adjustments were made to address deficiencies, thereby improving the process. Interviews and consistent interactions with participants provided an opportunity to discuss past performance, study habits, and gain authentic points-of-view. Interviews were audio recorded and transcribed.

The collection of score report data, before and after the intervention workshop sessions, gleaned both quantitative and qualitative data relevant to which skills needed additional support prior to participants retaking the exam. Interviews generally involve open-ended questions that are few in number and intended to elicit views and opinions from the participants (Creswell & Creswell, 2018). The interviews and surveys of prospective teacher candidates were a component in a larger effort to understand how to support them when struggling to pass licensure exams, specifically the Praxis II Content exam. Their insight and eventual success would be beneficial to South Carolina's educational stakeholders.

### **Procedures**

Preparation for licensure exams usually centers on skills development and knowledge acquisition (Petchauer, 2015). Research has shown that prospective teacher candidates struggle with various forms of standardized testing. The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. Specifically, the research aimed to provide targeted intervention strategies to improve prospective teacher candidate scores on three Praxis II Content exams in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095). The number of workshops attended by each participant varied. However, all participants attended at least four intervention workshops and a review session before retaking their Praxis II Content exam. The descriptive

procedures used to conduct this qualitative phenomenological research study is outlined below.

### ***Intervention Workshop Session 1***

After receiving the participant's consent form, due to the pandemic, an initial meeting and subsequent intervention workshops were scheduled via Zoom. During the initial meeting, the participants provided descriptive data via a survey and semi-structured interviews. The data included descriptive demographic information such as age range, gender, college major, teaching pathway (traditional vs. alternative certification) and how many times the participant had taken their specific Praxis II Content Exam. Semi-structured interviews were also conducted and provided the researcher with opportunities to explore the experiences of each participant when engaging with the Praxis II Content exam. The first session typically lasted for approximately 90 minutes in order to obtain as much data and information as possible.

### ***Intervention Workshop Session 2***

Because the Praxis covers a broad array of categories, pre-tests should be comprehensive enough to be diagnostic, providing an outline of specific strengths and weaknesses (Longwell-Grice et al., 2013). Following the initial meeting, study participants were required to provide a copy of their most recent official Praxis II Content exam score report(s). Study participants and the researcher collaborated via an analysis of their previous official Praxis II Content exam score report(s) to determine needed areas of intervention concentration. Each category was reviewed based on the total number of

correct questions. Discussions centered on if the participant perceived the specific category to be an area of strength or weakness in comparison to the score received. This session typically lasted approximately 60-90 minutes depending on the number of score reports analyzed.

### ***Intervention Workshop Session 3***

The purpose of this session was to provide participants the ability to create study plan tailored specifically to their exam needs. Participants were able to determine which exam categories to prioritize. Then, participants expressed their preferred learning mode (sample videos, question and answer, direct instruction, etc). Participants also discussed prior study materials and methods. In addition, the researcher encouraged participants to register online to retake the Praxis II Content exam. This session typically lasted for approximately 60 minutes.

### ***Intervention Workshop Session 4***

This session allowed the researcher and participant the opportunity to focus specifically on the exam. Discussions centered on exam format, sample questions, and processing answer choices. The researcher and participants reviewed the exam format at posted on the ETS.org website. This was significant in providing targeted support based on prior performance. For most of the participants, this was their final session prior to retaking the exam. This session typically lasted for approximately 90 minutes in order to provide a variety of practice exam questions.

### ***Intervention Workshop Sessions 5 & 6***

These two sessions allowed the researcher and participant to focus on the Constructed Response portion of the exam. The participant chose and provided a writing sample to the researcher based on a topic or prompt remembered from a prior exam. The researcher and participant reviewed the criteria for the Constructed Response component posted on the ETS.org website. The researcher provided feedback to the participant based on content, verbiage, and organization. These sessions typically lasted for approximately 90 minutes in order to provide a thorough analysis of written samples and effective feedback.

### ***Intervention Workshop Review Session***

The review session included reviewing provided materials, new resources, and answering any additional questions with participants. The researcher reviewed sample exam questions. Participants were encouraged to verbalize reasons and rationalizations for each answer chosen. The researcher offered encouragement and reassurance to all participants at the end of the review session. This session typically lasted for approximately 120 minutes in order to provide a thorough review of content prior to participants retaking the exam.

It was important to note that only one of the six study participants chose an exam focused on physical education. The participant followed the intervention workshop session schedule and was fully engaged. The intervention workshops were adjusted to focus specifically on test-taking skills and classroom instructional strategies. Although

multiple discussions occurred focusing on content material and test questions, the participant also collaborated with a former physical education teacher for content support.

The number of intervention workshops attended by each participant varied depending on their specific need and their projected date to retake the Praxis II Content exam. Working collaboratively with the researcher, the goals were for participants to enhance their testing strategies, receive content support, and improve their overall Praxis II Content exam score. An audio recorded follow-up interview, with transcription using Dedoose software, was conducted to allow participants to discuss their experiences retaking the Praxis II Content Exam after the intervention. Participants were encouraged to share feedback, strengths, as well as weaknesses with the intervention.

Table 3.1 *Praxis II Content Exam Intervention Workshop Sessions* presents a visual of the intervention workshop sessions provided to participants. There were three specific Praxis II Content exams reviewed within this research study: English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), and K-12 Physical Education (5095). The sources of data collected, the content discussed, the intended outcome of each session, and the participants' responsibilities and tasks required after each intervention workshop session was included.

**Table 3.1 Praxis II Content Exam Intervention Workshop Sessions**

<b>Intervention Workshop</b>	<b>Source of Data</b>	<b>Content</b>	<b>Outcome</b>	<b>Participant Responsibility</b>
<b>#1</b>	Survey & Semi-Structured Interview	Informed Consent Participant Data	Demographic background data collection	Provide official exam score report
<b>#2</b>	Official Praxis II score report	Score report analysis	Target specific exam areas	Review resources
<b>#3</b>	Recorded Workshop	Literary terms, authors, time periods, language use and vocabulary	Create a study plan	Register for Praxis II Content exam
<b>#4</b>	Recorded Workshop	Writing, speaking, & listening; Practice exam questions	Practice questions to apply content knowledge	Review provided resources
<b>#5 &amp; #6</b>	Recorded Workshop	Constructed Response questions	Schedule 2 hour review session	Provide writing sample
<b>Review</b>	Recorded Workshop	Review test-taking & study skills; Practice exam questions; Teaching Strategies	Schedule after exam follow-up interview	Independent study Take official Praxis II Content exam – (5039, 5047, or 5095)



## **Improvement Science**

The Plan-Do-Study-Act (PDSA) Cycle is a practical method to rapidly test changes within complex systems. Each cycle is essentially a mini-experiment to make predictions, implement a change, observe and learn from outcomes, and if necessary repeat the process for additional improvements. Bryk et al. (2015) declared an advantage of the PDSA cycle as a flexible tool to guide learning at different stages. This qualitative phenomenological study applied the steps in the PDSA Cycle to improve the Praxis II Content exam scores of six prospective teacher candidates.

*Plan.* In step one, *Plan*, the change must be defined, predictions made, and a mode to test the change designed. The change was defined as the implementation of remedial workshops for prospective teacher candidates. It was predicted that participants would be able to improve their score on the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), or K-12 Physical Education (5095). The mode to test the change would be an analysis and comparison of official Praxis II Content exam score reports before and after the implementation of intervention workshops. While the overall composite score was key in determining passage or failure, the individual category scores in Reading; Language Use and Vocabulary; Writing, Speaking, and Listening; and Constructed Response were also examined to determine growth. Descriptive survey data and semi-structured interviews served as steps to glean participant data and an initial

understanding of their experiences with the phenomenon under study, the Praxis II Content exam.

***Do.*** In step two, *Do*, the change must be implemented and data collected. The intervention workshops were developed, conducted, and data was collected via semi-structured interviews and audio-recorded workshop sessions. The intervention workshops provided a set time and structured (virtual) environment for the researcher and participant to discuss their points-of-view, review content, and practice exam questions. The participants were advised to continue to review provided materials and resources between sessions. They were also encouraged to bring questions and additional personal materials they had used in the past.

***Study.*** In step three, *Study*, the analysis of data and a reflection on earlier predictions is required. Member checks were completed with participants and feedback collected after the intervention workshop sessions. Data analysis was conducted with the use of computer software, Dedoose, which allowed an analysis of interviews and transcribed data. The transcribed data was then coded and categorized. This allowed for the emergence of themes. Follow-up interviews were conducted after each participant took their respective exam to gain feedback on the process and impact of the intervention workshop sessions.

***Act.*** The final step, *Act*, focused on decision making about potential adjustments and next steps. CERRA's *Annual Supply & Demand Reports* for 2020 and 2019 were analyzed. The analysis led to the determination that due to the increase in teacher attrition

and reduced teacher preparation program enrollment, research was needed to determine practical solutions to filling South Carolina's teacher pipeline. The participants were also required to provide an official Praxis II Content exam score report after the intervention workshops were completed. The researcher and the participant analyzed the new score reports to determine improvements, or declines, in specific categories; as well as future steps (i.e. exit study due to passing exam; retake exam; etc.).

### **Phenomenological Research**

The data collected and analyzed for this phenomenological study included participants' descriptive survey data, semi-structured interviews, official Praxis II Content exam score reports, audio recorded virtual intervention workshop sessions, and CERRA's 2020 and 2019 *Annual Supply and Demand* Reports. Phenomenological analysis is based on discussions and reflections of direct interactions and experiences of the researched phenomenon. Data analysis is often performed applying the hermeneutic cycle consisting of reading, reflective writing, and interpretation in a rigorous fashion (Kafle, 2011). Descriptive surveys, semi-structured interviews, and intervention workshops were conducted virtually via Zoom and audio-recorded. The recordings were uploaded and transcribed using Dedoose software.

Intentionality is one of the fundamental characteristics of phenomenology therefore reduction is necessary when analyzing data (Bhattacharya, 2017). The software allowed for the qualitative data to be excerpted, analyzed, coded, and categorized. The textual coding of descriptive data and interview transcripts provided opportunities to

reflect on interactions with study participants. Intentionality refers to the relationship between the observer (researcher), the observed (participants), and their interconnectedness (Bhattacharya, 2017). Initial interviews and subsequent discussions with participants during workshop sessions facilitated the development of relationships and trust. Participants stated feeling able to express their experiences and points-of-view without apprehension or fear of consequences or judgment.

### ***Codes and Themes***

Participant responses were gleaned from the descriptive participant surveys, audio-recorded semi-structured interviews, and intervention workshop sessions with regards to:

*RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

There were 10 initial codes that were identified during the analysis of collected participant data. The initial codes *Exam Format* (6), *Alternative Certification* (6), and *English* (4) were identified based on the highest frequency of occurrences. These codes were followed by *No Support*, *Timing*, *Instructional Strategies*, *Literature / Terms*, and *Grammar / Vocabulary* which had three occurrences each. These codes were followed by *Purchased Materials* and *Reading* each occurring twice.

Summarily, *Exam Format* was indicated by all participants, it was significant to note, the initial codes *Timing* and *Purchased Materials* were also grouped together under this theme. Kevin and Eddie stated that they had each purchased some form of study

materials in preparation for the exam. There are a variety of resources and materials available for review and purchase online for nearly all of the Praxis II Content exams. The Praxis website also provided a study plan and companion that outlined potential content and a few practice questions that could be on each exam. Participants also expressed difficulty with the allotted time provided to take the various Praxis II Content exams.

Participant responses based on *English* reflected five of six study participants had some prior knowledge and interaction with the subject. However, these prior relationships had not translated into passing the Praxis II Content exam on their first attempt. In addition, Eddie obtained a MAT in K-12 Physical Education, but was still unable to pass the Praxis II Content exam on multiple attempts. Continued review of collected data yielded responses based on the Theme *Alternative Certification*. It reflected that all study participants were enrolled or attempting to enroll in an alternative certification program. They each expressed varied experiences with regards to the individual support they received from their specific program. Table 4.1 *Praxis II Content Exams Format* outlines the number of questions and allotted amount of time for each exam.

**Table 4.1 Praxis II Content Exams Format**

<b>Exam</b>	<b>Multiple Choice / Time</b>		<b>Constructed Response / Time</b>	
5039 Secondary ELA	130 Questions	2 ½ Hours	2 Questions	30 minutes
5047 Middle ELA	130 Questions	2 Hours	2 Questions	30 minutes
5095 PE	90 Questions	2 Hours	2 Questions	-----

**Ethical Considerations**

Ethical considerations were made to ensure participants were aware of the research study parameters. This was provided in writing via the consent form, orally reviewed during the initial meeting, and an opportunity to ask questions. Participants were aware that their participation in the study was voluntary and could withdraw at any time. For the confidentiality of study participants, each was provided with a pseudonym. The initial participants were employed in the same school district as the researcher. There were no conflicts of interest between the researcher and any of the study participants. Further, the researcher had no supervisory position over any of the individual participants. Subsequent participants emerged from neighboring school districts within South Carolina. For the confidentiality of study data, audio recorded intervention workshop sessions and official score reports were kept in a secured hard drive accessible only by the researcher. Access was provided only to the researcher. Accumulated data will be stored for a minimum of one year, and then destroyed by the researcher.

## **Validity**

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. For this qualitative phenomenological study, validity for the data collection approaches was established through the incorporation of direct feedback from participants after each intervention workshop session and via follow-up interviews after retaking the Praxis II Content exam. External validity is concerned with the extent to which the results can be applied or transferred to other situations (Moser, 2012). The research design and methodology sections established a step-by-step process to the research to allow for future replication. There was a sufficient exploration of participant experiences via semi-structured interviews, audio recorded intervention workshop sessions, and analyses of provided Praxis II Content exam score reports. Subsequent review of CERRA's *Annual Supply and Demand* reports authenticated the need to improve South Carolina's teacher pipeline. These sources of data allowed for triangulation, thus adding to the validity, credibility, and reliability of collected data in this qualitative phenomenological research study.

## **Chapter 3 Summary**

Ideally, the success of the participants will fill vacancies, diversify the profession, and prepare students for a 21<sup>st</sup> century global economy. Research questions, methods, and data analysis procedures that address strategies and interventions to support teacher candidates struggling to meet scoring requirements were outlined. The research questions were generated based on prior interactions, research of scholarly articles, and discussions

with colleagues about issues facing public schools. Prior interactions with teacher candidates that were unable to pass licensure exams brought questions of root and systemic causes.

Phenomenological research follows this process with three primary components: (1) gathering life experiences, (2) analysis of themes, and (3) practical application for improvement (Mangrini, 2012). This study was organized with a focus on prospective teacher candidates, licensure exams, and teacher shortages. Gathering their life experiences with regards to the Praxis II Content exam was necessary in order to be able to support and collaborate with study participants. The analysis of participant responses and emerging themes shed light on the interconnectedness of their struggles to become certified teachers in South Carolina's public schools. The lack of diversity in the teaching profession is potentially caused by the lower passage rates on licensure exams, thereby creating teacher shortages. Through practical application, the system of supporting prospective teacher candidates can lead to a multitude of improvements for the education system.

Chapter 3 introduced this qualitative study using a phenomenological research design that employed a purposive sampling of six prospective teacher candidates. All participants were attempting to improve their prior failing Praxis II Content exam score. The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. In addition, the aim of this chapter was to describe the specific procedures and methods for data collection and management. The sources of data



included descriptive surveys, semi-structured interviews, intervention workshop sessions, and CERRA's *Annual Supply and Demand* reports. The outlined methodology provided specific details in order for future replication to occur. Ethical considerations and validity were also discussed in this chapter. Chapter 4 will provide descriptive and phenomenological findings through an analysis of the collected data, an analysis of emerging themes, and a summary of the results.

## CHAPTER FOUR

### FINDINGS

#### **Introduction**

The purpose of this qualitative phenomenological study was to explore and develop specific Praxis II Content exam interventions for six prospective teacher candidates in South Carolina. The problem of practice has been identified as the inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools. Because this research included adult learners, Knowles' Andragogy Adult Learning Theory and Vygotsky's Socio-Cultural Constructivism principles were respectively applied as a lens to theoretically and conceptually frame the phenomenon of participants being unable to pass a specific Praxis II Content exam. The study aimed to improve participants' scores through intervention workshop sessions. Obtaining the minimum cut score would allow them to meet requirements to become fully certified or

admittance to an alternative certification program to teach in South Carolina's public schools.

With the use of Improvement Science, there is more of a need for variation in the effectiveness of an intervention across contexts in order to highlight and learn from positive deviants (Bryk et al., 2015). The study was conducted in a tri-county region of South Carolina and limited to six participants in order to provide targeted, 1:1 intervention support and test-taking strategies for a specific Praxis II Content exam. This research study implemented a phenomenological research design with a descriptive survey and semi-structured interviews to glean the lived experiences of study participants undergoing the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), and K-12 Physical Education (5095). The study developed virtual intervention workshops to aid in the improvement of participant scores on the Praxis II Content exam. In addition, the research analyzed past and current data from CERRA's *Annual Supply and Demand* reports to determine the impact of teacher shortages in South Carolina's public schools. The improvement of participant scores on the Praxis II Content exam could result in the certification of more teachers, thereby reducing teacher shortages. In light of the stated purpose, problem of practice, and aim of the study in connection with prospective teacher candidates, licensure exams, and teacher shortages, the following research questions guided this phenomenological study:

*RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

*RQ2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?*

*RQ3: How can improved licensure exam scores impact teacher vacancies and shortages in South Carolina's public schools?*

Chapter 4 addresses the findings through an analysis of collected data from study participants, intervention workshops, official Praxis II Content exam score reports, and CERRA's *Annual Supply and Demand* reports. The coding process is explained and emerging themes are also presented. The analysis of collected data aided in responding to each research question. The descriptive findings, phenomenological data analysis, emerging themes, and results are outlined below.

### **Descriptive Findings**

From November 2020 to September 2021, in a tri-county region of South Carolina, the researcher provided remedial intervention workshops and tutorial sessions to prospective teacher candidates for the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039), Middle School English Language Arts (5047), and K-12 Physical Education (5095). This study examined the impact of the remedial intervention workshops to improve study participants' Praxis II Content exam scores on their journeys to becoming a certified teacher in South Carolina's public

schools. The study included six participants: four females (two African-American / two White) and two males (both African-American).

***Participant 1- Cindy***

Cindy was a 24 year old White female, in her 2<sup>nd</sup> year of teaching 7<sup>th</sup> grade English Language Arts in a small, rural school district. She attended K-12 schools and graduated from college in Indiana. Notably, she was the only participant not formally educated, K-12 or Post-Secondary, in South Carolina. Her college major was French, and she was currently enrolled in a national alternative certification program, Teach for America (TFA).

Cindy was recommended to join the study by her former principal. The principal contacted the researcher via email and stated that Cindy had recently failed to achieve the minimum cut score on the Praxis II Content exam and if the researcher could provide support. Once official IRB permission was granted (November 2020), approximately three days later, the researcher directly emailed the prospective participant, with an attachment of the consent form, about potentially joining the study. The researcher and participant met face-to-face (pre-pandemic) at a local coffee shop to review the consent form. The initial meeting was audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. The participant wanted to review the consent form more, and sent an electronically signed copy to the researcher via email

the next day. Within two days of the initial meeting, Cindy also sent a copy of her official Praxis II Content exam score report.

The participant's initial Praxis II Content score was 164, the highest ever achieved, but still 4 points less than the required cut score of 168. Prior to joining the study, she had taken both Praxis II Content exams, Middle School English Language Arts (5047) and English (Secondary) Language Arts: Content and Analysis (5039) once each. Although she taught middle school, she chose to take the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. This was opposed to retaking the Middle School English Language Arts exam (5047), needing a minimum score of 164 in order to meet the requirements for South Carolina's Department of Education and her alternative certification program (TFA). Cindy stated, "*I really want to teach high school English soon, so I might as well try to pass the 5039 now.*" The researcher respected the participant's choice, and began to collaborate and provide support in preparation for her to retake the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Ultimately, Cindy completed a total of four intervention workshop sessions before retaking the exam.

### ***Participant 2- Tanisha***

Tanisha was a 22 year old African-American female, in her 1<sup>st</sup> year of teaching 11<sup>th</sup> grade English in a large, suburban school district in South Carolina. She received her K-12 education in South Carolina's public schools and graduated from a local liberal arts

college. Her college major was Political Science, and she was enrolled in a national alternative certification program, Teach for America (TFA).

Tanisha and the researcher were employed by the same school district. After permission was granted by the research site, the researcher contacted the participant directly, via email, with an attachment of the consent form, about potentially joining the study. The researcher and participant met face-to-face (pre-pandemic) at a local library to review the consent form. The initial meeting was audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Tanisha physically signed the consent form at the end of the initial meeting. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. Tanisha sent her official Praxis II Content exam score report via email later the same evening. However, shortly thereafter, schools and public areas were placed under quarantine. The researcher and participant agreed to continue collaborations. However, intervention workshop sessions would be conducted virtually, via Zoom, in adherence to pandemic restrictions and guidelines.

The participant's initial Praxis II exam (5039) score was 162, but 6 points less than the required cut score of 168. Prior to joining the study, she had taken the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam once. She needed to pass the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam with a minimum score of 168 in order to meet the

requirements for South Carolina's Department of Education and her alternative certification program (TFA). Tanisha stated, *"I'm going to try this same exam one more time because I really wasn't ready the first time."* The researcher respected the participant's choice, and began to collaborate and provide support in preparation for Tanisha to retake the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Ultimately, Tanisha completed a total of four intervention workshop sessions before retaking the exam.

### ***Participant 3- Janelle***

Janelle was a 24 year old African-American female, in her 2<sup>nd</sup> of teaching 8<sup>th</sup> grade English Language Arts in a small, rural school district. She received her K-12 education in South Carolina's public schools and graduated from a local Historically Black College or University (HBCU). Her college major was Professional English, and she was enrolled in a local alternative certification program, Teachers of Tomorrow (TOT).

Janelle was recommended to the researcher by Cindy because they were currently employed by the same rural school district. The researcher initially emailed the participant about their interest and need for the study. Prior to the initial meeting, the researcher emailed the participant the consent form to review. The researcher and participant met virtually via Zoom (mid-pandemic) to review the consent form. The initial meeting and all subsequent meetings were audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Janelle electronically signed the consent form and returned it to the

researcher at the end of the initial meeting. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. The participant sent her official Praxis II Content exam score report via email within three days of the initial meeting.

Janelle's initial Praxis II Content score was 151, the highest ever achieved, but still 17 points less than the required cut score of 168. Prior to joining the study, she had taken both Praxis II Content exams, Middle School English (5047) and English (Secondary) Language Arts: Content and Analysis (5039) twice each. Although she taught middle school, she chose to take the English (Secondary) Language Arts: Content and Analysis (5039) exam needing a minimum score of 168 in order to meet the requirements for South Carolina's Department of Education and her alternative certification program (TOT). The researcher encouraged the participant to retake the Praxis II Content Middle School English Language Arts (5047) exam. However, Janelle chose to retake the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Janelle stated, *"I want to teach at the high school level in like three years, teaching in middle school isn't forever."* She continued, *"I want to take the high school test now so that I can be ready to switch over later because I'm still young."* The researcher provided support in preparation for the participant to retake the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Ultimately, Janelle completed a total of four intervention workshop sessions before retaking the exam.



#### ***Participant 4- Kevin***

Kevin was a 25 year old African-American male, in his 2<sup>nd</sup> year of teaching 10<sup>th</sup> grade English in a small, rural school district. Kevin was also enrolled in an online doctoral program in educational leadership. He received his K-12 education in South Carolina's public schools and graduated from a local Historically Black College or University (HBCU), although different from Janelle. Kevin's college major was English, and he was currently trying to meet the initial requirement of passing the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam to be able to enroll in a state alternative certification program, PACE.

Kevin was recommended to the researcher by Tanisha because of a posting he placed on social media requesting support with the Praxis II Content exam. The participant called the researcher and scheduled an initial meeting for the next day. Prior to the initial meeting, the researcher emailed the participant the consent form to review. The researcher and participant met virtually via Zoom (mid-pandemic) to review the consent form. The initial meeting and all subsequent meetings were audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Kevin electronically signed the consent form and returned it to the researcher at the end of the initial meeting. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. Kevin provided his official Praxis II Content exam score report via email before the end of the initial meeting. Kevin stated, *"I always wanted to be a teacher, but was not encouraged by my advisor to pursue an education degree and do*

*student teaching.*” The researcher provided support in preparation for Kevin to retake the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam.

Kevin’s initial Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam score was 151, the highest ever achieved, but still 17 points less than the required cut score. Prior to joining the study, he had taken the English (Secondary) Language Arts: Content and Analysis (5039) more than four times. He chose to retake the English (Secondary) Language Arts: Content and Analysis (5039) exam needing a minimum score of 168 in order to meet the requirements for South Carolina’s Department of Education and his potential alternative certification program, PACE. Ultimately, Kevin completed a total of five intervention workshop sessions before retaking the exam.

#### ***Participant 5- Kelly***

Kelly was a 36 year old White female, in her 2<sup>nd</sup> year of teaching 7<sup>th</sup> grade English in a small, rural school district. She received her K-12 education in South Carolina’s public schools and completed an Associate’s degree in liberal arts at a local community college. Kelly then matriculated to an upstate college to receive a Bachelor’s degree in English. Her college major was English, and she was enrolled in a local alternative certification program, Teachers of Tomorrow (TOT). Kelly was trying to improve her scores on the Praxis II Content Middle School Language Arts (5047) exam. This was in

an effort to meet a requirement of her alternative certification program, Teachers of Tomorrow.

Kelly was recommended to the researcher by Cindy because they (Kelly, Cindy, and Janelle) were employed by the same rural school district and school. The researcher initially emailed the participant about their interest and need for the study. The participant responded with potential meeting dates, and the initial meeting was conducted within a week of first contact. The researcher and participant met virtually via Zoom (mid-pandemic) to review the consent form. The initial meeting and all subsequent meetings were audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Kelly electronically signed the consent form and returned it to the researcher at the end of the initial meeting. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. Kelly sent her official Praxis II Content exam score reports via email two days after the initial meeting.

Kelly's most recent and highest Praxis II Content Middle School English Language Arts (5047) score was 143, but 21 points less than the required cut score of 164. Prior to joining the study, she had taken the Praxis II Content Middle School English Language Arts (5047) exams at least four times. She needed to pass the Praxis II Content Middle School Language Arts (5047) exam with a minimum score of 164 in order to meet the requirements for South Carolina's Department of Education and her alternative certification program, Teachers of Tomorrow. Kelly stated, "*My program won't allow me*

*to take the high school test anymore, so I plan to take the middle school test soon.*” The researcher provided support in preparation for her to retake the Praxis II Content Middle School English Language Arts (5047) exam. Ultimately, Kelly completed a total of six intervention workshop sessions before retaking the exam.

### ***Participant 6 - Eddie***

Eddie was a 38 year old African-American male and classified employee in a large, suburban school district (same as the researcher). However, Eddie was physically located at a small 7-12 rural school within the district where he served as an assistant teacher and coach. He received his K-12 education in South Carolina’s public schools and completed a Bachelor’s degree in Interdisciplinary Studies, at a small liberal arts college. Later, he enrolled in a Master of Arts in Teaching (MAT) program at a local college to become certified in K-12 Physical Education. Although Eddie had completed the required courses for the MAT degree, he would not be able to complete the final step of student teaching until he passed the specified Praxis II Content exam. He was required to take the Praxis II Content K-12 Physical Education (5095) needing a minimum score of 169 in order to meet the requirements for South Carolina’s Department of Education and his current MAT program.

Eddie was recommended to the researcher by his school’s principal and assistant principal. The participant initially called the researcher and scheduled an initial meeting for the next day. Prior to the initial meeting, the researcher emailed the participant the consent form to review. The researcher and participant met virtually via Zoom (mid-

pandemic) to review the consent form. The researcher stressed to the participant that although the researcher was knowledgeable about physical education content and classroom instruction, the researcher had never taken the Praxis II Content K-12 Physical Education (5095) exam. The participant responded, *“I need the most help with classroom instruction and mostly constructed response.”* Eddie also stated, *“I have two others helping me with the content part.”* Prior to joining the study, he had taken the exam at least six times.

The initial meeting and all subsequent meetings were audio-recorded and later transcribed. The researcher and participant reviewed the consent form, discussed questions, and set a future meeting date. Eddie physically signed the consent form and returned it to the researcher via the courier within four days of the initial meeting. Prior to the next meeting, the participant was required to provide any available Praxis II Content exam official score reports to the researcher. Eddie provided his official Praxis II Content exam score report via multimedia message the day after the initial meeting. The participant’s initial score was 161, but 8 points less than the required minimum score of 169. The researcher provided support with a targeted focus on classroom instruction and constructed response in preparation for Eddie to retake the Praxis II Content K-12 Physical Education (5095) exam. Ultimately, Eddie completed a total of six intervention workshop sessions before retaking the exam.

The methodology section identified purposive sampling as a component of this research. Alternative certification pathways, both national and state, were the most

frequent teacher pathway of choice for all six participants. In addition, five of six participants were retaking an exam centered on English language arts content. Cindy, Tanisha, Janelle, and Kevin retook the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Kelly retook the Praxis II Content Middle School English Language Arts (5047) exam. Further, Eddie was the only one retaking an exam in physical education, Praxis II Content K-12 Physical Education (5095) exam.

Additional participant data reflected the connections they shared between the locations of their K-12 and Post-Secondary educational schools. One participant, Cindy, was educated and received her college degree in Indiana. Five of six participants (Tanisha, Janelle, Kelly, Kevin, & Eddie) were educated in South Carolina's K-12 school system. Further, they each graduated from a SC college or university. This is significant to note because South Carolina has consistently been educationally ranked at the bottom, 45-50, nationwide. Future studies may find a correlation between the education location of prospective teacher candidates and their licensure exam scores. Participants referenced personal experiences during their K-12 and Post-secondary years that may not have adequately prepared them for the rigors of college nor licensure exams. While all participants were previously able to obtain a bachelor's degree, they were now attempting to be alternatively certified. These alternative certification programs fill classroom vacancies; however, candidates take required program sessions, but essentially learn on the job.

## **Phenomenological Data Analysis**

The data collected and analyzed for this phenomenological study included participants' descriptive survey data, semi-structured interviews, official Praxis II Content exam score reports, audio recorded virtual intervention workshop sessions, and CERRA's 2020 and 2019 *Annual Supply and Demand Reports*. Phenomenological analysis is based on discussions and reflections of direct interactions and experiences of the researched phenomenon. Data analysis is often performed applying the hermeneutic cycle consisting of reading, reflective writing, and interpretation in a rigorous fashion (Kafle, 2011). Descriptive surveys, semi-structured interviews, and intervention workshops were conducted virtually via Zoom and audio-recorded. The recordings were uploaded and transcribed using Dedoose software.

Intentionality is one of the fundamental characteristics of phenomenology therefore reduction is necessary when analyzing data (Bhattacharya, 2017). The software allowed for the qualitative data to be excerpted, analyzed, coded, and categorized. The textual coding of descriptive data and interview transcripts provided opportunities to reflect on interactions with study participants. Intentionality refers to the relationship between the observer (researcher), the observed (participants), and their interconnectedness (Bhattacharya, 2017). Initial interviews and subsequent discussions with participants during workshop sessions facilitated the development of relationships and trust. Participants stated feeling able to express their experiences and points-of-view without apprehension or fear of consequences or judgment.

Based on the initial codes from analyzed data, the codes were then categorized under three emerging themes: *College Major*, *Pathway*, and *Exam Essentials*. Thematic coding was used to analyze and categorize participant responses to the semi-structured interview questions and discussions during the intervention workshops. Graham (2013) found, although participants expressed a fairly moderate level of comfort with standardized tests, most revealed they did not know “how to” prepare for standardized tests.

### ***Theme 1 - College Major***

The participant responses were based on the code *English* which produced the emergence of Theme 1 *College Major*. The researcher initially hypothesized study participants would have a degree in English, specifically with the implementation of purposive sampling, yet only three of six participants earned an undergraduate degree in English. However, regardless of the participants’ undergraduate college major, five of six were undergoing a Praxis II Content exam related to English content. A connection between Janelle, Kevin, and Kelly was they each earned a Bachelor of Arts degree in English. Cindy earned an undergraduate degree in French, and Tanisha earned an undergraduate degree in Political Science. Coincidentally, Cindy and Tanisha, non-English majors and current English teachers, were the first to improve their scores and pass the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. The essence of Theme 1, *College Major*, it was evident participants’ undergraduate major in English did not predetermine that participants would have an easier path to improving their Praxis II Content English (Secondary) Language Arts:



Content and Analysis (5039) exam. This was in comparison to the two participants that did ultimately improve their scores with majors of French and Political Science.

Transcribed data collected during interviews and intervention workshops sessions are listed below based on analyzed participant responses for *Theme 1 – College Major*.

Cindy: *“I have always liked English, but I got a bachelor’s degree in French. They said I could start teaching English straight out , but I would have to wait to teach French somewhere else. I’m gonna keep taking the English Praxis because I think that I am good at it.”*

Tanisha: *“English was my favorite subject in school, but I decided to major in Political Science because I didn’t know what to do with an English degree. My program looked at my transcripts and put me in a high school teaching English.”*

Janelle: *“I have a professional English degree from a local HBCU.... I was originally an English Education major, but was just ready to graduate and didn’t want to fight to get into the Education program... I had enough English classes there.”*

Kevin: *“I knew since I was little that I was going to be a teacher, and I chose my local HBCU because they offered me a scholarship from the church... I took a lot of English courses there, and graduated with an English degree, but I didn’t pass the Praxis I Core until after I graduated.”*

Eddie: *“My first degree was in Interdisciplinary Studies. I have been working at the school for the last nine years as a teacher assistant, bus driver, and coach. I finished my MAT program in Physical Education two years ago, but I’m still trying to pass the Praxis now.”*

## ***Theme 2 - Pathway***

The participant responses were based on the initial codes of *Alternative Certification* and *No Support* which produced the emerging Theme 2, *Pathway*. A connection between all participants was they were affiliated with an alternative

certification pathway in order to meet requirements to become a certified teacher. Participants Cindy and Tanisha were currently enrolled in a national alternative certification program, TFA. Two other participants Janelle and Kelly were taking the exam to remain in a state alternative certification program, TOT. Kevin was taking the exam to be able to enroll in a state alternative certification program, PACE. Eddie was taking the exam to fulfill the requirement of his MAT program. Participants (Cindy, Janelle, Kelly, Eddie) expressed wanting their program to “*provide more support for the Praxis II Content exam.*” Further, Cindy stated, “*My program was really great in the beginning but when the pandemic started, I felt like I was on my own.*” The essence of Theme 2, *Pathway*, reflected the need for alternative certification programs to provide more support to prospective and enrolled candidates to meet South Carolina's Praxis II Content exam requirement.

Transcribed data collected during interviews and intervention workshops sessions are listed below based on analyzed participant responses for *Theme 2 – Pathway*.

Cindy: “*I entered my alternative certification program, Teach for America, to try a different career path. When I relocated to SC, the program helped me find a rural school. They told me I was going to teach middle school ELA. My contact person emailed me to check if I had passed the test.*”

Tanisha: “*I joined my alt cert program because I planned to move to Oklahoma to teach, but then COVID hit, and my program said I needed to pick something local. I chose the nearest school district, but they only had 2nd grade and 11th grade English available. I chose 11th grade English, but I have a Political Science degree. My program did have virtual meetings every other month, but it didn't help with my specific class or the Praxis exam.*”

Kevin: “*I know that I want to be in the PACE program because it is the cheapest and only requires for me to pass my Praxis, but they didn't tell me any*”

*ways to study for the test. My family encourages me to keep going until I get accepted into the program. I know that I want to be a teacher so now I am getting my doctorate degree.”*

*Kelly: “When I use to sub here a few years ago, some of the teachers and principal said that I could use my English degree to join a program. I joined Teachers of Tomorrow, but they told me I could only be middle school because I had taken the high school test too many times.”*

*Eddie: “I joined the MAT program after others told me about their pathway to teaching PE. My advisor has been supportive, but I still can’t seem to pass the Praxis. I have taken the test at least five times, but my score does improve each time.”*

### ***Theme 3 - Exam Essentials***

Participant responses based on the initial code *Exam Format* produced the emerging theme of *Exam Essentials*. The theme reflected an evident need to provide the participants with general testing strategies based on their responses about the Praxis II Content exam. The intervention workshops were designed to address each participant’s specific concern. Although all had previously taken a Praxis II Content (5039, 5047, and 5095) exam, the researcher reviewed the *Test at a Glance* and *Exam Study Companion* provided by Praxis with all participants. During the intervention workshop sessions, the researcher and participants reviewed over 100 sample exam questions. This was in an effort to discuss and familiarize participants with how the test was formatted and the specific content tested. Because testing strategy and content were connected, reduction took place, thereby merging each to create an overarching theme of *Exam Essentials*. The essence of Theme 3, *Exam Essentials*, highlighted the need for participants to receive support in understanding specific exam content such as teaching strategies, content, and timing skills.

Transcribed data collected during interviews and intervention workshops sessions are listed below based on analyzed participant responses for Theme 3 – *Exam Essentials*.

Cindy: *“It was awful, and I wasn’t prepared for the amount of time the constructed response would take. They only give you 30 minutes to answer 2 long questions, so I know I might need help with the time.”*

Tanisha: *“The first time I took the exam, I didn’t study and that caused me to not be ready for the way the test was formatted. I didn’t like the questions that had all of the above as a choice because if I missed 1 then got the whole question wrong.”*

Janelle: *“I didn’t know what to expect. It wasn’t like the Praxis I exam that included reading, writing, and math. I thought I did good on the Reading part, but the stuff about ELL was hard.”*

Kevin: *“I’ve studied and reviewed my notes from school and the flash cards I bought online. My scores were better than any other time I took the test. I think I need help with teaching strategies because I remember at least three of those questions.”*

Kelly: *“I get anxious during the test every time. I see how much time left... I get nervous. I feel like I need help with everything.”*

Eddie: *“I have taken this PE test so many times... I know the format and I feel like I know the content, but when the score come. I need the most help with the writing section.”*

Although participants hailed from varying backgrounds and locations, they all reflect similarities in the obstacles they encounter when engaging with the Praxis II Content exams. All candidates are affiliated with a college or an alternative certification program that may not provide enough or consistent support for prospective teacher candidates. The essence of each emerging theme, *Exam Essentials*, *College Major*, and *Pathway* was outlined. The themes called attention to the need to be intentional of targeted support and strategies needed for any prospective teacher candidate preparing to take a Praxis II Content exam.

## Results

It was significant to analyze and report participant progress before the intervention workshops in comparison to their performance on the exams after the intervention workshops. The data was extracted from official Praxis II Content exam score reports. The score reports aided in responding to

*RQ3: How can improved licensure exam scores impact teacher vacancies and shortages in South Carolina's public schools?*

Overall, there was a total increase of 20 points across three exams with six participants. Based on specific exam categories, there was a total of 45 points gained. Although the score improvements were significant, two passed their respective exams, while four did not pass. Potentially, if the study was conducted over a longer period of time, there may have been higher points earned, points improvement and more participants would have passed the exam.

### **Cindy**

After the intervention, Cindy passed the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam with a score of 169, 5 points higher than her initial score of 164, and 1 point higher than the 168 required minimum score. During the follow-up interview, she expressed that she planned to continue to her 3rd year of teaching 7th grade ELA for the upcoming school year.

## **Tanisha**

After the intervention, Tanisha passed the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam with a score of 173, 11 points higher than her initial score of 162, and 5 points higher than the 168 required minimum score. During the follow-up interview, she expressed that she planned to continue to her 2nd year of teaching 11th grade ELA for the upcoming school year. Tanisha stated, “*Now, I need to focus on taking the Praxis PLT exam.*”

## **Janelle**

After the intervention, Janelle did not pass the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam with a score of 156, 2 points higher than her initial score of 154, but still 12 points less than the 168 required minimum score. During the follow-up interview, she stated that she would not retake the exam, and did not plan to continue teaching for the upcoming school year. She stated that she was uncertain of proceeding with her alt certification program, TOT, because a passing score on the Praxis II Content exam was required for completion.

## **Kevin**

After the intervention, Kevin did not pass the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam with a score of 148, 3 points less than his initial score of 151, but also 20 points less than the 168 required minimum score. During the follow-up interview, he stated that he would retake the exam

in January 2022. Kevin stated, *“Since the state extended me again, I can continue teaching for the upcoming school year.”*

### **Kelly**

After the intervention, Kelly did not pass the Praxis II Content Middle School English (5047) exam with a score of 146, 3 points higher than her initial score of 143, but still 18 points less than the 164 required minimum score. During the follow-up interview, she stated that she would not retake the exam, and did not plan to continue teaching for the upcoming school year. She stated that she was uncertain of proceeding with her TOT program because a passing score on the Praxis II Content exam was required for completion.

### **Eddie**

After the intervention, Eddie did not pass the Praxis II K-12 Physical Education (5095) exam with a score of 163, 2 points higher than his initial score of 161, but still 8 points less than the 169 required minimum score. During the follow-up interview, he stated that he would retake the exam in December 2021, and planned to continue working as a classified employee for the upcoming school year.

During intervention workshop sessions, three of six participants expressed varying effects of the Covid-19 pandemic on their journeys to becoming certified teachers. Due to the pandemic and a shortage of teachers, Janelle and Kelly were able to have their initial certificates extended during 2020-2021 to remain classroom teachers.

Although the SCDE allowed for one additional pandemic extension for 2021-2022, their alternative certification program denied their requests. Kelly explained text anxiety was a contributing factor to her being unable to achieve the minimum cut score on the Praxis II Content exam. However, she further lamented the impact the pandemic caused her to teach virtually and face-to-face simultaneously. Kelly felt her teaching responsibilities left little time for her to study for the exam, thereby exacerbating her test anxiety during the retake. Tanisha expressed COVID-19 caused her alternative certification program to conduct sessions virtually. She felt she needed face-to-face contact to apply in her classroom setting. Although Tanisha preferred a testing center, the pandemic caused ETS to administer Praxis II Content exams at home.

South Carolina set the minimum score requirement for the Praxis II Content exam in English (Secondary) Language Arts: Content and Analysis (5039) at a 168. South Carolina set the minimum score requirement for the Praxis II Content exam in Middle School English Language Arts (5047) at a 164. South Carolina set the minimum score requirement for the Praxis II Content exam in K-12 Physical Education (5095) at a 169. Table 4.2 *Participant Descriptive Data* provides a visual representation and details the descriptive data of the study's six participants. There were 4 females (2 African-American / 2 White) and 2 males (both African-American). The chart lists: pseudonym, K-12 and college state location, race, gender, college major, teaching pathway, initial Praxis II Content exam scores, the number of intervention workshop sessions they participated in, after PDSA interventions score, and their current status.



**Table 4.2 Participant Descriptive Data**

<b>Participant (State)</b>	<b>Race</b>	<b>Gender</b>	<b>College Major</b>	<b>Pathway / Exam</b>	<b>Initial Score (# Sessions)</b>	<b>After PDSA Score</b>	<b>Current Status</b>
<b>1- Cindy (IN)</b>	W	F	French	TFA / 5039	164 (4)	169 (+5)	Passed 7 <sup>th</sup> ELA
<b>2- Tanisha (SC)</b>	B	F	Political Science	TFA / 5039	162 (4)	173 (+11)	Passed 11 <sup>th</sup> ELA
<b>3- Janelle (SC)</b>	B	F	English	TOT / 5039	151 (4)	154 (+3)	No retake exam
<b>4- Kevin (SC)</b>	B	M	English	PACE / 5039	151 (5)	148 (-3)	Failed 10 <sup>th</sup> ELA Retake 01/2022
<b>5- Kelly (SC)</b>	W	F	English	TOT / 5047	143 (6)	146 (+3)	Did not retake exam
<b>6- Eddie (SC)</b>	B	M	PE	MAT / 5095	161 (6)	163 (+2)	Classified Employee Retake 12/2021

\*Teach for America (**TFA**) - National - Alternative Certification Program

\*\*Teachers of Tomorrow (**TOT**) - State - Alternative Certification Program

\*\*\*Master of Arts in Teaching (**MAT**) - State - Requires 1 semester of student teaching

\*\*\*\*Program to Alternatively Certify Educators (**PACE**) - State - Alternative Certification Program

English (Secondary) Language Arts: Content and Analysis (**5039**) - Middle School English Language Arts

(**5047**) - K-12 Physical Education (**5095**)

## **Credibility**

Participants for this phenomenological study were selected based on their desire to improve their Praxis II Content exam score to satisfy an alternative certification program requirement to become certified public school teachers in South Carolina. Efforts were made to ensure the credibility and trustworthiness of this study. A triangulation of multiple data sources included transcribed interviews, member checks of written records through follow-up conversations with participants, and official Praxis II Content exam score reports. Triangulation provided the ability to identify emerging themes related to the research questions and thus added validity to the research process.

Trustworthiness was established between the researcher and participants during the intervention workshop sessions. This allowed the participants to openly share their experiences and obstacles with the Praxis II Content exams. Collaboration with participants consisted of presenting and discussing the analyzed data to verify that the essences and meanings were in fact those expressed directly or indirectly by the participants. Due to the small purposive sample size, the results of this study could not be generalized to all prospective teacher candidates. Also, transferability could occur if this study was done over a longer period of time with a larger group of participants.

## **Chapter 4 Summary**

This qualitative phenomenological study aimed to analyze the effectiveness of Praxis II Content exam workshops to improve the scores of six prospective teacher candidates in South Carolina. This chapter presented descriptive findings of study participants, phenomenological data analysis, and the emerging themes produced using transcribed interviews and Dedoose coding software. Phenomenological reduction allows the researcher to eliminate overlapping, repetitive, and vague expressions, thus allowing experiences to be described through textual language (Yuksel & Yildirim, 2015). Specific quotes from participants, gathered via descriptive surveys and semi-structured interviews, provided a glimpse into their struggles with the Praxis II Content exams. The results section provided official score report data of participant performance on their most recent Praxis II Content exams after the intervention workshop sessions.

With regard to preparation, licensure exam preparation should be targeted toward areas of need that have the maximum value on the exam, an inch wide and a mile deep (Petchauer, 2018). The data analysis procedures were significant because it outlined the step-by-step process and allowed for future replication of the study. The analysis of official Praxis II Content exam score reports with all participants allowed the researcher to target specific exam categories to collaborate with and support participants. The intervention workshops provided participants with content support, test-taking skills, and

instructional strategies. The categorization of codes produced emerging themes that allowed for easier interpretation.

Szeci & Spillman (2012) found that the lack of proper test preparation and remediation after failing the test, limited knowledge in specific content areas. All participants reported a lack of consistency with their exam preparation. The intervention workshop sessions were designed to create a targeted plan specifically based on the participant's need. The disparaging and disproportionate performance of minority students on both standardized tests and licensure exams have been widely reported. Yet, two (Cindy & Kelly) of six study participants were White. Ultimately, Cindy passed the exam and continued teaching. Kelly did not pass the exam, and left the teaching profession to work in the private sector.

The researcher hypothesized that providing targeted workshops and tutorial sessions focusing on content remediation and test-taking skills would improve participant scores on licensure exams. There was a need to produce actionable strategies to make score improvements a reality. Thus, the improvement of prospective teacher candidates' scores could equate to decreased teacher vacancies in public school districts across South Carolina. Overall, four of the six remained in their positions, therefore, not contributive to school shortages. Due to not receiving the minimum cut score, the other two participants left the profession. This created two classroom vacancies at the same rural school. Chapter 5 will address a discussion of the findings, implications of the study, and recommendations for future research.

## CHAPTER FIVE

### CONCLUSION

#### **Introduction**

The researcher conducted a qualitative phenomenological study with six prospective teacher candidates. The aim of this study was to provide targeted support to improve their Praxis II Content exam scores. Participants were attempting to meet the requirements to become fully certified teachers in South Carolina's public schools. The findings concur with and provide theoretical and practical implications for prospective teacher candidates, licensure exams, and teacher shortages.

All participants were working adults attempting to improve their content knowledge and test-taking skills. This was in an effort to improve their Praxis II Content exam scores. Thus, this research study theoretically framed the phenomenon through Knowles' Andragogy Adult Learning Theory. Research participants were motivated and goal oriented to meet the requirements of an alternative certification program. Further, the inclusion of Vygotsky's Socio-Cultural Constructivism provided a lens to conceptualize the research. The participants' needed to receive targeted support with the researcher, a more knowledgeable other (MKO). Participants were then required to apply the learned skills when they retook the Praxis II Content exam, to develop their zone of proximal development (ZPD).

This chapter concludes the study with overviews of the problem, purpose, and research questions. Subsequent sections include a review of the methodology and a

discussion of the findings. This is followed by implications for practice and recommendations for further study.

### ***Overview of the Problem***

Teacher shortages have been consistently documented and reported by CERRA's *Annual Supply & Demand* reports. The most recent, December 2020, reflected a 26% increase in vacant positions, 6% decrease in new hires, and less than 1,700 Education graduates (CERRA, 2020). It was also noted that students preparing to become teachers have declined yearly, thereby requiring districts to fill classroom vacancies from other programs and sources. This clearly signified that South Carolina's educator pipeline was in distress. South Carolina has partnered with national entities as well as created their own alternative certification programs to fill classroom vacancies. CERRA (2020) reported more new teachers were hired from alternative certification programs than any other pathway in South Carolina for the 2020-2021 school years. With regards to this study, all study participants hailed from various alternative certification programs.

In South Carolina, all teacher preparation and alternative certification programs required participants to achieve a minimum set cut score on a specific Praxis II Content exam. However many, including the researcher, have faced obstacles in passing the exam on their first or subsequent attempts. Therefore, the problem of practice was identified as the inability of prospective teacher candidates to achieve the required minimum score on the Praxis II Content exam has an underlying connection to teacher shortages in South Carolina's public schools.

### ***Purpose Statement and Research Questions***

Prospective teacher candidates face obstacles in obtaining the minimum cut score on specific Praxis II Content exams. The purpose of this study was to provide targeted support and interventions to six prospective teacher candidates in South Carolina. The qualitative phenomenological study was investigated through the following research questions as listed below:

*RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?*

*RQ2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?*

*RQ3: How can improved licensure exam scores impact teacher shortages in South Carolina's public schools?*

### ***Review of the Methodology***

The research questions were investigated applying Improvement Science and Plan-Do-Study-Act (PDSA) Cycles to support adult learners in improving their Praxis II Content exam scores on their journeys to becoming certified teachers in South Carolina's public schools. Research Question 1 highlighted the experiences of prospective teacher candidates when engaging with the Praxis II Content exams via descriptive surveys and semi-structured interviews. Research Question 2 determined if the development and implementation of virtual intervention workshop sessions aided in the improvement of participant scores on a specific Praxis II Content exam. Finally, Research Question 3 examined if the improvement of participant scores would impact teacher shortages and fill vacancies in South Carolina's public schools.

## **Discussion**

Teacher licensure exams, particularly Praxis I Core and Praxis II Content exams, negatively impact minority candidates and traditionally produce lower passage rates than Caucasian candidates (Dinkins & Thomas, 2016; Goldhaber & Hansen, 2009; Graham, 2013; Taylor et al., 2017; Shuls, 2018). However, the participants in this study reflected a mixed demographic needing varying level of support on the Praxis II Content exam. The research study began with data collection from each participant through descriptive surveys. The findings reflected participant demographics included: four females (Cindy, Tanisha, Janelle, and Kelly) and two males (Kevin and Eddie). This mirrors the reality of the education profession being mostly dominated by women. The racial profile of participants included: four African-Americans (Tanisha, Janelle, Kevin, and Eddie) and two Whites (Cindy and Kelly). However, as reflected in the literature, this statistic is reversed in America and South Carolina specifically. The literature revealed the population of America's teachers was 79% White and 9% African-American (NCES, 2021). Similarly, South Carolina's teachers were 77% White and 15% African-American (SCDE, 2021). Regardless of race or gender, prospective teacher candidates continued to face obstacles improving their scores on the Praxis II Content exam. This fact, coupled with decreased enrollments in teacher preparation programs, contribute to an already weakened educator pipeline in South Carolina.

The findings provided insight into the experiences of prospective teacher candidates when engaging with licensure exams. The findings also highlighted the need



to provide targeted support to improve Praxis II Content exams. Finally, the findings determined if the interventions impacted teacher shortages in South Carolina's public schools. The following is a discussion of the findings, outlined via research question.

***RQ1: What are the experiences of prospective teacher candidates when engaging with licensure exams?***

The young adults who enter colleges today are the tested generation of students in the history of public education (Petchauer, 2012). The study included descriptive surveys and semi-structured interviews with participants to gain their perspectives and experiences with licensure exams. The voices, strategies, and perspectives of current and former teacher candidates undertaking licensure exams were absent. The study participants used their voices to express prior experiences, feelings, and preparation with standardized tests, such as the Praxis exam.

It was evident participants' experiences, feelings, and preparation for the Praxis II Content exam was extensive and varied. The findings reflected all study participants revealed they had taken multiple standardized tests in the past, but none comparable to the Praxis II Content exam. Summarily, they felt the need for targeted content support, more time to complete the exam, and a level of test-taking anxiety. Many participants were far removed from their K-12 and undergraduate courses, thus it was understandable to need targeted content support. Test taking under time constraints caused levels of anxiety for study participants. They felt their scores were impacted by the inability to complete portions of the Praxis II Content exam within the timing requirements.

***RQ2: What interventions can be implemented to increase prospective teacher candidate success on the Praxis II Content exam?***

Petchauer (2018) found borderline passers prepared minimally before taking the exam the first time yet prepared diligently for the times they retook the exam. This exemplified the need to provide targeted support focused on specific areas of the exam. When engaging in the Praxis II Content exam, a standardized test that determines future employability, six prospective teacher candidates needed additional assistance to improve their overall score. Mild (2014) found, studying the content in which the learner is weak and learning what will be addressed on the test, participants could strengthen the skills required to pass the exam. Research Question 2 investigated what interventions could be developed to improve the Praxis II Content exam scores of prospective teacher candidates based on the experiences identified in Research Question 1.

Through the use of Improvement Science and PDSA Cycles, the researcher provided virtual intervention workshop sessions to review and analyze English and physical education content, instructional strategies, practice questions, and time management skills. During the follow-up interviews, participants expressed the impact of the intervention workshops on their exam performance and next steps after retaking the exam. Summarily, all of the participants identified participating in the study's intervention workshops as a critical factor that impacted their performance, regardless of pass or fail status, on the Praxis II Content exam.

Cindy, Tanisha, Kevin, and Kelly each suggested that anyone preparing for the exam should immediately plan to have someone or resource available for support.

Particularly through culturally sensitive research, researchers should seek to learn from struggles and successes of students that struggle with exams (Petchauer, 2012; Tillman, 2002). The findings of Research Questions 1 and 2 provided a glimpse of participant experiences and needed interventions when engaging with the Praxis II Content exam. Research Question 3 reflected the findings in connection to teacher shortages in South Carolina's public schools.

***RQ3: How can improved licensure exam scores impact teacher shortages in South Carolina's public schools?***

There are viable solutions to combat this deficiency in South Carolina to alleviate the teacher shortage and add strength and diversity to the instructional program (Lowe, 2006). CERRA annually reports the status of the teacher pipeline in South Carolina's public schools. The need to fill classroom vacancies has been the center of debate for over a decade. Research Question 3 aimed to investigate if there was a correlation between the improvements of participant licensure exam scores with the reduction of teacher shortages in South Carolina's public schools. The findings could potentially triangulate participant experiences and licensure exams to targeted intervention strategies, and thus the reduction of classroom vacancies across South Carolina.

Cindy and Tanisha improved their overall score performance and passed the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam above the minimum 168 cut score. Both participants planned to return to their respective schools for the upcoming 2021-2022 school years. Cindy and Tanisha's passing scores prevented an additional vacancy at their respective schools.

Despite the support, Janelle and Kevin continued to experience challenges with the Praxis II Content English (Secondary) Language Arts: Content and Analysis (5039) exam. Janelle ultimately chose to exit the teaching profession due to not meeting the required score, thereby creating a classroom vacancy at her school. Although Kevin did not pass the Praxis exam, his school district chose to rehire him for the 2021-2022 school years. Kelly also continued to experience challenges with the Praxis II Content Middle School English (5047) exam. Thus, Kelly ultimately chose to exit the teaching profession due to not meeting the required score, thereby creating another classroom vacancy within her rural school. Eddie was unable to obtain the minimum cut score on the Praxis II Content K-12 Physical Education (5095) exam. He ultimately chose to return to his school district as a classified employee for the 2021-2022 school years. Eddie planned to retake the exam in December 2021 in order to meet the requirements of his MAT program and be able to student teach in the future.

### **Realization #1: South Carolina Education**

The literature provided an overview of past and current statistics in reference to the status of educational achievement in South Carolina's public schools system. The state has consistently ranked near the bottom in education when compared to other states in America. As a graduate, parent, and employee of South Carolina's public schools, this is not a new realization. However, with regards to this study, it was significant to note that five of six study participants received their K-12 and Post-Secondary education in South Carolina's public schools and colleges.

There was a realization that the participants' K thru Post-Secondary education may have a direct impact on their current performance struggles on the Praxis II Content exams. Participants revealed they were not adequately prepared for licensure exams. Aligned with state's accountability measures, participants stated they had taken multiple standardized tests in the past. They further declared that while somewhat similar in format, no test within K-12 education was comparable to the Praxis exams.

### **Realization #2: South Carolina Teacher Shortages**

The improvement of prospective teacher candidates' Praxis II Content exam scores can fill vacancies in South Carolina's public schools. Two (Cindy and Tanisha) of six participants were able to improve their scores and remain in the teaching profession. Two (Janelle and Kelly) were required to vacate their classroom positions due to not meeting the required cut score on the exam. Eddie was also unable to meet the minimum score on his exam. Though a classified employee, his success would have been a step toward filling a classroom vacancy. In addition, Kevin was unable to meet the required score, but he was able to remain as a classroom teacher for the current school year. Kevin stated, *"I won't be able to teach 10th grade English anymore because it includes an End-of-Course exam, so I was moved to 11th grade. I plan to take the Praxis exam again, but I am in no rush since I have a job now and a new deadline of next June."*

The South Carolina Department of Education (SCDE) outlined a provision in June 2021 stipulating the extension of provisional certification for an additional year to June 2022. This provision also extended the Praxis II Content exam requirement deadline

to June 2022. Although the SCDE allowed the extension of teacher certifications for an additional year, Janelle and Kelly's alternative certification program would not provide them with an extension. This led to the realization that the provision had a direct impact on the research study. This affected participant motivation and the ability of the researcher to acquire additional participants. Participants were no longer motivated to consistently engage in sessions, nor in a rush to retake the exam. Due to current pandemic conditions and teacher shortages, the SCDE appeared well-intentioned in providing licensure extensions. However, classroom vacancies are still pervasive across the state. In addition, the "extended" teachers will again face Praxis exam requirements, in less than a year.

### **Implications**

Although this study included six participants, there were a total of 17 potential candidates that qualified for participation. Therefore, the implications of this study may impact a wide range of educational entities. This research hoped to yield results that would not only contribute to the literature, but also provide practical strategies to improve prospective teacher candidates Praxis II Content exam scores. At the federal, state, and local levels there have been widespread teacher shortages and a lack of diversity in public schools. The improvement of participant scores could diversify the profession and reduce teacher shortages in South Carolina's public schools. Thoroughly understanding the interventions needed to improve teacher candidates' exam scores can benefit study

participants, university teacher preparation programs, the state's alternative certification programs, and local school districts.

### ***University Teacher Preparation and Alternative Certification Programs***

University teacher preparation programs can use the tutorials and interventions to support teacher candidates when engaging with Praxis exams. The improvement of their scores would correlate to the university's programs passage rates for Title II reporting data. South Carolina's alternative certification programs can benefit from the interventions provided to support teacher candidates with licensure exams. The implementation of intervention workshops could allow alternative certification programs to have a larger supply of prospective teacher candidates.

### ***Local School Districts***

Local school districts may be able to increase teacher supply, target specific content areas and geographic locations, as well as provide Grow Your Own (GYO) opportunities. Partnerships between districts, universities, and alternative certification programs could create a pipeline of potential candidates. Local districts may attempt to recruit classified employees to provide support and a pathway into the profession. Creating a continuous cohort of prospective teacher candidates can strengthen the teacher pipeline.

## **Recommendations**

The use of Improvement Science with a qualitative phenomenological research design allowed the study to be conducted with participant interviews, surveys, and agency documents as key sources of data collection and analysis. Plan-Do-Study-Act cycles included strategies such as workshops to provide rapid interventions and feedback for study participants. Graham (2013) recommended the implementation of required preparation sessions, workshops, or courses that are prolonged and concentrated to improve teacher candidate passage rates on licensure exams. The following recommendations were based on a review of the literature, collected data, and the research findings.

### ***South Carolina State Department of Education***

CERRA's *Annual Supply and Demand* Reports consistently reflect a lack of individuals entering and remaining in the teaching profession. Due to the pandemic, the SCDE allowed provisional licenses to be extended until June 2022. This qualitative phenomenological study presented six prospective teacher candidates attempting to improve their Praxis II Content exam scores to become certified teachers in South Carolina's public schools. However, if prospective teacher candidates have not achieved the minimum cut score on the specified Praxis II Content exam by the deadline, they will be required to vacate their classroom positions and/or leave their alternative certification program.



Therefore, it is recommended that the SCDE apply their collected data of the number of prospective teacher candidates consistently missing the minimum cut score on Praxis exams. It is recommended that the data be used to identify and provide targeted support to strengthen the educator pipeline. It is also recommended the SCDE consider reviewing policies that continuously provide obstacles to filling teacher vacancies in South Carolina's public schools.

### ***Further Study***

It is recommended further study be conducted with regards to obstacles prospective teacher candidates face when engaging with licensure exams. It is also recommended a similar, longitudinal study with a larger sample population and wider range of Praxis II Content exams be conducted as well. This study implemented a small, purposive sample of six prospective teacher candidates focused on three specific Praxis II Content exams. A larger population with a wider range of specific exams could yield an increased success rate and a variety of content areas.

The findings of this study contributed to the understanding of prospective teacher candidates' experiences when engaging in the Praxis II Content exams. Through the virtual intervention workshop sessions, it was evident adult learners need targeted support when undertaking teacher licensure exams. Pandemic conditions caused this research study to be conducted virtually via Zoom. It is recommended future studies implement face-to-face interactions to facilitate continued participant learning. A phenomenological inquiry into the individual experiences of participants dictated that results would not reflect a representative sampling, nor could generalizations

be made about the types of participants involved. Findings of this research were not intended to be generalized to all prospective teacher candidates undergoing Praxis II Content exams.

## **Conclusion**

This research targeted prospective teacher candidates engaging in the Praxis II Content exam to provide targeted support and exam interventions. Qualitative data was collected through participant semi-structured interviews and surveys yielded perspectives that quantitative agency data could not supply. The viewpoints of study participants were needed because of the large absence of rich data when making major educational decisions. The study aimed to give a voice, support, and assistance to prospective teacher candidates finding a licensure exam as the final hurdle to becoming a certified teacher in South Carolina's public schools. Their outlooks, and improved exam scores could contribute to systemic educational improvements in South Carolina.

## APPENDICES

Appendix A  
International Review Board (IRB) Approval Form

Research Compliance | Division of Research | Clemson University  
391 College Avenue, Suite 406 | Clemson, SC 29634

11/24/2020

To: Reginald Wilkerson  
Re: Clemson IRB number: IRB2020-340  
Exempt Category: 3  
Determination Date: November 23, 2020  
Funding Sponsor: N/A  
Project Title: Praxis II Exam Strategies to Increase Prospective Teacher  
Candidates Test Scores

The Office of Research Compliance determined that the proposed activities involving human participants meet the criteria for exempt review under 45 CFR 46.104(d).

**Principal Investigator (PI) Responsibilities:** The PI assumes the responsibilities for the protection of human subjects as outlined in the Principal Investigator's Responsibilities guidance.

**Non-Clemson Affiliated Collaborators:** This exempt determination only covers Clemson affiliated researchers on the study. External collaborators will have to consult with their respective institution's IRB office to determine what is required for their role on the project.

**Continuing Review:** Exempt determinations do not have to be renewed.

**Modifications:** In general, investigators are not required to submit changes to the Clemson University's IRB office once a research study is designated as exempt as long as those changes do not affect the exempt category or criteria for exempt determination (changing from exempt status to expedited or full review, changing exempt category) or that may substantially change the focus of the research study such as a change in hypothesis or study design. If you plan to make changes to your study, please send an email to [IRB@clemson.edu](mailto:IRB@clemson.edu) outlining the nature of the changes prior to implementation of those changes. The IRB office will determine whether or not your proposed changes require additional review.

**Reportable Events:** Notify the IRB office immediately if there are any unanticipated problems involving risk to subjects, complications, adverse events and/or any complaints from research participants that may change the level of review from exempt to expedited or full board review. Additional information available at <https://www.clemson.edu/research/compliance/irb/forms.html>.

**Study Personnel Changes:** Notify the IRB office if the PI of the study changes. The PI is not required to notify the IRB office of other study personnel changes for exempt determinations. The PI is responsible for maintaining records of personnel changes and appropriate training.

**Non-Clemson Affiliated Sites:** A site letter is required for off-campus sites. Refer to the guidance on research site/permission letters for more information.

**International Research:** Clemson's approval is based on U.S. human subjects protections regulations and Clemson University human subjects protection policies. Researchers should become familiar with all pertinent information about local human subjects protection regulations and requirements when conducting research in countries other than the United States. We encourage you to discuss with your local contacts any possible human subjects research requirements that are specific to your research site, to comply with those requirements and to inform Clemson's IRB office of those requirements so we can better help other researchers prepare for international research in the future.

**New IRB Application:** A new application is required if the study remains open for more than 5 years after the initial determination.

**Closure:** Notify the IRB office when the study can be closed or if the PI leaves the university. Closure indicates that research activities with human subjects are no longer ongoing, have stopped and are complete. Human research activities are complete when investigators are no longer obtaining information or biospecimens about a living person through interaction or intervention with the individual, obtaining identifiable private information or identifiable biospecimens about a living person, and/or using, studying, analyzing, or generating identifiable private information or identifiable biospecimens about a living person.

**Contact Information:** Please contact the IRB office at [IRB@clemson.edu](mailto:IRB@clemson.edu) or visit our webpage if you have questions. Clemson University's IRB is committed to facilitating ethical research and protecting the rights of human subjects. All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants. This involves obtaining informed consent and maintaining confidentiality of data.

Institutional Review Board  
Office of Research Compliance  
Clemson University  
<https://www.clemson.edu/research/compliance/irb/>  
IRB Number: IRB00000481  
FWA Number: FWA00004497

Appendix B  
Praxis II Exam Workshop Flyer

**FREE! Praxis II Content Exam Workshops**

Criteria: Desire to pass Praxis II Content Exam –Middle School/Secondary ELA

Desire to enroll in an Alternative Certification Program

Desire to become a certified teacher

Incentive: There is no cost to participate in this study.

Benefits may include test-taking strategies, improved scores, etc.

Commitment: You will be required to participate in interviews and workshops for approximately 15-20 hours over a 30-45 day period.

Contact Information:

*Clemson University*

*Kara Hart, Doctoral Candidate (takarah@g.clemson.edu)*

*Dr. R. Wilkerson, Assistant Professor – Faculty Advisor & Dissertation Chair*

Appendix C  
Participant Consent Form

Information about Being in a Research Study

Clemson University

**Interventions to Increase Prospective Teacher Candidates' Praxis II Content Exam Scores**

**KEY INFORMATION ABOUT THE RESEARCH STUDY**

**Voluntary Consent:** Dr. Reginald Wilkerson and Kara Hart are inviting you to volunteer for a research study. Dr. Reginald Wilkerson is a Professor and Kara Hart is a Doctoral Candidate at Clemson University.

**Alternative to Participation:** Participation is voluntary and the only alternative is to not participate.

**Study Purpose:** The purpose of this research is to provide interventions and test-taking strategies to prospective teacher candidates undergoing the Praxis II Content Exam to improve the participants' scores.

**Activities and Procedures:**

- Interview / Review Score Report(s) Analysis / Diagnostic Test
- Review Diagnostic Test Results / Create Study Plan
- Review Study Plan / Test Taking Strategies / Post-Test
- Review Post-Test Results / Final questions before Praxis II Content Exam
- Praxis II Content Exam
- Follow-up / Closing Interview

**Participation Time:** It will take you about 15-20 hours to be in this study.

**Risks and Discomforts:** We do not know of any risks or discomforts to you in this research study.

**Possible Benefits:** Participants may achieve increased test-taking strategies and improved Praxis II Content Exam scores. Local school districts may be able to implement the interventions presented within the study to recruit prospective teachers and/or apply with current employees to undergo the exam thereby filling classroom vacancies.

**AUDIO/VIDEO RECORDING AND PHOTOGRAPHS**

Participant and researcher interactions will be audio / video recorded via a digital recorder and/or Virtual meeting platform (i.e. Zoom, Google Meets, etc.). Collected data / recordings will be maintained for at least 12 months, not be shared in public settings, and only accessible by the researcher and faculty advisor.

## **PROTECTION OF PRIVACY AND CONFIDENTIALITY**

The results of this study may be published in scientific journals, professional publications, or educational presentations.

Data and records collected from participants will be kept in a secured location. Access will only be allowed to the Researcher, Kara Hart and the Faculty Advisor, Dr. Reginald Wilkerson. Identifiable information collected during the study will be removed. The de-identified information could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from the participants or legally authorized representative.

## **CONTACT INFORMATION**

If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-0636 or [irb@clemson.edu](mailto:irb@clemson.edu). If you are outside of the Upstate South Carolina area, please use the ORC's toll-free number, 866-297-3071. The Clemson IRB will not be able to answer some study-specific questions. However, you may contact the Clemson IRB if the research staff cannot be reached or if you wish to speak with someone other than the research staff.

If you have any study related questions or if any problems arise, please contact Kara Hart, Researcher at Clemson University at [takahar@g.clemson.edu](mailto:takahar@g.clemson.edu).



Appendix D  
Participant Survey

**Interventions to Increase Prospective Teacher Candidates' Praxis II Content Exam Scores**

I. Demographics

1. What is your gender?
  - a. Female
  - b. Male
  - c. Prefer not to disclose
  
2. What is your age range?
  - a. 20-30
  - b. 30-40
  - c. 40-50
  - d. Other
  
3. What is your race?
  - a. White
  - b. African-American
  - c. Hispanic
  - d. Other
  - e. Prefer not to disclose
  
4. What is your best language of communication?
  - a. English
  - b. Other \_\_\_\_\_

II. Education

5. In what state did you receive your K-12 education?
6. What is the highest education level that you have obtained?
7. What was your college major?
8. How many years has it been since you attended college / school?
  - a. Currently attending
  - b. Less than 1 year
  - c. 5 years or less
  - d. More than 5
  - e. More than 10 years
9. Choose your teacher path:
  - a. Traditional Teacher Preparation Program: \_\_\_\_\_
  - b. Alternative Certification Program: \_\_\_\_\_
  - c. Bachelor's Degree: \_\_\_\_\_
  - d. Other: \_\_\_\_\_
10. What is your current occupation? \_\_\_\_\_

III. Testing Background

11. What types of standardized tests have you completed?
12. Have you ever taken the Praxis II Content Exam?
  - a. Yes
  - b. No

13. How many times have you taken the Praxis II Content Exam?
- a. 1
  - b. 2
  - c. 3
  - d. More than 3
14. What type(s) of remedial assistance have you received (choose all that apply)?
- a. Tutoring – paid
  - b. Tutoring - free
  - c. Study groups
  - d. Self-study
  - e. Praxis materials – online – free
  - f. Praxis materials – paid
  - g. Other: \_\_\_\_\_
15. What type(s) of instructional methods do you prefer (choose all that apply)?
- a. Questioning strategies
  - b. Lecture
  - c. 1:1 instruction
  - d. Drill-and-skill
  - e. Other: \_\_\_\_\_

Appendix E  
Participant Semi-Structured Interview Questions

**Interventions to Increase Prospective Teacher Candidates' Praxis II Content Exam Scores**

Participant Questions (60-90 minutes)

Initial Interview Questions

1. How do you feel about standardized tests?
2. How did you prepare for standardized tests?
3. Explain your performance and/or experience with the Praxis exams.
4. Discuss your teacher preparation experience?
5. How did your teacher preparation or alternative certification program prepare you for the exam?
6. How is preparing for the Praxis II exam similar to or different from other standardized tests?
7. From your experience with the Praxis II Content exam, what did you find most difficult / easiest?
8. Do you think the Praxis exam, or any other standardized test, is biased or racist?
9. How is the initial passage/failure of the Praxis exam an indicator of future teacher performance?
10. You cannot become a teacher in South Carolina without passing the Praxis II Content exam. Discuss your feelings about this requirement.

### **After Intervention Follow-up Questions**

1. Explain the impact of the intervention workshops on your retake of the Praxis II Content exam?
2. What are some strategies that you would suggest when preparing for the Praxis II Content exam?
3. If there was one thing that you could change/improve about the Praxis exam, what would it be?
4. What suggestions / recommendations do you have to offer to those preparing to take the Praxis II Content exam?
5. What other pertinent information would you like to add about the exam or workshops?
6. What are your next steps (retake the exam, continue teaching, etc.)?

## Appendix F. Participant Coded Responses

The following is an outline of participant responses, based on the three initial codes (*Exam Format, English, Alternative Certification*) with the highest number of occurrences.

### *Exam Format:*

Cindy: *“It was awful, and I wasn’t prepared for the amount of time the constructed response would take. They only give you 30 minutes to answer two long questions, so I know I might need help with that time part.”*

Tanisha: *“The first time I took the exam, I didn’t study and that caused me to not be ready for the way the test was formatted. I didn’t like the questions that had all of the above as a choice because if I missed one then I got the whole question wrong.”*

Janelle: *“I didn’t know what to expect. It wasn’t like the Praxis I exam that included reading, writing, and math. I thought I did good on the Reading part, but the stuff about ELL was hard.”*

Kevin: *“I did study and reviewed my notes from school and the flash cards I bought online. My scores were better than any other time I took the test. I think I need help with teaching strategies because I remember at least three questions from the test”.*

Kelly: *“I have taken the exam so many times that I get the format, but I still struggle and can’t pass. I struggle with the longer reading passages and constructed response section.”*

Eddie: *“The hardest part is always the writing component with creating a lesson. I put a lot of details and have been reviewing the content, but my score is low in that area.”*

### *English:*

Tanisha: *“English was my favorite subject in school, but I decided to major in Political Science because I didn’t know what to do with an English degree. My program looked at my transcripts and put me in a high school teaching English.”*

Janelle: *“I have a professional English degree from a local HBCU.... I was originally an English Education major, but was just ready to graduate and didn’t want to fight to get into the Education program... I had enough English classes there.”*

Kevin: *"I knew since I was little that I was going to be a teacher, and I chose my local HBCU because they offered me a scholarship from the church... I took a lot of English courses there, and graduated with an English degree, but I didn't pass the Praxis I Core until after I graduated."*

Kelly: *"I have always been good at English and got an associate's degree, and then I decided to pursue a bachelor's degree in English."*

#### *Alternative Certification:*

Cindy: *"I entered my alternative certification program, Teach for America, to try a different career path. When I relocated to SC, the program helped me find a rural school. They told me I was going to teach middle school ELA. My contact person emailed me to check if I had passed the test with my degree in French."*

Tanisha: *"I joined my alt cert program because I planned to move to Oklahoma to teach, but then COVID hit, and my program said I needed to pick something local. I chose the nearest school district, but they only had 2nd grade and 11th grade English available. I chose 11th grade English, but I have a political science degree. My program did have virtual meetings every other month, but it didn't help with my specific class or the Praxis exam."*

Janelle: *"My program is Teachers of Tomorrow. They did help me with teaching stuff in the beginning. I didn't get a lot of help with the Praxis exam from them, but I know I need help. I have been trying to study on my own."*

Kevin: *"I know that I want to be in the PACE program because it is the cheapest and only requires for me to pass my Praxis, but they didn't tell me any ways to study for the test. My family encourages me to keep going until I get accepted into the program. I know that I want to be a teacher so now I am getting my doctorate degree."*

Kelly: *"I have been struggling with this test for years. Some of the teachers and principal at my school said that I should use my English degree to join Teachers of Tomorrow. It was good in the beginning, but my contact person hasn't been any help with me taking the Praxis test. This is my last chance to pass or I will have to quit the program."*

Eddie: *"I joined the MAT program after others told me about their pathway to teaching PE. My advisor has been supportive, but I still can't seem to pass the Praxis. I have taken the test at least five times, but my score does improve each time."*

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