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A Correlational Study of Academic Locus of Control, Study Preparation, and the Praxis II

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A Correlational Study of Academic Locus of Control, Study Preparation, and the *Praxis II*

by

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Dr. Beth Kania-Gosche, Dissertation Chair	11-2-18 Date
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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

For school counseling candidates, the culmination of the pathway to state certification and/or licensure lies in a passing score on a standardized test. Within the state of Missouri, this test is the *Praxis II*. Within the state of Missouri, an achievement gap on the pass rates of the *Praxis II* existed between Caucasian and African American students. Participants in this study, both male and female, attended a Midwestern, private university and spanned a wide range of ages, all older than 20 years. The participant population included African American and Caucasian students. This dissertation sought to explore potential contributors to the gap in passing scores on the *Praxis II*. Using a quantitative approach, the researcher investigated the relationship among students' perceptions regarding control over academic outcomes (locus of control) in relation to study preparation, *Praxis II* test results, and a variety of variables. The results from this study indicated that there were not significant relationships amongst locus of control, planned study preparation, actual study preparation, and *Praxis II* scores. Two variables, age and ethnicity, were identified as predictors of *Praxis II* scores. The research proposed implications for school counseling programs, as well as faculty within those programs to develop learner-centered approaches to teaching, including Universal Design for Learning and inclusive teaching.

Keywords: achievement gap, locus of control, study preparation, *Praxis II*, school counseling

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Chapter One: Introduction

Both public K-12 schools and higher educational institutions used standardized testing to assess students' competence and progress. Such testing tended to make educational institutions rely upon one score to determine whether students graduated and obtained licensure, and/or certification within their field of study. One such example of the aforementioned use of standardized testing was the *Praxis II* Subject Assessments, published by Educational Testing Service (ETS). The *Praxis II* Subject Assessments was a series of standardized tests used to measure subject-specific knowledge that K-12 educators would teach. One test of the *Praxis II Series*, the *Praxis II: Professional School Counselor (0421)* was used to measure student knowledge of counselor functions and skills related to school counseling (Educational Testing Services [ETS], 2012). Until September 1, 2012, those seeking certification as a school counselor in the state of Missouri were required to score equal to or higher than the Missouri qualifying score on the *Praxis II*. During that time, students took the *Praxis II: School Guidance and Counseling (0420)*. The qualifying score for the *Praxis II* at that time was 164 (Missouri Department of Elementary and Secondary Education [MODESE], 2012). Students that completed satisfactory coursework in counseling but were unable to pass the *Praxis II* could not apply for certification as a school counselor within the state of Missouri.

In September of 2012, the ETS updated the *Praxis II* test. Formerly called *Praxis II: School Guidance and Counseling (0420)*, the new *Praxis II* test, *Professional School Counselor (0421)*, was designed to better measure the role and responsibilities of school counselors. According to ETS (2012), the new version of the test measured "whether entry-level school counselors have the standards-relevant knowledge, skill, and abilities

believed necessary for competent professional practice" (p. 1). Among the changes, the most notable was the elimination of the Listening section of the test, changing the structure of the test. The Listening section on the *School Guidance and Counseling (0420)* test originally included a set of 40 questions that required test-takers to listen to a tape of client responses, client-counselor interactions, and counselor responses. Students were provided multiple-choice answers to address the items presented during the audio portion of the test.

In September of 2014, requirements for certification as a school counselor in the state of Missouri underwent additional modifications. The Missouri Department of Elementary and Secondary Education (MODESE) began requiring a passing score on the Missouri Content Assessment, in place of the *Praxis II*. Exceptions were given to students who had a passing score on the *Praxis II* on or before August 31, 2014. Degree candidates were given until December 2016 to complete their coursework and use their *Praxis II* scores for certification purposes. Students seeking school counseling certification in the state of Missouri then took the Missouri Content Assessment (MCA): Counselor (056) test of the Missouri Educator Gateway Assessments (MODESE, 2014).

While the state of Missouri no longer required the *Praxis II: Professional School Counselor*, 22 states continued to use the test for certification purposes and required a passing score ranging from 151 to 164 (ETS, 2015). The *Praxis II: Professional School Counselor* content related to four major, overarching categories: Foundations, Delivery of Services, Management, and Accountability (ETS, 2012). The Foundations section of the test included test items that addressed the history and role of the professional school counselor, human growth and development, ethics, and legal issues. The Delivery of

Services section of the test included test items that addressed guidance and counseling, as well as consultation and collaboration. The Management section of the test included test items that addressed the management and organization of a comprehensive professional school counseling program, as well as the use of technology for program development and evaluation. Finally, the Accountability section included test items that addressed assessment, methods of program evaluation, and the use of data analysis to enhance a comprehensive school counseling program. Table 1 depicts the content categories of the *Praxis II: Professional School Counselor (0421)* and the number/percentage of questions applicable across all school levels.

Table 1
Professional School Counselor Test at a Glance

Content Category	Approximate Number of Questions	Approximate Percentage of Examination
Foundations	22	18%
Delivery of Service	54	45%
Management	18	15%
Accountability	26	22%

Note: ETS (2012).

The MODESE (2014) reported that the new MCA for school counseling candidates aligned with state and national standards. The test was computer based and included 100 multiple-choice questions that covered three school counseling domains: Student Development, Learning, and Guidance, Comprehensive School Counseling, and Professional Knowledge and Practice. The Comprehensive School Counseling domain constituted 40% of the test while the Student Development, Learning, and Guidance and Professional Knowledge and Practice domains made up 30% of the test. Then-currently,

school counseling candidates must earn a 220 to pass the test (Missouri Educator Gateway Assessments, 2015).

In November of 2016, the Missouri Advisory Board for Educator Preparation, who served as an advisor to the State Board of Education and the Coordinating Board for Higher Education, created the Equity Task Force and charged the task force with investigating the inequalities in K-12 education and teacher preparation. As part of the task force review, an investigation began regarding the "disparities that persist between White and Black teacher candidate performance on the Missouri Content Assessments" (MODESE, 2016, para. 1). While test content may be aligned with national standards, the issue of students of color failing to pass the exam continued to exist.

The Problem

Failure to pass the *Praxis II* could result in consequences that affected not only the individual student, but also the schools in which they may eventually serve and the universities where they completed a school counseling preparation program. School counseling candidates who are unable to successfully pass the *Praxis II* are unable to become certified as school counselors in the state where they wished to practice. For many states, the data demonstrated that this often resulted in an underrepresentation of minorities relative to the population of students. Similar trends were prevalent in the teaching workforce with minority representation among the teaching workforce half the representation among the student population (Nettles, Scatton, Steinberg, & Tyler, 2011).

In April of 2010, the Counselor Educator Committee of Missouri, comprised of college and university faculty and staff responsible for educating school counselors in Missouri, examined the average scores obtained by students throughout the state, specific

to each university/college represented by the test-takers. In the state of Missouri, 13 schools offered master's level programs for students who intended to become counselors in primary or secondary schools. For the state of Missouri, scores were reported to MODESE.

During the presentation of scores dated from September 1, 2008, to August 31, 2009, a concern was noted regarding the gap in scores on the *Praxis II: School Guidance and Counseling* (0420) between African American and Caucasian students. Institutionally, only 68% of African American students passed the *Praxis II* on the first attempt, compared to 98% of Caucasian students. In Missouri, 61% of African American students passed as compared to 96% of Caucasian students. Within the 19 states that required a qualifying score on the *Praxis II* to become a certified school counselor at that time, 56% of African American students passed as compared to 95% of Caucasian students (Hairston, G., 2010, slide 84). Nationally, the average score of *Praxis II: School Guidance and Counseling* test takers was 660 with scores typically ranging from 620 to 700 (Hairston, 2010, slide 85). Concern regarding this initial gap contributed to the necessity of this study.

Issues of equality in standardized testing. The most prominent issue regarding the use of standardized testing was perhaps the alarming achievement gap between African American students and Caucasian students (Jencks & Phillips, 1998; Lynch & Engle, 2010). Over the years, the concern regarding the achievement gap in standardized testing among ethnic groups continued to grow among researchers and educators. Then-currently, on every level of standardized testing, African American students as a whole scored lower than Caucasians on vocabulary, reading, and mathematics tests, as well as

tests that measured an individual's scholastic ability and intelligence (Nettles et al., 2011). This achievement gap began to appear in children before kindergarten age and continued into and through adulthood (Jencks & Phillips, 1998; Lynch & Engle, 2010). Within the realm of higher education, the achievement gap was affecting the rate at which African American students graduated from colleges and universities. In general, at the undergraduate level, African American students were earning their bachelor's degrees at rates 20 percentage points below their Caucasian peers (Lynch & Engle, 2010). Despite many efforts to close the gap with federal legislation, state legislative acts, and various programs, the achievement gaps persisted. Though the gap narrowed since 1970, African Americans typically still scored below 75% of Caucasians on standardized tests (Jencks & Phillips, 1998). Identifying chief contributors to the achievement gap was necessary to help educators and test publishers eliminate the gap.

A comprehensive understanding of the achievement gap between African American students and Caucasian students may help reduce racial inequality in educational success, which may eventually lead to different occupational and life outcomes for minority students. As seen in the case of the *Praxis II*, minority students who did not achieve a passing score did not progress in the school counseling field, limiting the number of minorities represented in the field.

Additionally, an increase in African American certificated/licensed school personnel would fulfill the need to have a more diverse teaching force in schools. Then-current demographic information indicated that while our school-aged population continued to grow in diversity, teaching workforce remained predominately White, middle-class, and female (Bennett, McWhorter, & Kuykendall, 2006; Latham, Gitomer,

& Ziomek, 1999). This demonstrated an urgent need to recruit more qualified minority individuals into the teaching workforce to reflect that of the school-age population and provide minority students with role models with whom they could identify.

Testing fairness. In an essay written by Grant (2004), he referred to the use of standardized tests in schools as tools of oppression and privilege. Such words still resonated with some minority students as well as professionals who were inherently opposed to the use of a single standardized test to award certification and/or licensure to students who otherwise met all qualifications to become certified school counselors. According to Bennett, McWhorter, and Kuykendall (2006), "No single test can be universally applicable or equally 'fair' to all cultures, and every test tends to favor individuals from the culture in which it was developed" (p. 541). Such a statement required educators to ask if it was even possible to create a test that was free from cultural bias and its influences. Critics of standardized testing indicate it is not possible (Bennett et al., 2006).

Publishers of standardized tests continually emphasized the importance of assessment fairness in how they designed and updated existing instruments in order to maintain educational equality. Researchers, however, struggled to balance the phenomenon of achievement gap with publishers' remarks (Jencks & Phillips, 1998). While identifying chief contributors to the achievement gap was necessary to help educators and test publishers eliminate it, examining the practices and perceptions of African American, as well as Caucasian students, who were preparing to take a standardized test may prove to be beneficial for students. In addition, findings regarding student practices and perceptions may provide insight to university programs preparing

students who would eventually be required to pass a standardized test for licensure and/or certification.

Financial barriers. Adding to the financial burden of higher education was the student loan debt that accumulated due to the pursuit of a degree that may not result in licensure/certification should the student not successfully pass the *Praxis II*. Then-currently, students enrolled at a private, nonprofit institution for a Master of Arts degree were charged between $16,960 and $21,680 on average to cover the cost of the tuition and related fees (U.S. Department of Education, 2018, Table 330.10).

The majority of African American students sought student loans to assist with college tuition. Specifically, 77% of African American students borrow federal student loans as compared to 57.5% of Caucasian students (Safier, 2018). In addition to higher rates of borrowing, African American students typically graduated with higher amounts of student debt. On average, African American students graduated with the "highest amount of debt from public colleges in 2012 at $29,344" (Safier, 2018, para. 9). It is likely that the average student loan debt increased since 2012.

African American students also tended to have the lowest graduation rates when compared to other races. Among bachelor seeking students in 2008, "just 21% of Black students graduated from college in four years. Compare that to the 30% of Hispanic students, 44% of white students, and 48% of Asian students who graduated within that time frame" (Safier, 2018, para. 25). This meant that African American students were more likely to borrow to cover the cost of college, but often did not complete the degree for which they borrowed money.

Compounding the issue of student loan debt was average household income for minorities. On average, Caucasian households earned $26,000 more than African American households. Repaying student loans became even less feasible when family members were unable to assist in repayment and individuals were unable to move up within their career to earn a higher paying salary, resulting in loan default (Safier, 2018).

College tuition alone did not include the additional costs students typically incurred while enrolled in a graduate program, such as student fees, textbooks, and school supplies, etc. Prior to the introduction of the MCA test, students who failed the *Praxis II* were required to pay to retake the test, which resulted in multiple test fees. Each test attempt required a $115.00 fee for the student (ETS, 2013). With the then-current cost of higher education and college and university fees, the expense of taking an exit exam could appear steep, especially when the student continued to struggle with passing the test.

Student attitudes and perceptions toward testing. Beyond the observed evidence of concerns related to testing, the achievement gap, and the financial burden of higher education, the researcher had anecdotal evidence that some students possessed the belief that study preparation had no bearing on the *Praxis II* test results. This evidence caused the researcher to question whether such beliefs had bearing on actual *Praxis II* test results and whether such beliefs tied to the students' ethnicity or gender. An investigation was warranted regarding students' perception regarding their control over academic outcomes, study preparation, and related variables.

University accreditation. As part of university accreditation, the school counseling program at the Midwestern university was required to report a variety of data

annually, including the number of program completers, student entrance and exit grade point average, and the first-time pass rate for students who took the *Praxis II*. During the 2011-2012 academic year, the Midwestern university, were this study took place, reported 77.5% of school counseling candidates enrolled in their program successfully passed the *Praxis II* on the first attempt (Polzin, 2012).

Failure to pass tests required by the state for certification did not only affect the student, but could also have an effect on universities' accreditation. Universities who were unable to demonstrate they were adequately preparing students for the school counseling profession ran the risk of losing accreditation and/or additional negative consequences imposed by accrediting bodies within the region or program discipline.

Purpose of the Study

After exploring possible research options, the researcher discovered that students' perceptions regarding control over academic outcomes may be determined by where the student placed the locus of control. In fact, research indicated that locus of control was one of the most internal motivational factors related to academic success (Gifford, Briceno-Perriott, & Mianzo, 2006). For the purpose of this study, the researcher investigated academic locus control in relation to study preparation, *Praxis II* test results, and a variety of variables, including student gender and ethnicity.

Little research existed regarding the correlation between internal and external loci of control and standardized testing. While research investigated the correlation between locus of control and academic achievement, the area of standardized testing, especially within the graduate student population, was largely ignored. Through this study, the

researcher hoped to expand the body of knowledge regarding locus of control within the graduate student counseling population in relation to standardized testing.

The purpose of this research was to identify 1) whether students enrolled in the school counseling program field placement courses at a Midwestern university identified as having internal or external loci of control; 2) whether locus of control correlated with students' anticipated study preparation versus actual study preparation; 3) whether locus of control correlated with *Praxis II (0421)* results; 4) whether anticipated study preparation versus actual study preparation correlated with *Praxis II (0421)* results; and 5) to what degree the aforementioned variables can predict performance on the *Praxis II (0421)* results.

Rationale

While a variety of studies document locus of control and its role in student achievement, no study, which focused on graduate students within school counseling licensure/certification programs was located. This research may aid in identifying if and how locus of control related to school counseling students' plans to study for the *Praxis II*; how they in fact studied for the *Praxis II*; how they performed on the *Praxis II*; and whether gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, and preparation activities were predictors of *Praxis II* results.

An understanding of academic locus and its relation to the aforementioned variables may help the faculty of school counseling programs understand the preparation strategies of students and their effects on the outcome of *Praxis II* scores. The results of the study may aid the faculty in implementing or redesigning exam preparation measures

for students. Such research can also inform faculty as to what role they may play, if any, in the support and guidance of students in preparation for the exam.

For students enrolled in school counseling programs, this study may alert them to test-taking trends within the student population regarding the *Praxis II*. Implications of the study may also serve as motivation for students to approach the exam in a different manner, based on the trends for their gender, ethnicity, and age. It could encourage students to modify their preparation strategy or encourage them to develop a preparation strategy should they learn that a particular number of hours of preparation, specific preparation activities, or a certain location of study preparation were all factors that proved to be beneficial to most of those who participated in the study.

Variables. For the purpose of this study, the variables the researcher considered included the participants' gender, ethnicity, age, study preparation, exam delivery, location of study preparation, hours spent in preparation, preparation activities, academic locus of control, and *Praxis II* test results. Table 2 depicts the variables included in this study that other studies also included regarding locus of control and its relation to standardized testing or academic performance, providing additional rationale for the variable selection. Several variables were included in this study due to the curiosity of the researcher.

Hypotheses

Research hypothesis one. There is a relationship between locus of control and anticipated study preparation for the *Praxis II*, as measured by the Academic Locus of Control scale and the Intended *Praxis II*: Professional School Counselor Preparation Survey.

Table 2

Study Variables

Variable	Source
Gender	Findley, M.J., & Cooper, H.M. (1983) *Locus of Control and Academic Achievement: A Literature Review; Elpus, K.* (2015). *Music Teacher Licensure Candidates in the United States. Journal Of Research In Music Education*
Ethnicity	Findley, M.J., & Cooper, H.M. (1983) *Locus of Control and Academic Achievement: A Literature Review; Elpus, K.* (2015). *Music Teacher Licensure Candidates in the United States*
Age	Findley, M.J., & Cooper, H.M. (1983) *Locus of Control and Academic Achievement: A Literature Review; Elpus, K.* (2015). *Music Teacher Licensure Candidates in the United States.*
Study preparation	Researcher curiosity
Exam delivery	Researcher curiosity
Location of study preparation	Researcher curiosity
Hours spent in preparation	Researcher curiosity
Preparation activities	Researcher curiosity
Academic locus of control	Findley, M.J., & Cooper, H.M. (1983) *Locus of Control and Academic Achievement: A Literature Review;* Baron, J., Cobb-Clark, D. (2010) *Are Young People's Educational Outcomes Linked to their Sense of Control?*
Praxis II test results	Researcher curiosity

Research hypothesis two. There is a relationship between locus of control and actual study preparation for the *Praxis II,* as measured by the Academic Locus of Control scale and the Actual *Praxis II*: Professional School Counselor Preparation Survey.

Research hypothesis three. There is a relationship between locus of control and *Praxis II* results, as measured by the Academic Locus of Control scale and the obtained score on the *Praxis II* exam.

Research hypothesis four. There is a relationship between anticipated study preparation and *Praxis II* results, as measured by the Intended *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

Research hypothesis five. There is a relationship between actual study preparation and *Praxis II* results, as measured by the Actual *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

Research hypothesis six. Gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, and preparation activities are predictors of *Praxis II* results.

Limitations

Including participants from a single university within a specific discipline may affect the results of this study and limit generalizability. A difference in results could exist if other universities and graduate students from various disciplines had participated in the study. Additionally, the participating university was a private, liberal arts university located in the Midwest. Additional research including a different locale or orientation may yield dissimilar results.

This study's participants were also limited in ethnicity. Due to the university population, the researcher investigated differences between the two most common ethnicities represented. This study may yield different results should a researcher include

a more diverse student population. Because of the ethnicities represented in this study, the results were also limited to generalizability within more densely diverse universities.

The researcher surveyed participants at the beginning of the semester regarding their intended preparation for the *Praxis II* and on a weekly basis regarding their actual preparation for the *Praxis II*. Participants were surveyed on a weekly basis to provide the best opportunity for students to accurately depict the week's preparation activities; however, because the information collected through the surveys was strictly based on what the student reported, the accuracy of the student report was subject to the student's recollection and honesty in responses. Unbeknownst to the researcher, participants may have wished to distort their answers to survey questions in an effort to exhibit a specific guise as factual. The data captured by the surveys must be interpreted with this limitation in mind.

A concern regarding participant honesty in responses results from the researcher's potential relationship with some of the participants. At the time of data collection, the researcher was an adjunct professor within the school counseling program; therefore, students may have reflected their preparation inaccurately, as though they spent more time in preparation for the *Praxis II* than factual. Some participants may have had the researcher as a professor while enrolled in the program or may be aware that they would have the researcher as a professor in the future. Participants may prefer to demonstrate a different level of preparation due to their interaction with the researcher as a professor or their interaction with the department as a whole.

This study was dependent on weekly involvement from participants; however, due to school breaks and participant absences from class, the researcher often had to

contact absent participants to collect weekly survey responses. The researcher eliminated data of individuals who failed to complete a total of four or more surveys conducted on a weekly basis. This resulted in the loss of data due to participant absences and failure to complete weekly surveys.

This study took place for the duration of a year, including the spring semester of the 2012-2013 academic year and the fall semester of the 2013-2014 academic year. Conducting the same study for an extended period of time, to include more participants, may lead the researcher to establishing more and/or different trends among the student body. Investigating such variables over an extended period of time may also allow the researcher to identify whether the variables interacted contrarily with a different group of participants.

While the instrument used to measure participants' academic locus of control was found to demonstrate a great deal of reliability and validity, the researcher created the Intended *Praxis II*: Professional School Counselor Preparation Survey and the Actual *Praxis II*: Professional School Counselor Preparation Survey used in this study. While the surveys were designed to collect data regarding the participants' preparation for the *Praxis II*, the lack of established reliability and validity must be taken into consideration as a limitation of this study.

It is also possible that because participants were asked to share about their weekly preparation for the *Praxis II* that the survey served as a reminder for participants to prepare for the exam, thereby changing their weekly responses. In this study, it is possible that because participants were reminded on a weekly basis to complete a survey regarding their study preparation, their behavior changed. In social research, the

Hawthorne Effect may explain this potential shift in behavior. Though an understanding and definition of the Hawthorne Effect may vary in different disciplines, within social research, it was commonly defined as "an influence that can occur in experiments when subjects know they are being studied and change their behavior as a result" (Chiesa & Hobbs, 2008, p. 69). In this study, the Hawthorne Effect may have been an underlying variable that indirectly influenced participant preparation and perceptions.

Finally, over the course of this research, the test by which institutions of higher education measured successful completion of a school counseling program changed several times. Due to the changes in the *Praxis II* content by the ETS and the subsequent change from the *Praxis II* to the MCA test by MODESE, the *Praxis II* results included in this research may be limited in their application to the MCA test.

Definition of Terms

The term *locus of control* is an individual's belief regarding his or her control over outcomes in life (Rotter, 1954). In Rotter's original research, he distinguished between an internal and external control of reinforcement. Rotter explained that outcomes of an event or action were reinforcements that individuals understand differently (as cited in Marks, 1998). Individuals with an *internal locus of control* are said to believe that positive and negative outcomes in life were due to the individual's behavior and often perceived as dependent on the individual's ability. Such individuals tended to accept responsibility for their behavior and outcomes. Those with an *external locus of control* are said to believe that outcomes in life were dependent on luck, chance, or fate; thereby projecting blame on other individuals, circumstances, or events (Gifford,

et al., 2006). In this study, *academic locus of control* refers to an individual's belief about academic outcomes.

Praxis II was a series of standardized tests used to measure subject specific knowledge that K-12 educators would teach. One test of the *Praxis II Series*, the *Praxis II (0421): Professional School Counselor*, was used to measure student knowledge of counselor functions and skills related to school counseling. Successful completion of the *Praxis II: Professional School Counselor* was required for school counseling certification in Missouri until September 1, 2014 (ETS, n.d.).

Students enrolled in the Midwestern university's school counseling program were required to complete two semesters of what was refered to by the university as 'Field Placement.' During Field Placement, students worked in a school setting under the supervision of a certified school counselor to learn the roles and responsibilities of a school counselor. In addtion to the field experience, students were required to attend the Field Placement course on a weekly basis during the semester.

Conclusion

This study sought to determine whether relationships among a variety of variables existed with respect to participants' academic locus of control, gender, ethnicity, age, study preparation, exam delivery, location of study preparation, hours spent in preparation, preparation activities, and *Praxis II* test score. By investigating these relationships, the researcher hoped to gain insight into how the above-mentioned variables interacted, if at all.

Chapter One revealed the concerns regarding student failure to pass the *Praxis II*, including evidence of an achievement gap among Missouri school counseling candidates

seeking certification as a school counselor. Initial review of *Praxis II* scores from September 1, 2008 to August 31, 2009 indicated significant disparities in pass rates between African American and Caucasian students. Such scores prompted the researcher's curiosity and need for investigation.

Upon further study, the researcher discovered other issues and potential contributors to the achievement gap within standardized testing. Specific issues discussed in Chapter One included issues of equality in standardized testing, testing fairness, student attitudes and perceptions toward testing, the financial barriers that many students face, and the impact of standardized testing on university accreditation. Additionally, the researcher had anecdotal evidence that some students possessed the belief that study preparation had no bearing on the *Praxis II* test results. This led the researcher to explore whether perceptions of testing affected plans for test preparation, how students studied, and whether there was a direct relationship to *Praxis II* scores. Research suggested that locus of control, a psychological construct, was one of the internal motivational factors that was most related to academic success (Gifford et al., 2006).

Little research existed regarding locus of control within the graduate school counseling student population. For this purpose, the researcher chose to include locus of control, along with several other variables as the foundation for this study. This research will aid university faculty in developing a more thorough understanding of variables that may influence *Praxis II* and assist with a foundation for developing proper *Praxis II* preparation strategies that may be included in a counseling program. Additionally, this research will aid school counseling students with an understanding of how variables

within and outside of their control may contribute to their success or failure on the *Praxis II*.

Chapter Two: The Literature Review

Achievement Gap

Literature regarding the achievement gap among the Black and White population abounded at the time of this writing. Research indicated that a gap between these two races of people existed for some time in the United States of America. Barton and Coley (2010), in a report regarding causes of the achievement gap, implied the long-living history of such an issue by stating, "The gap is as old as the nation itself" (p. 2). Historically, perhaps reflecting the nature of the country itself, the achievement gap affected all levels of education, including K-12, as well as higher education. One such case of the achievement gap effect on higher education was the *Praxis II*.

In 2010, Barton and Coley published a report regarding changes in the size of the achievement gap between the Black and White populations, with research studies dating back to the 1970s. The report also addressed periods of time when progress took place to narrow the gap and when the narrowing began to halt. The gap was specifically investigated among K-12 students.

During the 1970s, the United States experienced the largest reduction in the achievement gap between the Black and White populations. In this period, competency testing was minimal in each state, and strides were taken to reduce the average class size; however, Barton and Coley (2010) indicated challenges in attempting to determine whether specific changes to practices had direct impact on the narrowing of the gap or if they happened naturally or through some other uninvestigated factor. In their report, Barton and Coley (2010) examined the impact of family demographics, health/nutrition of low-income families, course taking/tracking, desegregation, class size, and minimum

competency testing on the narrowing of the gap. While these factors appeared to be important and impact the achievement gap, the authors were unable to conclude these elements had direct impact on the narrowing of the gap, due to a lack of proper evidence to follow up the initial research in 2010 (Barton & Coley, 2010).

Literature demonstrated that the gap in academic achievement began far earlier than in the process of earning a college degree. At the high school level, African American students were earning high school diplomas at a lower rate than their Caucasian peers. In 2012, only 73% of African Americans in Missouri were earning their high school diploma, as compared to 89% of their Caucasian peers (Ginder, Kelly-Reid, & Mann, 2018, table 104.10). In a similar article by Barton and Coley (2009), the authors expanded on additional factors that may have contributed to the achievement gap that involved an individual's background. The authors discussed factors, such as birth weight, parent participation in a child's education, parent-child ratio, students' perceived safety at school, and other factors that began at birth and may have had a home and school connection. Barton and Coley (2009) argued that minority students often had very different life experiences than majority students, leading to disadvantages in school and adding to the factors that may contribute to the achievement gap. The authors advocated for equal access to quality education for all students, as well as a focus on the challenges students faced outside of the classroom (Barton & Coley, 2009).

Achievement gap within higher education. Within higher education, 40% of African American students completed their degree requirements and graduated within six years, as compared to 62% of Caucasian students (Minding the Gap, 2013, p. 1). In 2018, the National Center for Education Statistics reported the enrollment of African

American students in undergraduate programs continued to decline; however, enrollment of African American students in graduate programs increased. Then-currently, African American students made up 11.7% of the graduate student population (Ginder, Kelly-Reid, & Mann, 2018, table 306.10.); however, the success of African American students enrolling in higher education was questionable. "At the college level, Black and Latino students experience lower graduation rates, take longer to complete their degrees, and have lower average grades than do White or Asian students" (Martin, Spenner, & Mustillo, 2016, pp. 617-618).

Such statistics indicated the urgency to investigate barriers to success for African American students who enrolled in degree programs, but were unable to complete a college degree. Failure to alleviate the causes of retention issues among African American students only contributed to the achievement gap in higher education. Furthermore, poor retention of African American students at the undergraduate level meant fewer students matriculated into graduate programs, compounding the lack of diversity in the teaching workforce.

As younger generations continue to increase in diversity, the demand for a diverse educator workforce in the United States will grow. Barna's research indicated that Generation Z (individuals born between 1999 and 2015), those then-currently in their teenage years, was the most ethnically diverse generation yet (as cited in Barna Group & Impact 360 Institute, 2018). Additionally, Generation Z was also the second largest generation alive at the time of this writing, following Millennials (Barna Group & Impact 360 Institute, 2018). Not only would Generation Z students be looking for educators of similar ethnic backgrounds in their classrooms and schools, but as Generation Z aged,

institutions of higher education would be welcoming a more diverse student body. This required that higher education institutions determine how to ensure the success of all students, especially minorities, as well as how to diversify the racial makeup of their faculties.

Perhaps the most visible consequence of the achievement gap was the shortage of minority teachers, school counselors, and administrators in the workforce across the country. Failure to pass standardized tests for licensure and/or certification was not the only obstacle facing minority students. Madkins (2011) cited that there were several reasons as to why researchers believed such a shortage existed. In addition to standardized testing requirements that minority candidates struggled to meet, Madkins (2011) also suggested that limited educational opportunities and more profitable careers for minority students contributed to the disparity between Caucasian and African American teachers. This indicated there were many elements to the achievement gap yet to be unpacked, especially within higher education and graduate programs.

Faculty response to achievement gap in higher education. Research was consistent in concluding a multitude of factors existed that likely contributed to the achievement gap (Barton & Coley, 2009; Gewertz, 2004; Gillian-Daniel & Kraemer, 2015; Steele, 1997). Gillian-Daniel and Kraemer (2015) published that family demographics, stereotype threat, and non-cognitive experiences were likely contributors to the achievement gap and often had long-lasting effects on student performance, beginning at young ages and progressing well into college-aged years. Gillian-Daniel and Kraemer (2015) proposed that the structure, culture, and faculty members' lack of

preparation for teaching within institutions of higher education also contributed to the achievement gap.

Specifically, Gillian-Daniel and Kraemer (2015) stated several elements that contributed to the gap in higher education. For students, Gillian-Daniel and Kraemer (2015) suggested "stereotype threat, early cognitive and non-cognitive experiences, family structure, K–12 educational disparities, identity development, digital divide, token status, microaggressions, and few positive role models in the disciplines" (p. 33) all may have differing effects on disadvantaged students' academic achievement. Gillian-Daniel and Kraemer (2015) also posited the following effect on the disadvantaged student with regard to an instructor: "unconscious bias, white privilege, degree of student-centered instruction, assessment style, degree of multicultural knowledge, use of culturally relevant pedagogy" (p. 33). Finally, the institution was seen as a contributing factor to the lack of success disadvantaged students experienced due to the following: "[lack of] faculty diversity, admissions and standardized testing, access to majors, class size, campus climate, campus support programs" (Gillian-Daniel & Kraemer, 2015, p. 33).

To address these issues within higher education, faculty at the University of Wisconsin-Madison, piloted faculty development specific to the achievement gap between majority and minority students. With the foundational belief that "the single largest factor that affects student learning that is under control of an institution is instructor quality" (Gillian-Daniel & Kraemer, 2015, p. 32), the University of Wisconsin-Madison sought to create dialogue regarding the achievement gap in higher education. In addition, the program sought to review literature pertaining to teaching diverse student populations and implement best practices into classrooms across disciplines.

Based on the varying aspects of faculty development, Gillian-Daniel and Kraemer (2015) found the following pedagogical practices to be most effective when working with undergraduate, disadvantaged students:

1) Include culturally relevant content;
2) Address students' feelings of intimidation by faculty;
3) Connect students with opportunities for supplemental instruction;
4) Teach effective group-work strategies to promote success in the course;
5) Practice inclusive teaching strategies;
6) Include teaching assistants in the process of reform. (pp. 37-38)

While this type of faculty development served only as an initial step for the institution to address the achievement gap, preliminary evaluation indicated, the majority of faculty members who participated indicated their understanding of the achievement gap had changed. More specifically, faculty cited their understanding of inclusive teaching practices had expanded and had practical strategies moving forward to implement such practices into their teaching and classroom (Gillian-Daniel & Kraemer, 2015).

As for long-term goals with respect to faculty development, Gillian-Daniel and Kraemer (2015) listed the outcomes displayed on Table 3. The authors acknowledged that the process of resolving and providing solutions to the achievement gap on a university campus would take time. In addition to involving faculty in the dialogue regarding the achievement gap, Gillian-Daniel & Kraemer (2015) noted that this project was an undertaking of the entire university, involving staff, administrators, and had informed university strategic planning. Lastly, improving the educational experience for minority

students may improve the educational experience for all students, making such university-wide initiatives incredibly worthwhile.

Table 3
Anticipated Outcome of Faculty-Focused Development Regarding Teaching with an Emphasis on Disadvantaged Students' Academic Achievement

Institutional position/role	Anticipated outcomes
Disadvantaged undergraduates and their non-minority peers	• improved end-of-semester grades • improved attitudes about classroom climate and learning
Graduate students, postdocs, and graduate teaching assistants	• increased awareness of the achievement gap • training on teaching with a focus on disadvantaged-student achievement • changes implemented in a greater number of courses
Current faculty	• professional development in teaching with a focus on disadvantaged students' academic achievement • greater capacity to effect change via trainings and work with future faculty • greater number of classroom-based projects as a result of enhanced involvement
Departments & colleges	• engaged faculty who are actively focused on this issue • improved student academic achievement • improved disadvantaged students' entry into the major • improved disadvantaged students' retention within the major
Institution	• improved collaboration among campus groups working on this issue • improved graduation rates • improved hiring of graduate students and postdocs

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Faculty development, with respect to teaching diverse learners, was essential on college campuses. In higher education, most faculty were hired because they demonstrated competency within their field and area of expertise, but often lacked adequate teaching background and/or training to teach. Basic pedagogical approaches for

university faculty must be addressed to ensure classroom practices provide appropriate environments for learning, as effective teaching strategies were found to be directly correlated to student achievement (Beckerman, 2010).

The body of research regarding potential contributors to the achievement gap was vast; however, exploring the relationship among variables that may contribute to the achievement gap, as this study investigates, was limited, specifically within higher education. Solutions for the achievement gap were few, because the contributing factors to this disparity were vast. In an effort to determine the extent of relationship between variables contributing to the achievement gap on the *Praxis II*, a more thorough understanding of the *Praxis II*, its development, and its publisher, was necessary.

Praxis II

The *Praxis Series* of tests includes three groups of tests: Subject Assessments (formerly known as *Praxis II*), Principles of Learning and Teaching tests, and Teaching Foundation tests. The *Praxis* test, once required for school counseling candidates, was a Subject Assessment. The Subject Assessments measured an individuals' knowledge using one of two approaches. The first approach included measuring ones' knowledge of a "wide range of subjects across elementary school, middle school, or high school" (ETS, 2010, p. 10). The other approach involved measuring one's knowledge of pedagogy at different grade levels using a case-study approach (typically related to the field of study). The *Praxis II (0421)* was a subject assessment test and involved the case-study approach to measure knowledge of school counseling among those entering the school counseling field upon completion of a graduate degree program.

States that used the *Praxis* Subject Assessments did so as part of the state licensure process. According to the technical manual, the "test provides states with a standardized mechanism to assess whether prospective teachers have demonstrated knowledge believed to be important for safe and effective entry-level practice" (ETS, 2010, p. 10). Additionally, several professional organizations required the *Praxis* as part of their professional certification requirements.

Educational Testing Service

The publisher of the *Praxis Series* tests, ETS, was established in 1947 as a nonprofit. In addition to publishing The *Praxis Series*, ETS administered and scored over 50 million tests annually in 180 countries. K-12 and higher education institutions used tests published by ETS; however, ETS also worked with businesses and governments to conduct research and develop assessments based on need. ETS cited five areas of expertise, including research, assessment development, test administration, test scoring, and instructional products and services. Then-currently, ETS was the "world's largest private educational testing and measurement organization" (ETS, 2016, para. 1).

Test fairness. Test fairness was crucial, especially for tests that carried significant implications for test takers and publishing companies. In cases where a single test could prevent students from entering a desired workforce, it was commonplace for testing fairness to be questioned and challenged by test takers and university and college administrators.

In an effort to hold fairness in testing to a high esteem with regard to test development, design, and scoring, the ETS adopted the *ETS Standards for Quality and Fairness* in 1981. The standards were revised on a regular basis to maintain alignment

with the Standards for Educational and Psychological Testing, published by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. The document outlined 13 standards adhered to by ETS when developing, designing, publishing, or scoring a test, or when providing additional instructional materials. It also outlined the rights and responsibilities of test takers (ETS, 2014).

ETS (2010) stated that the company followed a seven-step process when developing questions to ensure fairness for their test takers. The first step involved defining the objectives by engaging educators, licensing boards, and professional associations in determining the skills and knowledge to be measured by a test. Committee work was the focus of step two. During this phase, committee members (educators and other professionals) reviewed to determine if bias in questioning existed, determined the format of the test, wrote new test questions, and reviewed those already written.

In step three, the committee reviewed questions again to ensure one answer to each question, though open-ended questions underwent a similar review. Following a series of question reviews, a pretest took place as step four for developing test questions. The results from the pretest assisted the committee in reviewing the difficulty of each question, if questions were misleading in some way, whether that should be revised, and if alternative answers should be revised. In step five, through the work of statisticians, the removal of unbiased questions from the test took place. Lastly, the test was assembled with the seventh and final step: a continual review of tests to insure fairness and reliability of each test.

Validity. To ensure the validity of a test, there must be evidence that demonstrated the test "measures what it was intended to measure and that the meaning and interpretation of the test scores are consistent with each intended use" (ETS, 2010, p. 14). Because licensure tests were designed to protect the public from mental, physical, or economic hardship, a test designed to inform licensing decisions must demonstrate that test takers possessed the knowledge necessary for the occupation, and that the test takers could practice such knowledge in a safe and effective manner (ETS, 2010).

The Technical Manual for *The Praxis Series* and Related Assessments, published by ETS (2010), stated "the main source of validity evidence for licensure tests comes from the alignment between what the profession defines as knowledge and/or skills important for safe and effective practice and the content include on the test" (p. 15). To link the occupational content and test content for the sake of validity, ETS sought expert practitioners and stakeholders in the profession to conduct a job analysis to develop an understanding of the necessary occupational knowledge and/or skills.

According to ETS (2010), the evidence-centered design process (or construct-centered approach) was used to develop specific test items on the *Praxis* Subject Assessments. In this type of approach to test item development, test developers identified what factors would reveal the constructs identified in the job analysis and what behaviors would illicit the specific constructs. Messick (1994) explained the concept in the following:

> A construct-centered approach would begin by asking what complex of knowledge, skills, or other attributes should be assessed, presumably because they are tied to explicit or implicit objectives of instruction or are

> otherwise valued by society. Next, what behaviors or performances should reveal those constructs, and what tasks or situations should elicit those behaviors? Thus, the nature of the construct guides the selection or construction of relevant tasks as well as the rational development of construct-based scoring criteria and rubrics. (p.17)

Following initial test development, ETS monitored test validity periodically. Unless warranted by significant advancements in a specific occupation, ETS typically reviewed test validity every five years. Ongoing review required ETS to determine whether test items continued to reflect the then-present-day knowledge and/or skills required for specific occupations (ETS, 2010).

Content and test development. When developing tests or determining if a state was interested in adopting a test, ETS oversaw a rigorous process of test development. According to the ETS Technical Manual (2010), Figure 1 displays the process for test development.

An outline of the steps in Figure 1 includes the following:

- Research national, state, and professional standards and curricula to verify alignment with the claims made for the test and the test takers.
- Recruit and convene a National Advisory Council (NAC) to help develop the job analysis claims.
- Conduct job analysis/content validation survey.
- Reconvene the NAC to develop test specifications and blueprints, using the results of the job analysis survey.

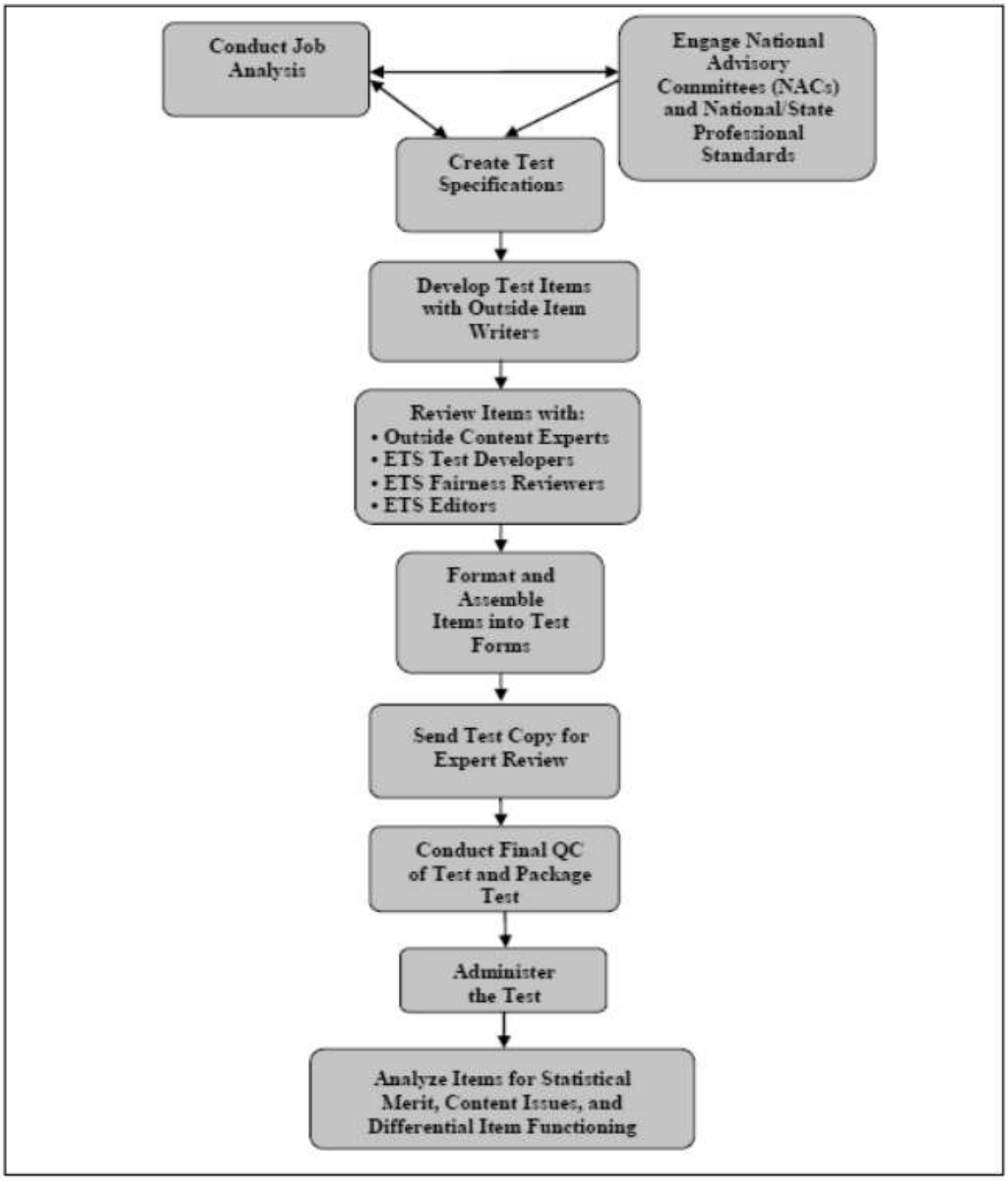

Figure 1. Test development process. (Copyright © 2010 Educational Testing Service. Used with permission.)

- Recruit expert practitioners, who teach the potential test takers and understand the job defined in the job analysis, to write items for the test.

- Develop sufficient numbers of test items to form a pool from which parallel forms can be assembled.
- Review the items developed by trained writers, applying and documenting ETS Standards for Quality and Fairness (2014) and editorial guidelines. Item reviews are also done by practitioners in the field who may not be trained writers but who have the content expertise to judge the accuracy of the items.
- Prepare the approved test items for publication and assemble them into operational forms.
- Send assembled test(s) to appropriate content experts for a final validation of the match to specifications, importance to the hob, and accuracy of the correct response.
- Perform final quality control checks according to the program's standard operating procedures to ensure assembled test(s) are ready to be administered.
- Administer a pilot test if it is included in the development plan.
- Analyze and review test date from the pilot or first administration to verify that items are functioning as intended and present no concerns about the intended answers or impact on subgroups. (pp. 17-18)

While ETS could demonstrate thorough test development, administrators at state level within the Department of Elementary and Secondary Education sought to improve the rigor of exit exams by revisiting the usefulness of tests, like the *Praxis II,* for licensure exams in the state. In an effort to evaluate a candidate's work to demonstrate competency within the discipline, a new standardized test was developed within the state of Missouri.

Missouri Content Assessment

As mentioned in Chapter One, in September of 2014, the standardized testing requirement for certification as a school counselor in the state of Missouri changed. The MODESE began requiring a passing score on the *Missouri Content Assessment*, in place of the *Praxis II*. Students seeking school counseling certification in the state of Missouri then took the *Missouri Content Assessment (MCA): Counselor (056)* test of the Missouri Educator Gateway Assessments. The qualifying passing score on the *Counselor (056)* was then 220 (MODESE, 2014).

Unfortunately, despite the change in standardized testing for school counselor certification, the gap between Caucasian and African American student performance continued to exist. In 2015, MODESE reported that of the first test taking attempts for *Counselor (056),* 70% of school counselor candidates passed the test. When ethnicity was considered, 82% of Caucasian students passed, while only 24% of African American students passed on the first attempt (slide 84). Even when multiple attempts to pass the *Counselor (056)* took place, a total of 73% of school counselor candidates passed the test. When ethnicity was considered, 84% of Caucasian students passed while only 30% of African American students passed (MODESE, 2015, slide 85). These pass rates proved to be lower than those on the *Praxis II* (Missouri Advisory Board for Educator Preparation, 2015).

In addition to understanding the test construction of the *Praxis II* and the continued achievement gap on the MCA, a consideration of psychological factors must be explored to determine whether such were compounding variables in the achievement gap. Determining factors that were within a university's control may assist universities in

identifying students who may be at-risk for poor performance on the *Praxis II* or the MCA.

Locus of Control

Originally coined in the 1950s by Rotter (1966), the term locus of control found its origins in social learning theory. At the time, the dominant perspectives of Social Learning Theory included clinical psychologists who attempted to explain human behavior by delving into the unconscious. Rotter, however, chose to investigate different factors, including behaviorism and personality, to explain individuals' motivations. In Rotter's Social learning theory, he emphasized environmental factors and stimuli influenced an individual's behavior (as cited in Mearns, 2009). As defined by Rotter (1966) himself, "Internal versus external control refers to the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable" (p. 489).

The construct, locus of control, was first introduced within Rotter's (1966) research regarding behavior reinforcement in his journal article, *Generalized Expectancies for Internal Versus External Control of Reinforcement*, as an aspect of his social learning theory. In his article, Rotter (1966) defends locus of control as an aspect of personality. Through his studies, Rotter (1954, 1966) concluded that a definitive law for learning does not exist because every task performed by an individual is on a continuum, between internal and external locus of control. Seemingly, each task for individuals would occur on the continuum. Where each task occurs on the continuum is

unpredictable for the researcher, providing further justification for the need to research a specific task within the continuum. Furthermore, Rotter's (1966) research during this time also verified, "internal-external attitudes are not generalized across the board" (p. 21).

In 1957, Phares conducted one of the initial studies regarding expectancy of control to determine whether an individual's perception of control mattered (Lefcourt, 1982). In his study, participants identified whether a colored line matched a paint patch. Phares designed the experiment to be nearly impossible for the participants in that they had no way of knowing whether they were correct. In the instructions for the experiment, half of the participants were told that the task was so difficult that success was a matter of luck, more so than skill, while the other half of the participants were told that the task was a matter of skill and that only some participants would be successful. After each given verdict, Phares would provide the participants with feedback regarding whether they were correct or incorrect. Following the feedback, the participants wagered a poker chip to indicate their expectancy of being correct on the following attempts (Lefcourt, 1982).

Because of his study, Phares found that individuals who believed skill was involved in being successful in the task were more likely to use the experience from preceding events to determine the likelihood of success or failure for the future attempts. The participants who were told their success or failure was simply a matter or luck ignored feedback and began "behaving in a manner similar to that of a gambler" (Lefcourt, 1982, p. 38). The chips wagered for individuals receiving feedback based on skill varied far more than those receiving feedback, who believed the task was based on

luck. Phares' study supported his hypothesis that knowledge of his participants' "perception of control was useful for predicting the type of judgments he would make in response to success and failure in a given task" (as cited in Lefcourt, 1982, p. 38).

Phares' findings through his chip-wagering experiment indicated that an individual's belief about success had bearing on behavior. Findings like Phares' prompting a host of studies regarding locus of control and other variables, one of which was of particular interest to educators: academic achievement (Lefcourt, 1982).

Locus of Control and Academic Achievement. Close after its conception, locus of control became the focus of a variety of research studies, most of which involved relating locus of control to other variables associated with the field of education. Initially, research surrounding locus of control and academic achievement regarding college students demonstrated little to no relationship between the two variables (Nord, Connelly, & Daignault, 1974). Additionally, Hjelle (1970) determined that no relationship existed between the Scholastic Aptitude Test and locus of control; however, as the 1970s continued, research began to demonstrate that locus of control may be a predictor of academic success. Much of this research indicated that locus of control, as a predicator of academic success, was more statistically significant within the male population than the female population (Nord et al., 1974).

Findley and Cooper's (1983) literature review of locus of control, in relation to academic achievement, indicated that hundreds of studies suggested a link between locus of control and academic achievement. In an effort to determine the strength of the relationship between locus of control and academic achievement, and to what degree the relationship existed, Findley and Cooper (1983) reviewed all literature available from the

1970s regarding locus of control in relation to academic achievement. A review of 98 studies and 275 hypothesis tests, of which all measured the relationship between locus of control and academic achievement in a variety of settings with differing genders and ethnicities, indicated 126 significant positive findings in contradiction to nine negative findings (Findley & Cooper, 1983).

Then-current research indicated that locus of control may still be considered a predicator of student achievement. Gifford, Briceno-Perriott, and Mianzo (2006), studied whether locus of control, as well as ACT scores, acted as predictors of academic success of first-year college freshmen. The study involved 3,026 freshman students at a large public university. Using the students' first year cumulative GPA to determine academic success, the researchers determined that both ACT scores and locus of control were significant predictors of academic success.

While research among college students indicated that academic achievement and locus of control were related, there was a lack of literature regarding how these variables interacted within the African American college student population. Most research regarding academic achievement and locus of control among college students was conducted at a time when fewer minority students were attending higher education institutions (Bar-Tal, 1977).

Bar-Tal's (1977) research reiterated the subjectivity of perception of locus of control based on particular situations. Additionally, Bar-Tal (1977) summarized that changing the structure of the environment could indeed modify the perception of locus of control. In several studies involving children, educational programming caused a shift in perception of locus of control. Additionally, these shifts often resulted in improved

academic achievement (Bar-Tal, Bar-Tal, & Leinhardt, 1975; Hunt & Hardt, 1969; Milgram, 1971; Mischel, Zeiss, & Zeiss, 1974). Such findings indicated that an individuals' locus of control may change with an environment modification. While such research involved only children, it demonstrated the need for further research regarding locus of control and graduate students. Findings of additional research had potential to alter program design at the graduate level.

Locus of Control and Standardized Testing. Nord, Connelly, and Daignault (1974) investigated the relationship among academic achievement in graduate school, perceived locus of control, and a relevant aptitude test (Admissions Test for Graduate Study in Business) of male students enrolled in a graduate business school. The researchers found that both the aptitude test and students' locus of control related to success in graduate school, adding to the body of literature an additional study confirming the positive relationship between an internal locus of control and achievement.

In a study conducted by Nordstrom and Segrist (2009), the researchers examined the likelihood of participants attending graduate school using grade point average (GPA), locus of control, and consumer orientation. Using the Academic Locus of Control Scale (Trice, 1985), researchers found that of all variables, locus of control "emerged as the most potent predictor of likelihood of going to graduate school" (Nordstrom & Segrist, 2009, p. 203). Nordstrom and Segrist's (2009) study demonstrated the use of the Academic Locus of Control Scale as a predicting variable regarding students' education.

Several studies demonstrated little to no relationship between student GPA and locus of control. In a study of degree attainment and academic performance amongst

graduate students, the strongest relationship for predicting academic performance involved the students' locus of control, as measured by Rotter's (1954, 1966) Locus of Control Scale. In addition, GPA had the least correlation to locus of control (Otten, 1977). Additionally, in the Nordstrom and Segrist (2009) study, GPA failed to demonstrate any significant prediction of whether students would attend graduate school.

Brown, Brown, and Brown (2008) conducted a study using Scholastic Aptitude Test (SAT) scores and Quality Point Average to determine correlation to *Praxis II* (Fundamental Subjects: Content Knowledge) scores for teacher candidates. Results indicated no significant findings between Quality Point Average and the *Praxis II*. Such studies indicated little rationale for investigating student GPA or QPA when predicting future performance.

Locus of Control and Anxiety. In addition to determining how locus of control may effect achievement, researchers also investigated its influence over test anxiety and test format. Choi (1998) included undergraduate students at a large Midwestern university as participants in the study. No African American students were included in the sample population.

Choi (1998) found that the student's locus of control did not influence his or her anxiety level across different test formats (essay and multiple choice); however, students who were identified to have an external locus of control demonstrated significantly higher test anxiety than students identified to have an internal locus of control. This finding supported Rotter's (1954) original thought that those with an internal locus of control "maintain the belief that they can control their performance in a given environment to a certain extent" (p. 618). Several other studies found similar results

regarding the correlation of test anxiety and external locus of control (Butterfield, 1964; Watson, 1967). Watson (1967) and Butterfield (1964) both concluded a significant correlation between one's external locus of control and the level of anxiety reported, indicating the more external an individual, the more anxiety one reported.

Internal Versus External Locus of Control. In one study including post-graduate participants, researchers investigated participants' attribution of success or failure in examination. Results of the study demonstrated that high achieving students associated their success mostly "to ability and effort" while low achieving students associated their failure "to luck or task difficulty" (Shaukat, Abiodullah, & Rashid, 2010, p. 96). A study conducted in Australia regarding 18 year-old students concluded that individuals within the same age range with "a more internal locus of control have a higher probability of finishing secondary school," (Baron & Cobb-Clark, 2010, p. 1); thereby, demonstrating that individuals with an internal locus of control may possess higher levels of motivation when it comes to education. Research indicated that an internal locus of control was typically associated with higher self-motivation, superior academic performance, social maturity, and greater independence (Gurin, Gurin, Loa, & Battie, 1969; Nelson & Mathia, 1995; Nowicki & Strickland, 1973), and greater academic achievement in college (Nelson & Mathia, 1995); whereas, those with an external locus of control obtained lower grades than individuals with an internal locus of control (Nelson & Mathia, 1995).

Learned Helplessness

Learned helplessness, described as an 'induced trait,' also had the potential to impact students' perception and motivation for completing tasks. Learned helplessness

referred to an individual's "tendency to give up or easily or fail more often at somewhat easier tasks" (Firmin, Hwang, Copella, & Clark, 2004, p. 688). Originally, Seligman, a psychologist interested in depression, investigated learned helplessness in the late 1960s. Through his research, Seligman determined that learned helplessness existed in animals and humans, identifying it as a psychological condition. In his research regarding classical conditioning with dogs and humans, he learned that those with learned helplessness believed that outcomes were uncontrollable (Nolan, 2017).

In one study of undergraduate college students, researchers Firmin, Hwang, Copella, and Clark (2004) divided students into two groups. One group of students were given a test with easy questions to answer early in the test. The second group of students were given difficult questions to answer early in the test. Firmin et al. (2004) hypothesized that those with difficult questions early on the test would question their intelligence and give up more easily on the test, eliciting learned helplessness. Their research confirmed their hypothesis: Those who began with the hard questions on the test scored lower on easier test items than those given a test with easy questions at the beginning of the test. The two groups of students scored comparably on hard test items. Firmin et al. (2004) concluded that negative prior experiences on test items could affect future experiences on test items. In their study, they also concluded that the perception of failure was enough to induce learned helplessness.

In studies by Hiroto, who studied locus of control and learned helplessness, he concluded that college students with an external locus of control displayed greater helplessness than those with an internal locus of control (as cited in Cohen, Rothbart,

Phillips, 1976). Additionally, those who experienced learned helplessness also self-reported higher levels of depression, anxiety, and hostility (Pittman & Pittman, 1979).

While several studies involved the investigation of learned helplessness alongside locus of control, the two were descriptors of different behavior. Locus of control referred "to the amount of perceived control a person believes they have over their environment" (Donenfeld, 2008, p. 28). Specifically, locus of control often looks to future outcomes based on an individual's actions whereas learned helplessness looks to prior experience to predict future outcomes (Donenfeld, 2008).

Passion and Perseverance

Modern, positive psychology contributed to the conversation of internal and external motivation through its investigation of personality dimensions. One example is the research of Duckworth, professor of psychology at University of Pennsylvania, who set out to explain why some individuals "accomplish more than others of equal intelligence" (as cited in Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087).

'Grit,' a term coined by Professor Duckworth, was defined as perseverance and passion for long-term goals. Through her research with undergraduate students at an elite university, those who had greater levels of grit (as determined by the Grit Scale) were associated with higher GPAs. In this specific study, *Grit: Perseverance and Passion for Long-Term Goals*, Grit scores were associated with lower SAT scores, implying that "among elite undergraduates, smarter students may be slightly less gritty than their peers" (Duckworth et al., 2007, p.1093). Duckworth, Peterson, Matthews, and Kelly (2007) concluded that those who were identified as "less bright than their peers compensate by working harder and with more determination" (p. 1093).

Through research of grit, Duckworth et al. (2007) found that individuals with more education were higher in grit than the same age individuals with less education. Additionally, one study conducted demonstrated that scores obtained on the Grit Scale served as the best predictor of cadets who were retained following their rigorous summer regimen at West Point Academy.

Perhaps the most pertinent to this study were the results from a study involving finalists at the 2005 Scripps National Spelling Bee. Participants in the spelling bee ranged in age from seven to fifteen- years-old. Through use of the Grit Scale and review of study time of each participant, "gritty finalists outperformed their less gritty peers at least in part because they studied longer" (Duckworth et al., 2007, p. 1097). The research of Duckworth et al. (2007) was imperative because it suggested that achievement (even that outside of academics), was the result of not only talent, but also effort.

Additional Study Variables

Ethnicity. Ethnicity as a factor in standardized testing pass rates was identified in other studies (Edmonds, 2014; Elpus, 2015; Graham, 2013; Wall, 2008). In a study regarding music teacher candidates who took the *Praxis II* for music educator licensure, Elpus (2015) found that Caucasian students earned higher scores on the *Praxis II* than their African American counterparts. Specifically, the Caucasian participant pass rates were double that of African American students, resulting in 85.8% of Caucasian participants passing as opposed to 41.7% of African American participants (Elpus, 2015, para. 32).

Such disparity also existed on the *Praxis I*. The *Praxis I* tested preservice teachers on reading, writing, and mathematics (ETS, 2018). Madkins (2011) stated:

> Between 1994 and 1997, Black candidates had the lowest rate of passing the Praxis I when compared to other subgroups. About 74% of Black candidates passed the test compared to 94% of White candidates. For the 2002-2005 cohort, the rate dropped from 52% to 84% passing for Black and White candidates, respectively. (p. 421)

Madkins (2011) stated that historically, teacher candidates at historical Black colleges also have the lowest pass rate on the *Praxis I*. Because of her findings, Madkins (2011) suggested researchers and school administrators continue to seek alternative pathways to certification for minority candidates.

In 2014, Missouri removed the requirement of passing the *Praxis II* for school counselor certification. In place of the *Praxis II*, Missouri began requiring a passing score on the MCAs. Edmonds (2014) researched pass rates on the Missouri Educator Gateway Assessments (MoGEA), one version of the MCAs, and found that the gap between ethnicities continued to exist. Additionally, he concluded that gender and ethnicity served as predictors of MoGEA performance. Edmonds (2014) recommended Missouri not use the MoGEA to screen teacher candidates, as the disparity in pass rates eliminated a number of minority candidates from the teaching workforce.

Gender. In addition to a gap in pass rates based on ethnicity, Elpus (2015) found that gender was also factor in *Praxis II* pass rates for music educators. Male students performed better on the *Praxis II* than females. Similar findings were discovered in research regarding the MoGEA as well as the *Praxis I*. Male candidates typically performed better on the MoGEA and *Praxis I* than females (Edmonds, 2014; Gitomer, Brown, & Bonett, 2011). Researchers hypothesize that such discrepancies in

performance based on gender is due to test bias (Bennet et al., 2006; Gitomer, Brown, and Bonett, 2011). Similar to inequalities in ethnicity, such findings regarding gender demonstrated the necessity to investigate gender as a variable in *Praxis II* performance among school counseling candidates.

Age. Within the nursing profession, "approximately 3,000 graduates of schools of nursing fail the licensure exam (NCLEX-RN) and are unable to enter the nursing workforce" (Simon, McGinniss, & Krauss, 2013, p. 18). A study regarding predictors of success on the NCLEX-RN found that older students (identified as those who had transferred credits into the program) were 1.19 times more likely to pass the NCLEX-RN (Simon et al., 2013). While age was a predictor in the study regarding nursing students, it indicated that older students performed better than younger students.

Literature suggested that typically, older students possessed more internal motivation and self-efficacy, resulting in favorable educational outcomes (O'Shea, 2003; Rothes, Lemos, & Gonçalves, 2017). Additional study regarding age as a predictor on the *Praxis II* was necessary to determine the relationship between age and *Praxis II* scores for school counseling candidates.

Study preparation. Activity related to studying can vary. "The term 'study' refers to the amount of time spend on any academic-related activities. Such activities may include, but are not limited to, doing homework, preparing for a quiz or an exam, conducting research, writing a reflective journal, writing a research report, and preparing for an oral presentation" (Lei, 2015, p. 195). Both research and common knowledge illustrated that in order to perform well on a test, students must understand and be able to

recall information presented in class. The ability to do so involved monitoring one's own learning and understanding what he/she mastered and what he/she had yet to learn.

Self-regulation, "the self-generated thoughts, feelings, and actions for attaining one's goals" (Cohen, 2012, p. 892), involved the interaction between the individual, environment, and his/her behaviors. All individuals had the ability to self-regulate; however, the degree of self-regulation could vary among individuals. Self-regulated learners "set clear and realistic goals, use strategies, self-monitor, and evaluate their progress, as well as complete tasks on time, report high levels of motivation, and exhibit skill acquisition" (Cohen, 2012, p. 892). Research indicated that self-regulation could often affect "performance, such as goal setting, self-monitoring, self-evaluating, self-consequences, environmental structuring, and help seeking" (Cohen, 2012, p. 893). Such constructs could have significant impact on test preparation and academic success.

In a study of 62 college students, those who scored higher on a test reported more self-regulatory processes before taking a test (study preparation), during test taking (reviewing responses), and following test taking (reviewing a test and determining what help was needed to improve). Such a study highlighted the effect of self-regulation on learning and test taking. Students who failed to use self-regulation in study preparation may be overly confident in their knowledge and/or test taking abilities, ultimately proving to be a hazard to themselves (Cohen, 2012).

Beyond measuring locus of control and its relationship with academic performance, this study sought to determine if specific study techniques related to locus of control and a pass/fail score on the *Praxis II*. Study preparation could include a variety of tasks from proper note taking to reviewing materials before a test. For this

study, the researcher sought to determine if study location, the amount of time dedicated to studying, or study activities influenced students' performance on the *Praxis II*.

Location of study preparation. Research was limited in determining whether study location could influence a student's academic performance. Ideally, study location would provide students an environment appropriate for learning and reviewing of materials. Lei (2015) indicated in his research that changing locations of where one studied could help prevent burnout; however, areas such as small libraries, academic department buildings, or public libraries tended to be more conducive to learning as opposed to dormitories or personal living space where students became easily distracted.

While this variable was of interest to the researcher, little to no research existed regarding the influence of study location on test outcomes, nor the relation to locus of control. The researcher concluded that investigating the use of technology for preparation might have been more beneficial than study location. Due to the demands on most graduate students (course work, job responsibilities, family responsibilities, etc.), there was little variation in study location.

Hours spent studying. In his review of literature, Lei (2015) also indicated that studying was most effective between "when [students] wake up and when they eat dinner" (p. 196). He suggested that time management was most imperative and that students should have a designated study time to develop the habit of studying regularly. This suggested that students who had a plan to study may be more effective in systematically setting aside time to study on a regular basis; however, a study conducted among college students by Hammonds and Mariano (2015) found that study time did not correlate with student grades on classroom tests. The authors were uncertain as to

whether such a finding was accurate or if students failed to accurately report time spent studying. Such findings indicated the need for further investigation with regard to an exit exam rather than a classroom test.

Preparation activities. In an article by Schoenherr (2006), he discussed the benefit of study groups and its reinforcement of material learned in class. He stated in his article that when students "work together in collaborative teams in classrooms, they learn material better than when they sit alone at their desks" (para. 5). Potthast conducted a study in 1999 to investigate how study groups in an introductory statistics course influenced student learning. In her study, Potthast (1999) found that students who participated in collaborative learning performed better on tests. Additionally, the collaborative work with peers increased communication with the course professor, which resulted in an increased learning experience.

With the ever-growing use of technology, students' use of available study materials and the activities they engaged in for study purposes continued to evolve. Collaborative learning could take place via technology platforms, rather than face-to-face interaction. Additionally, technology also provided avenues for test preparation that had not historically been available. In this study, the researcher did not consider whether students participated in a study group, unless otherwise specified by an individual student.

For this study, the researcher was specifically interested in whether students reviewed the 'Test at a Glance' material available on the ETS website, reviewed other textbooks and/or study materials, participated in a test preparation/study activity or course organized by a university or other institution, and whether students chose not to

engage in a study activity at all. For many school counseling programs, the aforementioned materials were commonly suggested tools for proper test preparation. While investigating the use of study groups among participants may have demonstrated another beneficial study technique, the researcher was interested in whether the materials students were encouraged to use were indeed beneficial tools for *Praxis II* preparation.

Perceptions of Preparation

While worthwhile to investigate elements of preparation for standardized testing, perhaps equally valuable was the perception of preparation for a standardized test. In a study of African American students and their preparation for the *Praxis I,* Graham (2013) found through informational interviews that many most African American students in his study felt comfortable taking a standardized test; however, students felt inept to properly prepare for the *Praxis I.* 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.

Additionally, in Graham's (2013) study, students shared the belief that standardized tests (such as the *Praxis I*), were not typically biased in questions and answers; however, they believed that such standardized tests were only measures of knowledge, not an indication that any one person would be a good teacher. One student was quoted, a first semester student enrolled in a teacher education program, "I didn't study [for the SAT]. I just went — I didn't really know what to study. It's such a broad test. I was like: I'm not going to sit here and worry about what to study. I just went in there and took the test" (Graham, 2013, p. 11). Such a belief dated back to standardized testing in high school and the perceived belief regarding study preparation.

Literature indicated that developing effective preparation programs may be beneficial to students when preparing to take standardized tests (Chittooran & Miles, 2001; Mee, 2000; Miyasaka, 2000; Taylor, 1992). Specifically, elements of effective preparation programs included "improving content knowledge, increasing knowledge of effective test-taking skills, referred to as test-wiseness, acknowledging the effects of test anxiety and reducing them" (Wall, 2008, p. 128). In Wall's (2008) study of preservice teacher candidates, those who participated in a preparation program for the CBASE and *Praxis II* performed at a better rate than those who did not participate.

In some cases, studies concluded that gains in test scores did not take place, despite the use of a preparation course and/or program (Rainey, 1996; Robb & Ercanbrack, 1999; Scholes & Lain, 1997); however, most professionals concluded that intentional preparation for test taking can improve candidate self-efficacy; thereby, improving test outcomes (Wall & Symonds, 2012). Wall (2008) suggested that institutions should spend more time investigating how to best assist students in preparation for high stakes testing through preparation programs. Additionally, he suggested that more research was warranted regarding ACT/SAT scores as predictors of performance on tests like the *Praxis II*. Wall (2008) believed that identifying such would allow programs to be proactive in their advising of students who were more likely to be at-risk for failing the certification test.

Summary

Chapter Two is a review of literature that supported the necessity of this study and research that closely related to the study of locus of control and the *Praxis II*. More specifically, Chapter Two examined the issue of the achievement gap between Caucasian

and African American students throughout history and into higher education. Best practices for faculty seeking to close the achievement gap are provided.

Chapter Two includes definitions of key terms, including locus of control as well as academic locus of control. The researcher examined several studies implicating locus of control as a predicator of academic success as well as the rationale for utilizing locus of control within the study. Other psychological elements, including learned helplessness, passion, and perseverance were highlighted as other areas of research within a similar field.

The development and design of the *Praxis II* by the ETS, including its validity as a gatekeeper exam was also included in Chapter Two. The researcher details the validity, content development, and standards for testing fairness as it relates to the *Praxis II*. Because of changes within the state of Missouri regarding licensure exams, the MCA was discussed; however, despite the desire to minimize the achievement gap within the MCA, results from the MCA indicated that the achievement gap continued to exist.

While the achievement gap was widespread in the United States, and had historically been so, the relationship among variables that may contribute to the achievement gap were limited, specifically within higher education. Literature reviewed in Chapter Two indicates that locus of control could influence academic achievement, prompting the need for an investigation of locus of control and its relationship to the *Praxis II*.

The researcher had anecdotal evidence to suggest that students often spent little to no time preparing for the *Praxis II*. In addition to exploring the relationship between locus of control and the *Praxis II*, the researcher investigated other variables as part of the

study, heavily based on curiosity, though research supported the need to include some of the variables in the study. Specifically, the researcher sought to understand whether ethnicity, age, gender, study preparation, study location, hours spent studying, and preparation activities related to a student's *Praxis II* score. The role that locus of control could play in academic achievement, coupled with the anecdotal information the researcher possessed, demonstrated sufficient evidence to do further research, especially within the graduate student population, where literature was then-currently lacking.

Through this study, the researcher hoped to yield results that would aid in establishing indicators of risk for graduate student populations with regard to standardized testing, specifically, the *Praxis II*. A preliminary study could potentially aid faculty within school counseling programs in determining what content of the *Praxis II* to emphasize or discuss in class, as well as provide information for faculty to guide students in specific study habits proven to have an impact on *Praxis II* scores. Lastly, for administrators, the researcher hoped to yield results that would contribute to the literature that may later aid further study regarding intervention for students at risk of not passing the *Praxis II*.

Chapter Three: Methodology

Introduction

The purpose of this research was to develop an understanding of academic locus and its relationship to several variables, including preparation strategies of students, and its effect on the *Praxis II* score. The researcher sought to determine whether students enrolled in school counseling program Field Placement courses at a Midwestern university identified as having an internal or external loci of control and whether locus of control correlated with students' anticipated study preparation versus actual study preparation. Additionally, the researcher sought to identify whether locus of control correlated with *Praxis II (0421)* results; whether anticipated study preparation versus actual study preparation correlated with *Praxis II (0421)* results; and to identify to what degree the aforementioned variables could predict performance on the *Praxis II (0421)* results.

Studies investigating the relationship among locus of control and other variables utilized a quantitative approach to research (Findley & Cooper, 1983; Mischel et al., 1974; Nord et al., 1974; Nordstrom & Segrist, 2009; Watson, 1967). To determine whether a relationship among the variables and locus of control existed, the researcher conducted a quantitative study, utilizing hypothesis testing to determine the relationship among variables potentially influencing *Praxis II* scores. Data for this study included responses from participants on surveys, including the Academic Locus of Control measure, the Intended *Praxis II*: Professional School Counselor Preparation Survey, and the Actual *Praxis II*: Professional School Counselor Preparation Survey. Lastly, *Praxis II*

scores from participants were collected to correlate them to variables identified on each survey instrument.

The researcher used convenience sampling to determine the sample. Bluman (2008) explained that in convenience sampling, the researcher "uses subjects that are convenient" (p. 13). Convenience sampling allowed the researcher to include all participants willing to participate in the study; however, convenience sampling does limit the ability to generalize findings in this study to a larger population. Convenience sampling was used, due the difficulty in recruiting school counseling participants across the state, because of the limited number of school counseling programs. In this study, criteria to be considered a participant included enrollment in a Field Placement course, completion of the *Praxis II*, completion of the Academic Locus of Control measure, completion of the Intended *Praxis II*: Professional School Counselor Preparation Survey, and completion of the minimum number of Actual *Praxis II*: Professional School Counselor Preparation surveys.

Research Participants

This study involved participants attending a Midwestern, private, Liberal Arts University. All participants were enrolled in graduate level school counseling courses and were seeking certification as a school counselor within the state. Originally, 85 individuals consented to participate in the study; however, the researcher deemed 35 participants ineligible to be considered in the study results, because the individuals completing the surveys failed to complete a minimum of 12 surveys over the course of one semester. Additionally, one participant failed to report his/her *Praxis II* score to the institution, which also eliminated the participant from the study.

The data gathered for this study reflected duplicate information for five participants, resulting in 44 participants. Given participant responses may vary from semester to semester, data collected from the same participants during different semesters was included in the results. Due to the inclusion of duplicate participants from semester to semester, 49 respondents were included in the study.

Of the 44 unique study participants, 9% were males (n = 4) and 91% were females (n = 40). The ethnicity of the sample was 71% White (n = 31) and 29% African American (n = 13). Half of the participants (50%) in this study were between the ages of 20 and 30 (n = 22), 39% were between the ages of 31 and 40 (n = 17), 6% were between the ages of 41 and 50 (n = 3), and 5% were between the ages of 51 and 60 (n = 2). No participants identified themselves as being over the age of 60. The participants of the study were comparable in makeup to the characteristics of students enrolled in the school counseling program at the Midwestern university.

Contact was established with eligible participants via classroom visits to request involvement in the study. Professors teaching the Field Placement course were able to integrate the Academic Locus of Control measure, the Intended *Praxis II*: Professional School Counselor Preparation Survey, and the Actual *Praxis II*: Professional School Counselor Preparation surveys into the Field Placement course. Prior to visiting any Field Placement classrooms to request consent from students for participation, the Lindenwood University Institutional Review Board approved this study.

The researcher initially collected data from participants using their names and their student identification numbers. The researcher then removed student names, leaving only student identification numbers to align all data for each participant with the

proper student identification number. Once all collected data were aligned with the appropriate participant, student identification numbers were replaced with random numbers in descending order to eliminate any type of participant identification.

Hypotheses

The researcher investigated the following six hypotheses. The first hypothesis investigated the relationship between locus of control and anticipated study preparation, with the null hypothesis stating that there is no relationship between locus of control and anticipated study preparation for the *Praxis II*, as measured by the Academic Locus of Control scale and the Intended *Praxis II*: Professional School Counselor Preparation Survey.

The second hypothesis investigated the relationship between locus of control and actual study preparation as reported by students themselves. The null hypothesis stated that there is no relationship between locus of control and actual study preparation for the *Praxis II,* as measured by the Academic Locus of Control scale and the Actual *Praxis II*: Professional School Counselor Preparation Survey.

The third hypothesis for this study investigated the relationship between locus of control and the *Praxis II* test results, with the null hypothesis stating that there is no relationship between locus of control and *Praxis II* results, as measured by the Academic Locus of Control scale and the obtained score on the *Praxis II* exam.

The fourth hypothesis investigated the relationship between anticipated study preparation and *Praxis II* results. The null hypothesis stated that there is no relationship between anticipated study preparation and *Praxis II* results, as measured by the Intended

Praxis II: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

The fifth hypothesis investigated the relationship between self-reported actual study preparation of students and the *Praxis II* test scores. The null hypothesis stated that there is no relationship between actual study preparation and *Praxis II* results, as measured by the Actual *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

The final hypothesis investigated the relationship among gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, preparation activities and the *Praxis II* test scores. The null hypothesis stated that the variables are not predictors of the *Praxis II* test results.

Research Instruments

Academic Locus of Control. Originally developed by Trice in 1985, The Academic Locus of Control Scale for College Students (see Appendix A) was designed to better "predict a wide range of relevant behavior of college students" (Trice, 1985, p. 1043) building from the framework set forth by Rotter (1954, 1966) and his design of locus of control instruments. The researcher chose to use the Academic Locus of Control Scale for College Students for this study due to its high test-retest reliability and its significant correlation to achievement motivation (Trice, 1985).

According to later studies conducted by Trice (1987), the Academic Locus of Control Scale for College Students was found to have significant correlation with variables typically regarded as important to success in college, specifically in the studies conducted by Trice, class participation, study time, and homework. Trice (1987)

concluded that such results supported "the validity of the scale as a useful measure of college students' beliefs in the contingency between their actions and success or failure in college" (p. 485).

The instrument consisted of 28 statements about various academic topics. For each statement, participants indicated whether the statement reflected their personal belief by selecting true (T) or false (F). The researcher emphasized that participants should respond to statements based on what was true of their behavior, rather than what the participants would like to be true. The researcher also explained to the participants that there were not 'right or wrong' answers to select.

Intended *Praxis II*: Professional School Counselor preparation survey. The researcher generated the tool used to assess participants' intended preparation for the *Praxis II*, which consisted of 12 survey questions (see Appendix B). Individual survey items on the Intended *Praxis II*: Professional School Counselor Preparation Survey were created primarily based on the researcher's interest. Anecdotal information gathered by the researcher contributed to the design of the individual survey items, as the researcher sought to collect information regarding participant perspectives. Literature regarding locus of control indicated that differences existed between those who had internal versus external locus of control, indicating an individual perspective regarding the outcome of behavior (Rotter, 1966). The researcher designed the survey to collect participants' perspective regarding their intended preparation for the *Praxis II* through a series of multiple-choice questions.

The Intended *Praxis II*: Professional School Counselor Preparation Survey required participants to specify their plans to study for the *Praxis II* through a series of

multiple-choice questions. Specific survey items inquired about how much time participants planned to prepare, where participants planned to prepare, with whom (if anyone) participants planned to prepare, programs/materials participants planned to use to prepare, as well as gathering demographic information for the purpose of data analysis. To evaluate its reliability, the researcher piloted the survey prior to its use in this study, with students enrolled in the Field Placement class during a prior semester.

Actual *Praxis II*: Professional School Counselor preparation survey. The researcher generated the tool used to assess participants' actual preparation for the *Praxis II*, which consisted of four survey questions (see Appendix C). Individual survey items on the Actual *Praxis II*: Professional School Counselor Preparation Survey were created primarily based on the researcher's interest. Anecdotal information gathered by the researcher contributed to the design of the individual survey items, as the researcher sought to collect information regarding participant perspectives. Literature regarding locus of control indicated that differences existed between those who had internal versus external locus of control, indicating an individual perspective regarding the outcome of behavior (Rotter, 1966). The researcher designed the survey to collect participants' perspective regarding their actual weekly preparation for the *Praxis II* through a series of multiple-choice questions.

The Actual *Praxis II*: Professional School Counselor Preparation Survey required participants to specify the time spent and activities they engaged in while preparing for the *Praxis II* by surveying them on a weekly basis. Survey items included questions regarding whether the participants studied, how much time the student spent preparing within the last week, where the participant spent time preparing within the last week, with

whom (if anyone) they prepared alongside within the last week, and if they used any programs/materials to assist with preparation within the last week. To evaluate its reliability, the researcher piloted the survey prior to its use in this study, with students enrolled in the Field Placement class during a prior semester.

Data Collection and Analysis Procedures

Due to the nature of the research regarding the *Praxis II,* the researcher chose to use the school counseling program capstone class, Field Placement, to identify potential study participants. Students enrolled in the school counseling program were required to complete two semesters of Field Placement. During Field Placement, students worked in a school setting under the supervision of a certified school counselor to experience the roles and responsibilities of a school counselor, and demonstrate their competency as a school counselor under supervision. In addition to the field experience, students were required to attend the Field Placement course on a weekly basis during the semester to receive supervision from a faculty member at the Midwestern university in addition to the certified school counselor under which they worked in the school setting. It was also during the two semesters of Field Placement that students were encouraged to take the *Praxis II* exam, as the Field Placement courses were typically the remaining two courses students took as part of the school counseling. Lastly, successful completion of the *Praxis II* was a graduation requirement.

Initially, the researcher visited each section of the Field Placement course offered during the spring 2013 semester during the first week of class. Due to the multiple sections of the course, the researcher included participants from two separate campuses of the Midwestern university in the study. The researcher extended the invitation for

participation in the study to students enrolled in the Field Placement during these classroom visits, following an explanation of the study. Potential participants were given a consent form and, if willing to participate, were asked to read the form, sign the form, and return it to the researcher.

During the same class visit, those who consented to participate in the study completed the Academic Locus of Control measure. Immediately following the Academic Locus of Control measure, participants completed the survey, Intended *Praxis II*: Professional School Counselor Preparation Survey, regarding their intended plans for preparing to take the *Praxis II.* Following their completion, the researcher collected all forms and surveys during the class session.

Subsequently, participants completed the survey, Actual *Praxis II*: Professional School Counselor Preparation Survey, regarding their preparations to take the *Praxis II,* on a weekly basis during their Field Placement class session. The professor of the course distributed the surveys during class. Following each course session, the professor returned the completed surveys to the researcher.

On occasion, participants missed class or classes were cancelled due to school breaks; therefore, some participants did not participate in the weekly survey. For these students, the researcher contacted the participants and requested they complete the weekly survey. The researcher contacted absent participants through e-mail. The researcher provided the participants the survey and the option to reply with their answers by e-mail or to print out the survey and return personally. The researcher eliminated data of individuals who failed to complete four or more surveys conducted on a weekly basis. Over the course of the semester, participants were expected to complete 16 surveys (one

Intended *Praxis II*: Professional School Counselor Preparation Survey; 15 Actual *Praxis II*: Professional School Counselor Preparation Surveys) and a minimum of 12 surveys to remain as participants in the research.

During the fall 2013 semester, the researcher repeated the aforementioned steps during the first week of classes. Following the fall 2013, the researcher determined which participants to eliminate from the study based on their lack of participation in survey completion. Eligible participants for the study successfully met requirements through completion of the appropriate number of surveys and the Academic Locus of Control measure. The researcher collected *Praxis II* scores of those participants who remained eligible to partake in the study. Following the collection of all data, the researcher statistically analyzed data using a Pearson Product Moment Correlation Coefficient (PPMCC) for the first five hypotheses, as well as logistical regression for the sixth hypothesis.

Calculating Academic Locus of Control. The researcher calculated whether participants possessed an internal or external academic locus of control by comparing the true and false responses of participants on the Academic Locus of Control Scale for College Students to determine to Trice's (1986, 1987) key. For each response that matched Trice's (1986, 1987) key, the researcher granted a point, resulting in a total score on the Academic Locus of Control Scale. Scores identifying internal locus of control ranged from zero to 13. Scores identifying an external locus of control ranged from 14 to 28.

Coding for survey responses. The researcher used numerical coding for all responses, because participants designated answers to survey items using an alphabetical

indicator. Each letter was given a number in ascending order (i.e. A=1, B=2, etc.). In some cases, survey items elicited more than one response for each statement. When participants provided more than one answer to a single survey statement, the researcher coded the response to match the number of answers the participant provided. For example, if the participant endorsed A, B, D, options on a survey, the researcher coded the response with a number three.

When coding gender responses, the researcher coded responses for those who identified as males with a number one. The researcher coded responses for those who identified as females with a number two. For ethnicity, the researcher coded responses for those who identified as African American with a number one. The researcher coded responses for those who identified as White with a number two. No students identified as Asian, Hispanic, Native American, or Other, eliminating coding through use of numbers three through six.

When coding age responses, the researcher coded responses for those who identified as 20 to 30-year-olds with a number one. The researcher coded responses for those who identified as 31 to 40-year-olds with a number two. The researcher coded responses for those who identified as 41 to 50-year-olds with a number three. The researcher coded responses for those who identified as 51 to 60-year-olds with a number four. The researcher coded responses for those who identified as 60 or older with a number five.

Data analysis. Following the collection of all data, the researcher statistically analyzed data using a PPMCC for hypotheses one through five and a logistical regression for hypothesis six. According to Bluman (2008), determining the relationship between

variables was accomplished through the technique of a correlation analysis. Such an analysis aided the researcher in determining the strength of the relationship, should one exist, between the variables. Additionally, through a correlation analysis, the researcher could determine whether the relationship between variables, should one exist, was positive or negative. Studies investigating the relationship among locus of control and other variables utilized a correlation to determine whether a relationship between variables existed and to what degree (Findley & Cooper, 1983; Mischel et al., 1974; Nord et al., 1974; Nordstrom & Segrist, 2009; Watson, 1967).

The researcher also chose to use a regression analysis in this study for hypothesis six to determine the relationship among variables. Different from a correlation, a regression analysis aided the researcher in determining whether the independent variable could predict the dependent variable (Bluman, 2008). In this study, the researcher sought to determine whether any variables measured in the study could predict passing scores on the *Praxis II*. Similar to a correlation, completing this type of analysis aided the researcher in identifying whether a positive or negative relationship existed between variables.

Conclusion

The purpose of this research was to develop an understanding of academic locus and its relationship to several variables, including preparation strategies of students and its relationship to *Praxis II* scores. Utilizing a quantitative approach with hypothesis testing, the researcher measured the relationship among participants' academic locus of control, their plans to prepare for the *Praxis II*, weekly preparation for the *Praxis II*, and

Praxis II scores. In addition, the researcher determined whether these variables were predictors of *Praxis II* scores for participants.

The researcher utilized convenience sampling to determine the participant sample. In this study, convenience sampling allowed the researcher to include all participants in the study, but did limit the ability to generalize findings to a larger population. A total of 49 respondents were included in the study, including five duplicate participants, due to their enrollment in the Field Placement course for more than one semester.

Chapter Three discussed the six hypotheses the researcher investigated, all of which sought to determine whether a relationship among the *Praxis II*, study preparation, and locus of control existed, and if so, to what degree. The researcher explained the study design, including the process followed for contacting participants enrolled in Field Placement courses and data collection through survey instruments. As part of the study, the researcher developed two survey instruments to evaluate participants' intended study preparation for the *Praxis II*, as well as what participants actually did on a weekly basis to study for the *Praxis II*. Both survey instruments were piloted prior to the beginning of this study.

Chapter Three also highlighted the process for data collection, including the calculation of academic locus of control based on Trice's (1986, 1987) instrument and coding of survey responses. With regard to data analysis, the researcher used a PPMCC for the following hypotheses: 1) There is no relationship between locus of control and anticipated study preparation for the *Praxis II*, as measured by the Academic Locus of Control scale and the Intended *Praxis II*: Professional School Counselor Preparation Survey; 2) There is no relationship between locus of control and actual study preparation

for the *Praxis II,* as measured by the Academic Locus of Control scale and the Actual *Praxis II*: Professional School Counselor Preparation Survey; 3) There is no relationship between locus of control and *Praxis II* results, as measured by the Academic Locus of Control scale and the obtained score on the *Praxis II* exam; 4) There is no relationship between anticipated study preparation and *Praxis II* results, as measured by the Intended *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam; and 5) There is no relationship between actual study preparation and *Praxis II* results, as measured by the Actual *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

The researcher used a logistical regression for the final null hypothesis: Gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, preparation activities are not predictors of *Praxis II* test scores. Utilizing such analyses allowed the researcher to determine the strength of the relationship among the variables, should one exist, and whether the relationship was positive or negative.

Chapter Four: Results

The purpose of this research was to develop an understanding of academic locus and its relationship to several variables, including preparation strategies of students and its influence on the *Praxis II* score. The researcher sought to determine whether students enrolled in school counseling program Field Placement courses at a Midwestern university identified as having an internal or external loci of control and whether locus of control correlated with students' anticipated study preparation versus actual study preparation. Additionally, the researcher sought to identify whether locus of control correlated with *Praxis II* results; whether anticipated study preparation versus actual study preparation correlated with *Praxis II* results; and identified to what degree the aforementioned variables can predict performance on the *Praxis II* results.

Chapter Four includes results from data analyzed using PPMCC and regression analysis. A total of 85 series of responses were recorded for the study. Of the 85 responses, the researcher did not consider 35 students in the study results, because the individuals completing the surveys failed to complete a minimum of 12 surveys over the course of one semester. Lastly, one participant failed to report his or her *Praxis II* score to the institution, which also eliminated the participant from the study.

The data reflected duplicate information for five participants, resulting in 44 unique participants. Given that participant responses may vary from semester to semester, data collected from the same participants during different semester is included in the results. Due to the inclusion of duplicate participants from semester to semester, 49 respondents, henceforth referred to as participants, were included in the study.

Locus of Control Among Participants

Of the eligible study participants, 40 identified as having an internal locus of control (ILOC), while nine participants identified as having an external locus of control (ELOC) according to the Academic Locus of Control Scale for College Students. The Academic Locus of Control Scale for College Students scores identified ILOC range from zero to 13. The average locus of control score for those identifying with an ILOC was 8.6.

Participants with scores ranging from 14 to 28 had an ELOC according to the Academic Locus of Control for College Students. Of the participants who identified as having an ELOC, the average score was 14.9. Overall, 82% of the participants identified as having an ILOC, while 18% identified as having an ELOC (Table 4).

Table 4

External versus Internal Locus of Control

	Number of Participants (N=49)	Percentage
ELOC	9	18%
ILOC	40	82%

Participants' locus of control score was determined using the Academic Locus of Control Scale for College Students. Responses to the survey provided a sum of all responses and in turn, identified whether the student possessed an ILOC or ELOC. According to the Academic Locus of Control Scale for College Students, a sum of survey responses ranging from 1 to 13 indicated an ILOC, while a sum of survey responses ranging from 14 to 28 indicated an ELOC.

A total of 9 participants possessed an ELOC, 44% (n=4) of which were African American and 56% (n=5) of which were Caucasian. Of those with an ELOC, 22% (n=2)

were male and 78% (n=7) were female. A total of 40 participants possessed an ILOC, 25% (n=10) of which were African American and 75% (n=30) of which were Caucasian. Of those with an ILOC, 5% (n=2) were male and 95% (n=47) were female.

Praxis II **Results**

Overall, regardless of the number of attempts, of the 40 participants with an ILOC, 31 passed the *Praxis II*; however, nine participants failed. Of the nine participants with an ELOC, five passed the *Praxis II*, with four participants failing.

Table 5

Pass/Fail Rates Based on Total Participants and LOC (n=49)

	Pass	Fail	Percentage Pass	Percentage Fail
ILOC	31	9	63%	19%
ELOC	5	4	10%	8%
Total	36	13	73%	27%

Note: Pass/fail rates on based on total attempts at taking the *Praxis II*.

Of all participants involved in the study, 73% passed the *Praxis II*, while 27% failed (Table 5). The percentage between pass and fail rates on the first attempt were much closer for students with an ELOC (2% difference) as compared to those with an ILOC (44% difference).

Null Hypotheses

The researcher investigated the following null hypotheses during the study.

Null Hypothesis one. There is no relationship between locus of control and anticipated study preparation for the *Praxis II*, as measured by the Academic Locus of Control scale and the Intended *Praxis II*: Professional School Counselor Preparation Survey.

For the sake of this study, the researcher identified the following scale when considering the degree of strength to which variables may correlate: .2 to.4 is a weak relationship, .5 to .7 is a moderate relationship, and .8 to .9 is a strong relationship. A correlation of 1.00 or -1.00 is a strong relationship.

To calculate whether a relationship between locus of control and anticipated study preparation existed, the researcher used a PPMCC to determine if a relationship existed and to what degree.

Table 6

Anticipated Study Preparation and Academic Locus of Control

Preparation Activity Variable	Test Value (R)
Registration date	0.07
Exam delivery	0.29
Number of times taken Praxis	-0.12
Previous Praxis taken	-0.09
Study prep location	0.03
Preparation hours	0.04
Study technique	0.23
Preparation activities	-0.05
Allocated study time	0.15
Gender	-0.13
Ethnicity	0.18
Age	-0.12

Note: critical value=0.273

In examining the potential relationship between anticipated study preparation and locus of control, the researcher investigated the potential relationship between several sub-variables (types of study preparation) and the academic locus of control score. Using a 0.05 alpha, the test value of each sub-variable was compared to a critical value of 0.273.

Table 6 displays the PPMCC values for each variable considered, in relation to locus of control.

A weak positive correlation was found, indicating a significant linear relationship between exam delivery and academic locus of control (r= .29). This indicated that participants who had an ELOC either registered to take the computer-delivered test, or at the time of the study had not yet registered to take the test at all. At the time of the study, the computer-delivered test was the latest version of the test and in higher demand than the paper-delivered test.

While a strong relationship existed between exam delivery and locus of control, no other relationships were identified among the sub-variables and locus of control; therefore, the reader might conclude the null hypothesis was not rejected and the alternative hypothesis was not supported.

Null Hypothesis two. There is no relationship between locus of control and actual study preparation for the *Praxis II*, as measured by the Academic Locus of Control scale and the Actual *Praxis II*: Professional School Counselor Preparation Survey.

To calculate whether a relationship between locus of control and actual study preparation existed, the researcher used a PPMCC to determine if a relationship existed and to what degree.

In examining the potential relationship between locus of control and actual study preparation, the researcher investigated the potential relationship between several sub-variables (types of study preparation) and the academic locus of control score. Using a 0.05 alpha, the test value of each sub-variable was compared to a critical value of 0.273.

Table 7 displays the PPMCC values for each variable considered, in relation to locus of control.

Table 7

Academic Locus of Control and Actual Study Preparation

Preparation Activity Variable	Test Value (R)
Study prep location	0.03
Preparation hours	0.09
Study technique	0.23
Preparation activities	-0.05

Note: critical value=0.273

There were no identifiable correlations between actual study preparation sub-variables and academic locus of control scores; therefore, the null hypothesis was not rejected, and the alternative hypothesis was not supported. This indicated that there was no relationship between study preparation activities participants engaged in and academic locus of control.

On average, most participants spent no time engaging in study preparation for the *Praxis II*. Of those participants who did study, most study sessions were spent at home. In fact, of the weekly survey responses, participants who did study did so at home 94 times, far surpassing any other location of study. Those participants who did study typically spent less than one hour preparing for the *Praxis II* on a weekly basis.

Null Hypothesis three. There is no relationship between locus of control and *Praxis II* results, as measured by the Academic Locus of Control scale and the obtained score on the *Praxis II* exam.

To calculate whether a relationship between locus of control and *Praxis II* results existed, the researcher used a PPMCC to determine if a relationship existed and to what

degree. Using a 0.05 alpha, the test value of each sub-variable was compared to a critical value of 0.273.

There was not an identifiable correlation between academic locus of control and *Praxis II* scores; therefore, the null hypothesis was not rejected and the alternative hypothesis was not supported. This indicated that there was no relationship between academic locus of control and *Praxis II* scores

Null Hypothesis four. There is no relationship between anticipated study preparation and *Praxis II* results, as measured by the Intended *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

Table 8

Anticipated Study Preparation and Praxis II

Preparation Activity Variable	Test Value (R)
Registration date	0.20
Exam delivery	-0.24
Number of times taken Praxis	-0.02
Previous Praxis taken	-0.06
Study prep location	0.22
Preparation hours	0.01
Study technique	0.08
Preparation activities	-0.09
Allocated study time	0.00
Gender	-0.06
Ethnicity	0.12
Age	0.23

Note: critical value=0.273

Table 8 displays the PPMCC values for each variable considered, in relation to locus of control.

To calculate whether a relationship between anticipated study preparation and *Praxis II* results existed, the researcher used a PPMCC to determine if a relationship existed and to what degree.

In examining the potential relationship between anticipated study preparation and locus of control, the researcher investigated the potential relationship between several sub-variables (types of study preparation) and the *Praxis II* score. Using a 0.05 alpha, the test value of each sub-variable was compared to a critical value of 0.273. There were no identifiable correlations between anticipated study preparation sub-variables and the *Praxis II* scores; therefore, the null hypothesis was not rejected and the alternative hypothesis was not supported. This indicated that there was no relationship between participants' plans to study for the *Praxis II* and their *Praxis II* score.

Null Hypothesis five. There is no relationship between actual study preparation and *Praxis II* results, as measured by the Actual *Praxis II*: Professional School Counselor Preparation Survey and the obtained score on the *Praxis II* exam.

To calculate whether a relationship between actual study preparation and *Praxis II* results existed, the researcher used a PPMCC to determine if a relationship existed and to what degree. Table 9 displays the PPMCC values for each variable considered, in relation to locus of control.

Table 9

Actual Study Preparation and Praxis II Results

Preparation Activity Variable	Test Value (R)
Study prep location	*0.03*
Preparation hours	*-0.21*
Study technique	*0.23*
Preparation activities	*-0.05*

Note: critical value=0.273

In examining the potential relationship between actual study preparation and *Praxis II* results, the researcher investigated the potential relationship between several sub-variables (types of study preparation) and the *Praxis II* score. Using a 0.05 alpha, the test value of each sub-variable was compared to a critical value of 0.273. There was not an identifiable relationship between actual study preparation sub-variables and the *Praxis II* scores; therefore, the null hypothesis was not rejected and the alternative hypothesis was not supported. This indicated that there was no relationship between study preparation activities participants engaged in and their *Praxis II* scores.

Null Hypothesis six. Gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, and preparation activities are not predictors of *Praxis II* results.

To determine whether gender, ethnicity, age, exam delivery, location of study preparation, hours spent in preparation, and preparation activities were predictors of *Praxis II* results, the researcher quantified responses to the Intended Study Preparation and Actual Study Preparation Survey and used a single linear regression analysis to determine whether there was a relationship.

A single linear regression was calculated to predict participants' *Praxis II* score based on participants' gender. The regression equation was not significant ($F(1, 47) = 0.00$, $p = .97$) with an R^2 of 1.85. The regression analysis indicated that gender was not a significant predictor of *Praxis II* scores.

A single linear regression was calculated to predict participants' *Praxis II* score based on participants' ethnicity.

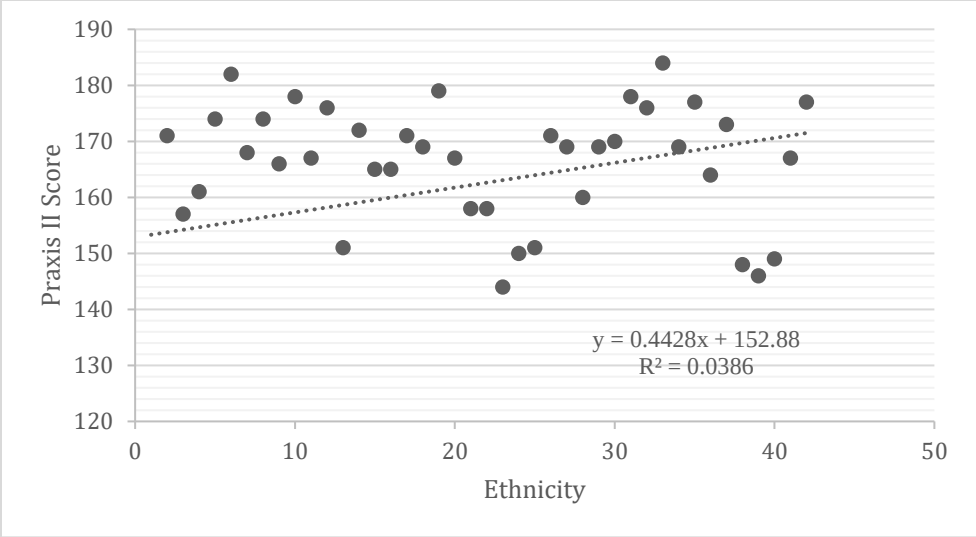

Figure 2. Linear relationship of ethnicity and *Praxis II* scores.

The regression equation was significant, ($F(1, 47) = 18.51$, $p = .000$) with an R^2 of .32. The regression analysis indicated that 32.1% of variance in *Praxis II* scores could be explained by participants' ethnicity.

A single linear regression was calculated to predict participants' *Praxis II* score based on participants' age.

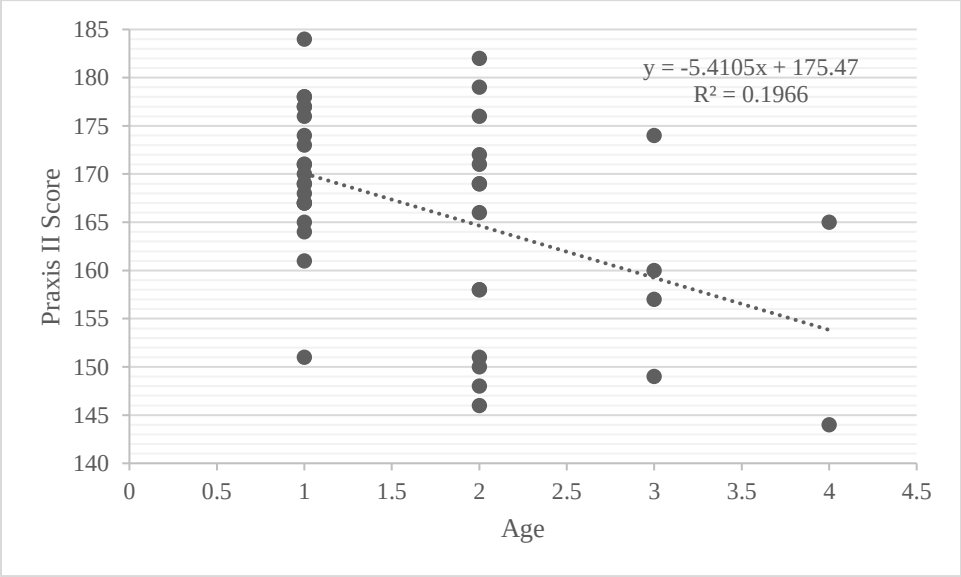

Figure 3. Linear relationship of age and *Praxis II* scores.

The regression equation was significant, ($F(1, 47) = 9.54$, $p = .003$) with an R^2 of .196. The regression analysis indicated that 19.6% of variance in *Praxis II* scores could be explained by participants' age.

Time spent studying for the exam was not a significant predictor of *Praxis II* scores. The regression equation was not significant ($F(1, 47) = .35$, $p = .55$) with an R^2 of .008. The regression analysis indicated that gender was not a significant predictor of *Praxis II* scores.

A single linear regression was calculated to predict participants' *Praxis II* score based on whether participants took the exam on a computer or paper. The regression equation was not significant ($F(1, 47) = 3.46$, $p = .07$) with an R^2 of .08. The regression analysis indicated that exam delivery was not a significant predictor of *Praxis II* scores.

A single linear regression was calculated to predict participants' *Praxis II* score based on location of where participants studied. The regression equation was not significant ($F(1, 47) = 1.78$, $p = .18$) with an R^2 of .04. The regression analysis indicated that location of study preparation was not a significant predictor of *Praxis II* scores.

A single linear regression was calculated to predict participants' *Praxis II* score based on time participants spent preparing for the exam. The regression equation was not significant ($F(1, 47) = .35$, $p = .07$) with an R^2 of .008. The regression analysis indicated that time spent studying for the exam was not a significant predictor of *Praxis II* scores.

A single linear regression was calculated to predict participants' *Praxis II* score based on preparation activities participants engaged in to prepare for the exam. The regression equation was not significant ($F(1, 47) = 1.25$, $p = .26$) with an R^2 of .03. The

regression analysis indicated that preparation activities were not a significant predictor of *Praxis II* scores.

There were few identifiable predictors of *Praxis II* scores, including age and ethnicity; therefore, the null hypothesis for age and ethnicity was rejected and the alternative was supported. However, the null hypothesis for gender, exam delivery, location of study preparation, hours spent in preparation, and preparation activities was not rejected and the alternative hypothesis was not supported. This indicated that these variables were not predictors of *Praxis II* scores. Since the null hypothesis for age and ethnicity was rejected and the alternative hypothesis was supported, these variables, age and ethnicity, were predictors of *Praxis II* scores.

With respect to age, 49% of the participants were between the ages of 20 and 30, 39% were between the ages of 31 and 40, 8% were between the ages of 41 and 50, and 4% were between the ages of 51 and 60. No participants identified themselves as 60 years or older.

Table 10
Age Range and Praxis II Pass Rates

Age range	*n*	Percentage of total participants	Percentage pass
20-30	24	49%	88%
31-40	19	39%	68%
41-50	4	8%	25%
60	2	4%	50%

Note: n=*49*

Pass rates on the *Praxis II* indicated that younger participants were more likely to pass the *Praxis II*. There were few participants above the age of 41; however, those between the ages of 20 and 30 passed the *Praxis II* at a greater rate. With regard to *Praxis II* scores, the average score for the 20 to 30-age-range was 170. The average score

for the 31 to 40-age-range was 194. The average score of the 41 to 50-age-range was 160. The average score of the 51 to 60-age-range was 155. At the time of this study, the cut off score to be eligible to pass the *Praxis II* was 164.

The researcher speculated that younger participants passed the *Praxis II* at a greater rate because they were more likely to be students who entered graduate school immediately following their undergraduate program, as opposed to older participants who likely stepped away from school for some time. Younger participants may be more accustomed to test taking compared to those who were not enrolled as a student for some time, requiring the development or refining of test taking skills.

Conclusion

This study analyzed the relationship among locus of control, *Praxis II* scores, and participants' plans to study, as well as their self-reported study habits. The study included 44 unique participants, with a total of 49 respondents, due to their enrollment in the Field Placement course for more than one semester.

The majority of participants in this study (82%) possessed an ILOC with an average academic locus of control score of 8.6 (score range is from zero to 28). Only 18% of the participants identified as having an ELOC with an average academic locus control score of 14.9. When comparing ethnicities, more African American participants identified as having an ELOC (56%) than their Caucasian peers (44%). More Caucasian participants identified as having an ILOC (75%) than their African American peers (25%). The percentage of participants with an ILOC that passed the *Praxis II* (63%) was greater than the percentage of those with an ELOC that passed the *Praxis II* (10%), indicating some inherent value in possessing an ILOC.

The results from this study indicated that there were not significant relationships amongst locus of control, planned study preparation, actual study preparation, and *Praxis II* scores. While two variables, age and ethnicity, were identified as predictors of *Praxis II* scores, the majority of variables considered were not identified as predictors of *Praxis II* scores.

Lastly, results indicated that younger participants were more likely to pass the *Praxis II*. Specifically, those within the age range of 20 to 30 passed the *Praxis II* at a greater rate, though the average score on the Praxis II was higher for those between the ages of 31 and 40. Based on findings within Chapter Four, Chapter Five specifies recommendations for school counseling programs, faculty, and students enrolled in school counseling programs, as well as areas for future research.

Chapter Five: Discussion and Reflection

The purpose of this research was to develop an understanding of academic locus and its relationship to several variables, including preparation strategies of students and their effect on the *Praxis II* score. Utilizing a quantitative approach, the researcher measured the relationship among participants' academic locus of control, their plans to prepare for the *Praxis II*, and weekly preparation for the *Praxis II*. Additionally, the researcher investigated whether participants' academic locus of control, their plans to prepare for the *Praxis II*, and weekly preparation for the *Praxis II* were predictors of *Praxis II* scores.

Summary of Results

The results from this study indicated that there were not significant relationships among locus of control, planned study preparation, actual study preparation, and *Praxis II* scores. While two variables, age and ethnicity, were identified as predictors of *Praxis II* scores, the majority of variables considered were not identified as predictors of *Praxis II* scores. Results did indicate that participants who possessed an internal locus of control passed the *Praxis II* at a greater rate than those with an external locus of control. Additionally, ethnicity as a predictor of *Praxis II* scores provided further confirmation for the rationale for this study. This finding confirms that a gap among *Praxis II* scores existed and may be related to student ethnicity.

Hypotheses. Six hypotheses were included in this study, five of which investigated the whether a relationship among variables existed and to what degree. The sixth hypothesis investigated variables in the study as predictors of *Praxis II* scores. The researcher did not reject the null hypothesis for hypotheses one through five. There were

few identifiable predictors of *Praxis II* scores, including age and ethnicity; therefore, the null hypothesis for gender, exam delivery, location of study preparation, hours spent in preparation, and preparation activities was not rejected and the alternative hypothesis was not supported. This indicated that these variables were not predictors of *Praxis II* scores. The null hypothesis for age and ethnicity was rejected and the alternative hypothesis was supported. This indicated that age and ethnicity were predictors of *Praxis II* scores.

Discussion

Ethnicity. Pass rates of the *Praxis II* in this study clearly demonstrated ethnicity as factor in success on the *Praxis II*. Of the 13 African American participants that took the *Praxis II*, only 38% passed the *Praxis II*. Of the 36 Caucasian participants that took the Praxis *II*, 95% passed the *Praxis II*. Ethnicity as a factor in standardized testing pass rates was identified in a variety of studies (Edmonds, 2014; Elpus, 2015; Graham, 2013; Wall, 2008). More specifically, such standardized tests that demonstrated ethnicity as a predictor of student pass rate included, but were not limited to the *Praxis II* (multiple areas of content), the *Praxis I*, and the MoGEA (Edmonds, 2014; Elpus, 2015; Madkins, 2011). Such findings in this study were consistent with findings throughout literature regarding standardized testing.

Gender. While this study did not conclude gender as a predictor of *Praxis II* scores, there was evidence that gender may also be a factor in passing the *Praxis II*. While not statistically significant, analysis of gender indicated that only female participants in the study failed the *Praxis II*. In addition to a gap in pass rates based on ethnicity, Elpus (2015) also found that gender was also factor in *Praxis II* pass rates for music educators. Male students performed better on the *Praxis II* than females. Similar

findings were also concluded in other studies with regard to the MoGEA and *Praxis I* (Edmonds, 2014; Gitomer et al., 2011). This demonstrated the need for further investigation concerning *Praxis II* scores and gender. The researcher concluded that a larger sample size with increased gender diversity may demonstrate a dissimilar outcome.

Age. With respect to age, this study concluded that age was a predictor of *Praxis II* scores. Specifically, those participants between the age ranges of 20 and 30 passed the *Praxis II* at a greater rate; however, the average *Praxis II* score was higher among the participants in the 31 to 40-age-range.

Literature supported the notion that older students tended to retain higher levels of motivation and self-efficacy that often resulted in better educational outcomes (O'Shea, 2003; Rothes, Lemos, & Gonçalves, 2017). There was a lack of research regarding age as a predictor on *Praxis II* tests. Because of the findings of this study as compared to the then-current body of literature, additional inquiry regarding age as a predictor on the *Praxis II* was warranted. Narrowing the age ranges on the Intended Preparation Survey, or requiring participants to specify their exact age may be necessary to determine the degree of relationship between age and *Praxis II* scores for school counseling candidates.

Locus of control. Results from this study indicated that there was not a statistically significant relationship between locus of control and *Praxis II* results. The researcher found similar results with regard to a lack of relationship between locus of control and anticipated study preparation, as well as actual study preparation. While results indicated no significant relationship between locus of control and *Praxis II* scores, findings from this study did indicate that participants with an internal locus of control passed the *Praxis II* at a greater rate than those with an external locus of control.

Of the 13 failed attempts on the Praxis II, 31% (n=4) of participants possessed an external locus of control, while of the 36 successful attempts on the Praxis II, 14% (n=5) participants possessed an external locus of control. Findings regarding a higher pass rate for those with an internal locus of control was consistent with research that suggested those with an internal locus of control typically possessed higher levels of motivation when it came to education and earn higher grades than those with an external locus of control (Nelson & Mathia, 1995).

Recommendations to the Program

Quantitative results from this study indicated little relationship among variables and their ability to predict a *Praxis II* score. In short, the counseling program at the Midwestern university where research took place, may wish to consider other variables that could significantly influence *Praxis II* scores. Additionally, because Missouri no longer requires the *Praxis II* at the time of this writing, the counseling program may wish to more fully investigate performance on the new MCAs to determine what factors may contribute to a gap in pass rates. Determining such factors may allow the program to better assist students who are more likely to struggle with passing the culminating exam.

The outcomes of this study did not yield results that aid school counseling programs in identifying specific studying techniques or materials students should be encouraged to utilize in preparation for the *Praxis II*. While age and ethnicity were predictors of performance on the *Praxis II*, these variables cannot be altered to aid students in successful completion of the *Praxis II*. If this study had suggested, for example, that a relationship existed between the number of hours spent studying and Praxis II scores, faculty and administration within school counseling programs may have

grounds for specific interventions to programs, within counseling programs, or recommended guidelines for preparation to ensure student success.

As faculty within school counseling programs consider the methods and tools by which to support students in their preparation for the *Praxis II*, they should consider best practices that are culturally relevant and inform an entire program. Research among African American and other minority undergraduate college students indicated that the following contribute to their academic success: increased social engagement, welcoming campus culture and climate, and modifying consequences of changing major fields (Martin et al., 2016). How these aspects of campus life apply to graduate students differs, especially due to the different needs of adult learners that traditionally seek graduate programs. The researcher believes that continued research involving locus of control, its relationship with student perceptions of preparation, and exit exam scores, may eventually demonstrate value to counseling programs and enrolled students.

As administrators at universities seek to maintain accreditation and prepare students appropriately for their field of study, a thorough understanding of contributing factors to the achievement gap will be essential. Institutions accredited by the Higher Learning Commission (2018), regional accrediting body for post-secondary education institutions, are required to review the success of its graduates on a regular basis (Criteria 4, Core Component 4.A.). More specifically, as part criteria for accreditation, institutions must demonstrate:

> that the degree or certificate programs it represents as preparation for advanced study or employment accomplish these purposes. For all programs, the institution looks to indicators it deems appropriate to its mission, such as employment rates,

> admission rates to advanced degree programs, and participation rates in fellowships, internships, and special programs. (Higher Learning Commission, 2018, para. 15)

Failure to address gaps in the success of an institution's graduates could have impact on an accreditation review, requiring specific and documented remediation from the university or college. It is in the best interest of an institution to remain abreast of the challenges facing their graduates and seek to remediate obstacles regularly encountered. Inadequate solutions will influence accreditation reviews, but may also affect enrollment and retention as students learn of dismal success rates for graduates.

Implications for Faculty

While this study focused on student-related perceptions and preparation for the *Praxis II*, it is clear that colleges and universities have little control over such elements. Faculty can provide study tools, offer study sessions, and guide students in their efforts to prepare for a licensure exam, and should continue to do so, but faculty cannot control individual motivations of students or their perceptions. Perhaps a more valuable use of time for institutions and faculty is to consider elements that directly influence student achievement and performance. Literature suggested that faculty teaching had significant impact on students' academic achievement (Gillian-Daniel & Kraemer, 2015; Gillian-Daniel, Kraemer, Kueppers, & Schmid, 2016). Institutions of higher education must recognize the value of developing the teaching ability of all faculty to support not only minority students, but also all students. Strategies used by faculty to be inclusive in their instruction has potential to influence the learning of students who are diverse, in not only race, but also academic ability, including those with disabilities.

Because of the varying preparation faculty receive in teaching, faculty lack knowledge regarding teaching methodology. One way by which institutions can begin to address the achievement gap in higher education is by providing opportunities for faculty to learn and master learner-centered teaching methodologies.

Higher education institutions are already exploring the idea of implementing practices like Universal Design for Learning (UDL) to assist in making course content accessible for all learners. While helpful for students with disabilities, UDL can aid in the learning of all students. Tobin (2014) stated that:

> Though UDL allows us to do much more than merely accommodate student disabilities. UDL is an approach to the creation of learning experiences that incorporates multiple means of engaging with content and people, representing information, and expressing skills and knowledge. (p.14)

In short, UDL provided access to course materials and content in a format that was accessible for all learners. UDL provided learners the opportunity to engage, interaction, and absorb course content is a manner most suitable to the learning needs of the student (Tobin, 2014). As the student body within higher education continues to diversify and includes adult learners, first-generation, minority, ESL, and disabled students, the method of course delivery and teaching methodology of faculty will have to change if colleges and universities hope to retain these students.

Simple elements of UDL include providing course documents in a PDF format so students can utilize screen readers to audibly hear the material, rather than read it, providing videos with closed captioning, and allowing students an option with demonstrating their knowledge regarding course content. While college and university

faculty may prefer a lecture style course to convey course content, the reality is that not all students effectively learn through lecture-based teaching. UDL is a best practice for faculty serving not only students with disabilities, but also students with varying learning needs.

An example of one faculty development opportunity to learner-centered teaching exists at University of Wisconsin-Madison. The Madison Teaching and Learning Excellence (MTLE) Office developed a program for its faculty to train faculty on inclusive teaching. As part of the training, faculty become aware of institutional and systematic barriers that minority students often deal with, explore their personal biases, explore new pedagogical approaches to teaching, and develop an action plan that includes one evidenced based practice with the goal of becoming a more inclusive teacher. The MTLE program utilizes the following best practices based on research, for inclusive teaching, which can be replicated at other institutions (Gillian-Daniel, et al., 2016):

Table 11
Inclusive and Impactful Teaching Practices

Categories of Practice	Examples of instructor's practice
Integrate culturally inclusive and relevant content into a course	• Include content-based literature from diverse populations and invite students to contribute their unique cultural experiences to the classroom discussion. • Reflect on the degree to which their own teaching practices are inclusive and appropriate for their multicultural classrooms, as well as students' future work settings.
Decrease the potential intimidation students feel around instructors	• Create more opportunities for student-faculty and student teaching assistant (TA) interactions in and beyond the classroom. • Hold out-of-class meetings with first-generation students, individually or collectively, to discuss collegiate success.

Continued

Table 11. Continued.

Engage students with supplemental instruction	• Create a peer collaborative learning space. • Create open study spaces where students can receive help from TAs, instructors, and other classmates. • Connect students with existing campus resources, like learning centers and tutoring programs.
Be intentional about how student groups and project teams are formed	• Conduct teamwork training with graduate students and undergraduate peer mentors before group projects; conduct mentoring meetings with each group during the project. • Allow each study group or peer-mentoring group to determine goals and rules, and to create an agenda for each meeting at the beginning to allow for greater participation.
Work with TAs and other instructors in the class	• Include a section in TA trainings on how to improve retention of first and second year students (especially in the sciences) by presenting data on institutional and national retention figures and case studies on why students leave the discipline. • Train TAs how to implement active learning and cooperative learning in their discussion groups and labs.
Use inclusive teaching practices	• Make sure the classroom, textbooks, handouts, and all other course materials reflect an inclusive environment in both their content and images. • Emphasize the human purpose of what is being learned and its relationship to the students' experience.

Faculty who engaged in the MTLE program reported a change in their knowledge, attitude, awareness, and teaching practice. Most notably, faculty who participated in this development opportunity felt as though the way they engaged students changed

significantly. Faculty reported a developed ease with regard to discussing diversity to engage students in the classroom (Gillian-Daniel, et al., 2016).

Development opportunities like the MTLE program and UDL may be the answer to closing the achievement gap in higher education. Higher education administration and faculty should make note of promising practices that will continue to facilitate changes in the learning experiences for minority students, leading to student success and licensed, employable school counseling candidates.

Implications for School Counseling Students

Unfortunately, this study did not reveal any significant findings related to students enrolled in school counseling programs. Initially, the researcher had anticipated learning of study practices and techniques that aided students in successfully passing the *Praxis II*; however, results did not indicate any variables within the student's control that had a direct relationship with pass or failure rates on the *Praxis II*. For school counseling students, it may prove more beneficial to examine the habits of students who successfully pass the *Praxis II* to determine study suggestions for those preparing to take the test. Students are encouraged to utilize the study tools prepared by ETS to become familiar with the test prior to taking it for licensure.

Recommendations for Future Research

Sampling. Various issues contributed to a smaller sample size than originally expected. This was due to issues outside of the researcher's control. A larger sample size may have allowed for a smaller margin of error when attempting to discern the relationship of the variables. Additionally, the participants included one institution. It is possible that admission standards and institution location affected the type of student

attracted, resulting in a different outcome with regard to locus of control and exam scores. A larger sample size of participants from various institutions would provide the researcher with a more comprehensive understanding of the relationship among the variables, academic locus of control, and the *Praxis II* results.

In future research, stratified random sampling would yield results that would be more representative of the population characteristics, increasing the ability to generalize results. Convenience sampling, as used in this study, cannot always be generalized to the population, nor does convenience sampling ensure proper representation of the population (Bluman, 2008). Because this study used convenience sampling to identify participants, the study should be replicated to determine if results can be duplicated. Convenience sampling also limits the ability for results to be generalized to the population as a whole, because it may include biases, including over representation or underrepresentation of particular groups. Lastly, a study involving a small number of participants is not sufficient to evaluate the assortment of variables that may influence a *Praxis II* score.

Participants. Several considerations should be made for future research, should this study or aspects of this study be replicated. One limitation of this study was the participants. Including participants from a single university within a specific discipline may have affected the results of this study and limited generalizability. A difference in results could exist if other universities and graduate students from various disciplines had participated in the study. Additionally, the participating university was a private, liberal arts university located in the Midwest. Research including a different locale or orientation may yield dissimilar results.

The participants in this study were also limited in ethnicity with 13 participants identifying as African American and 36 identifying as Caucasian. This study may yield dissimilar results should a researcher include a more diverse student population. Because of the ethnicities represented in this study, the results were also limited to generalizability within more densely diverse universities.

This study took place for the duration of a year, including the spring semester of the 2012-2013 academic year and the fall semester of the 2013-2014 academic year. Conducting the same study for an extended period to include more participants may lead the researcher to establishing more and/or different trends among the student body. Investigating such variables over an extended period may also allow the researcher to identify whether the variables interact contrarily with a different group of participants.

Quantitative study. The quantitative nature of this study limited the researcher's insight into linking locus of control with Praxis II performance, along with the other variables investigated in this study. Conducting a mixed method study to include interviews or focus groups may have provided more awareness regarding the participants' perspectives of the Praxis II, as well as their study habits. In this study, nearly all participants indicated they planned to dedicate a significant amount of time to preparing for the Praxis II; however, regardless of age, race, sex, or internal/external locus of control, on average, participants spent less than an hour studying each week. Developing an understanding of rationale for lack of follow through on planned study time from the participant's perspective may lead to other avenues for research.

Instruments. While the instrument used to measure participants' academic locus of control was found to demonstrate a great deal of reliability and validity, the researcher

created the Intended *Praxis II*: Professional School Counselor Preparation Survey and the Actual *Praxis II*: Professional School Counselor Preparation Survey used in this study. While the surveys were piloted prior to its use for research, it could have undergone more rigorous evaluation for reliability and validity. A different measure of intended versus actual study preparation would be beneficial for future research, ideally with an instrument that has not been created solely by the researcher.

Additionally, though participants were made aware that their responses to the survey had no bearing on the course content or grade earned in the course, their responses may have not reflected an accurate depiction of reality. The researcher surveyed participants at the beginning of the semester regarding their intended preparation for the *Praxis II* and on a weekly basis regarding their actual preparation for the *Praxis II*. Participants were surveyed on a weekly basis to provide the best opportunity for students to accurately depict the week's preparation activities; however, because the information collected through the surveys was strictly based on what the student reported, the accuracy of the student report was subject to the student's recollection and honesty in responses.

Unbeknownst to the researcher, participants may have wished to distort their answers to survey questions in an effort to exhibit a specific guise as factual. The data captured by the surveys must be interpreted with this limitation in mind. In this case, participants may have sought to indicate study habits they did not actually complete. The weekly survey may have also influenced results, as it served as a reminder of the necessity to study. Typically, students do not receive such a prompting on a weekly

basis. As with any self-reporting instrument, all results are based on what participants' report, which is subject to error and interpretation.

A concern regarding participant honesty in responses results from the researcher's potential relationship with some of the participants. At the time of data collection, the researcher was an adjunct professor within the school counseling program; therefore, students may have reflected their preparation inaccurately, as though they spent more time in preparation for the *Praxis II* than factual. Some participants may have had the researcher as a professor while enrolled in the program or may be aware that they would have the researcher as a professor in the future. Participants may prefer to demonstrate a different level of preparation due to their interaction with the researcher as a professor or their interaction with the department as a whole. A reviewer from outside of the organization may yield reliable results, as participants may not be concerned about their relationship or potential relationship with the researcher.

It is also possible that because participants were asked to share about their weekly preparation for the *Praxis II* that the survey served as a reminder for participants to prepare for the exam, thereby changing their weekly responses. In this study, it is possible that because participants were reminded on a weekly basis to complete a survey regarding their study preparation, their behavior changed. In social research, the Hawthorne Effect may explain this potential shift in behavior. Though an understanding and definition of the Hawthorne Effect may vary in different disciplines, within social research, it is commonly defined as "an influence that can occur in experiments when subjects know they are being studied and change their behavior as a result" (Chiesa & Hobbs, 2008, p. 69.). In this study, the Hawthorne Effect may have been an underlying

variable that indirectly influenced participant preparation and perceptions. In social research, this effect may be one that is nearly impossible to avoid.

Finally, over the course of this research, the test by which institutions of higher education measure successful completion of a school counseling program has changed several times. Due to the changes in the *Praxis II* content by the ETS (2012) and the subsequent change from the *Praxis II* to the MCA test by MODESE (2014), the *Praxis II* results included in this research may be limited in their application to the MCA test. Future research should most certainly include the most current version of the exam required by the state for certification.

Variables of the study. Rather than relying on curiosity, the researcher should have framed research based on studies that indicated specific variables that influenced study habits and test performance. While the researcher was curious if specific variables had the ability to influence a specific cohort and test, limited information was available as to whether such variables were a worthy topic of study. This may have influenced the results of the study because little research existed to support the need to investigate variables, such as study location and preparation activities specific to the *Praxis II* exam. Selecting variables that had evidence of affecting study preparation and test performance may have proved to be more fruitful.

Personal Reflections

Continuing to attribute test score discrepancies among students of different ethnicities solely to the achievement gap perpetuates the myth that students have no control over their academic outcomes. Failure to continue to investigate the variables that may be related to such gaps in achievement demonstrates a lack of understanding by

administrators to the real and relevant issues students continue to encounter on standardized tests. A willingness to continue to understand all variables that contribute to the achievement gap not only builds student confidence in university administration, but also aids in accessible employment for all students upon successful completion of a graduate program.

Personally, anecdotal comments from students served as a prompt for this study. The perception that students possessed regarding their inability to perform well on a standardized test, regardless of preparation spoke volumes to me. The perceived lack of control among students was a perspective I had hoped to change based on the results of this study. While this study did not provide the evidence I had hoped, it did demonstrate the continued need for faculty development in the areas of teaching and inclusivity. There are elements of my teaching methodology that need to change to better reflect the needs of my students and their learning needs. Additionally, in my role as an administrator, I can use the knowledge learned through this study to aid in proper support program design and faculty development.

My drive to empower students in their academic journey has not waivered. My resolve, as a university administrator, remains the same. I will continue to listen to the varying perspectives among students while considering the responsibility of university programs in preparing students to be successful, not only in the classroom, but on exit exams and beyond.

Conclusion

This study sought to determine whether a relationship among academic locus and several variables, including preparation strategies of students and the effect on the *Praxis*

II score, exists. While the majority of participants possessed an internal locus of control, the researcher found that there is no significant relationship among academic locus of control, plans students had to study, what they did to study, and *Praxis II* scores.

Results did that younger participants, specifically those between the ages of 20 and 30, were more likely to pass the *Praxis II*; however, average scores on the *Praxis II* were the highest within the age range of 31 to 40. Results also indicate that participants who possessed an internal locus of control passed the *Praxis II* at a greater rate than those with an external locus of control. Additionally, ethnicity as a predictor of *Praxis II* scores provides further confirmation for the rationale for this study. This finding confirms that a gap among *Praxis II* scores exists and may be related to student ethnicity. In addition, scores from the replacement exam for the *Praxis II*, the MCA, indicate that disparity continues to exist among pass and failure rates based on student ethnicity. Changing the exam required for licensure did nothing to improve the achievement gap for school counseling candidates.

In Chapter Five, this study highlights recommendations made by the researcher for institutions of higher education, faculty, and school counseling students. Perhaps the most notable are the proposed faculty development opportunities to improve the quality of instruction within higher education classrooms, including learner-centered and inclusive teaching. While faculty can only influence student perceptions and study habits, they do have the ability to shape student learning by utilizing pedagogy that reflects best practice.

While the achievement gap continues to exist, research regarding the rationale for why and the means by which to address it, should continue. As faculty continue to

diversify their teaching methods, their assessment of learners in the classroom, as well as students in their classrooms, educators will not be able to avoid the achievement gap any longer. As university administrators and leaders, our pursuit of eliminating barriers to student success should be relentless.

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Appendix A

Student ID: _____

Academic Locus of Control

Below are some statements about various academic topics. For each statement, please indicate whether it is true (T) or false (F). There are no right or wrong answers, but be sure to select the one you believe to be more true rather than the one you think you should choose or the one you would like to be true. When you have completed this survey, please return it to the front of the classroom, and place it in the manila folder. If you would like to receive information regarding the outcome of this measure relative to your answers, please indicate your e-mail address at the end of the survey.

T	F	1.	College grades most often reflect the effort you put into classes.
T	F	2.	I came to college because it was expected of me.
T	F	3.	I have largely determined my own career goals.
T	F	4.	Some people have a knack for writing, while others will never write well no matter how hard they try.
T	F	5.	At least once, I have taken a course because it was easy to get a good grade.
T	F	6.	Professors sometimes make an early impression of you and then no matter what you do, you cannot change that impression.
T	F	7.	There are some subjects in which I could never do well.
T	F	8.	Some students, such as student leaders and athletes, get free rides in college classes.
T	F	9.	I sometimes feel that there is nothing I can do to improve my situation.
T	F	10.	I never feel hopeless-there is always something I can do to improve my situation.
T	F	11.	I would never allow social activities to affect my studies.
T	F	12.	There are many more important things for me than getting good grades.
T	F	13.	Studying every day is important.

T	F	14.	For some courses, it is not important to go to class.
T	F	15.	I consider myself highly motivated to achieve success in life.
T	F	16.	I am a good writer.
T	F	17.	Doing work on time is always important to me.
T	F	18.	What I learn is more determined by college and course requirements than by what I want to learn.
T	F	19.	I have been known to spend a lot of time making decisions, which others do not take seriously.
T	F	20.	I am easily distracted.
T	F	21.	I can be easily talked out of studying.
T	F	22.	I get depressed sometimes and then there is no way I can accomplish what I know I should be doing.
T	F	23.	Things will probably go wrong for me sometime in the near future.
T	F	24.	I keep changing my mind about my career goals.
T	F	25.	I feel I will someday make a real contribution to the world if I work hard at it.
T	F	26.	There has been at least one instance in school where social activity impaired my academic performance.
T	F	27.	I would like to graduate from college, but there are more important things in my life.
T	F	28.	I plan well and stick to my plans.

University E-mail address (optional):_____

Appendix B

Student ID: _____

Intended *Praxis II*: Professional School Counselor Preparation Survey

Below are statements regarding preparation for the *Praxis II*: Professional School Counselor. There are no right or wrong answers. Please be sure to read all answers prior to indicating a response to the following questions regarding your intended preparation for the *Praxis II.* When you have completed this survey, please return it to the front of the classroom, and place it in the manila folder.

1. I have registered to take the *Praxis II* on:
    a. January 26, 2013
    b. April 13, 2013
    c. June 8, 2013
    d. July 20, 2013
    e. not yet scheduled.
    f. the computer (test dates vary).
    g. I have already passed the *Praxis II* (if so, skip to question number 10).

2. I have registered to take the *Praxis II* as a:
    a. paper-delivered test.
    b. computer-delivered test.
    c. I have not registered to take the *Praxis II.*

3. I have taken the *Praxis II*: Professional School Counselor:
    a. once.
    b. twice.
    c. more than twice.
    d. never, it is my first time.

4. I have taken a *Praxis* test for a previous certification or program:
    a. once.
    b. twice
    c. more than twice.
    d. never, this is the first *Praxis* test I have planned to take.

5. When I study for the *Praxis II*, I plan to:
    a. study at home.
    b. study at a library.
    c. study outside of my home.
    d. study in multiple locations.
    e. I do not plan to study.

6. When I study for the *Praxis II*, I plan to:

a. spend less than one hour per week preparing for the test.
b. spend one to two hours per week preparing for the test.
c. spend more than two hours per week preparing for the test.
d. Unsure.
e. I do not plan to study.

7. When I study for the *Praxis II*, I plan to (select all that apply):
    a. study with a study group.
    b. study by myself.
    c. study with a single partner.
    d. not study outside of class.
    e. I do not plan to study.

8. I plan to participate in the following preparation activities before taking the *Praxis II* (select all that apply).
    a. Review the *Test at a Glance* that is available on the Educational Testing Service website.
    b. Review other textbooks and/or study materials.
    c. Participate in a test preparation/study activity or course organized by my university or other institution.
    d. Other, please specify:

9. I have a set time for studying each week.
    a. True.
    b. False.

10. Your gender is:
    a. Male.
    b. Female.

11. Your ethnicity is:
    a. African American.
    b. White/Caucasian.
    c. Asian.
    d. Hispanic.
    e. American Indian.
    f. Other.

12. Your age range is:
    a. 20-30.
    b. 31-40.
    c. 41-50.
    d. 51-60.
    e. older than 60.

Appendix C

Student ID: _____

Actual *Praxis II*: Professional School Counselor Preparation Survey

Below are statements regarding your preparation for the *Praxis II*: Professional School Counselor. There are no right or wrong answers. Please be sure to read all answers prior to indicating a response to the following questions regarding your preparation for the *Praxis II* **within the past week**. When you have completed this survey, please return it to the front of the classroom, and place it in the manila folder.

1. This week, I:
    a. studied for the *Praxis II* at home.
    b. studied for the *Praxis II* at a library.
    c. studied for the *Praxis II* outside of my home.
    d. studied for the *Praxis II* in multiple locations.
    e. did not study for the *Praxis II.*
    f. I have already taken the *Praxis II*; therefore, I did not study. If so, please select the most appropriate response regarding your perspective:
        i. I believe I passed the *Praxis II*: Professional School Counselor.
        ii. I do not believe I passed the *Praxis II*: Professional School Counselor.
        iii. I am unsure as to whether I passed the *Praxis II*: Professional School Counselor.
        iv. I know I did pass the *Praxis II*: Professional School Counselor.
        v. I know I did not pass the *Praxis II:* Professional School Counselor.

2. This week, I:
    a. spent less than one hour preparing for the *Praxis II*.
    b. spent one to two hours preparing for the *Praxis II*.
    c. spent more than two hours preparing for the *Praxis II*.
    d. did not study for the *Praxis II*.

3. This week, I (select all that apply):
    a. studied with a study group.
    b. studied by myself.
    c. studied with a single partner.
    d. did not study outside of class.
    e. did not study.

4. This week, I participated in the following activities in preparation for the *Praxis II* (select all that apply).

a. Reviewed the *Test at a Glance* that is available on the Educational Testing Service website.
b. Reviewed other textbooks and/or study materials.
c. Participated in a test preparation/study activity or course organized by my university or other institution.
d. Other, please specify:
e. I did not participate in any of the above activities this week.

Vitae

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Education

2011-present	Lindenwood University, St. Charles, Missouri Ed.D (projected August 2017), Instructional Leadership, emphasis in Higher Education Administration Dissertation Title: *A Correlational Study of Academic Locus of Control, Study Preparation, and the Praxis II*
2011	Lindenwood University, St. Charles, Missouri School Psychological Examiner Certification
2009	Lindenwood University, St. Charles, Missouri Master of Arts, School Counseling
2005	Hannibal-LaGrange University, Hannibal, Missouri Bachelor of Science, Christian Education

Clinical Experience

2013-2014 Red Lake School District ISD #38, Red Lake, Minnesota
School Psychologist

- Provided indirect and direct psychological services to prekindergarten through grade 12 Native American students
- Administered, interpreted, and reported results of psychological, functional, behavioral, and educational tests
- Selected and evaluated assessment instruments and data gathering procedures
- Gathered and interpreted necessary data using formal and informal procedures in the areas of child development, such as cognitive, perceptual, emotional, social, adaptive behavior, personality, and vocational

2011-2013 Lindenwood University, St. Charles, Missouri
School Psychological Examiner

- Conducted educational evaluations in conjunction with the Student Counseling and Resource Center
- Appropriately identified disabilities and provided recommendations for accommodations through the university's Student and Academic Support Services
- Designed and implemented new application forms and referral process for students requesting an evaluation
- Developed a database by which to track students referred for testing

Teaching and Administrative Experience in Higher Education

2016-present Concordia University, Mequon, Wisconsin
Vice President of Academics for Student Success

- Develop, oversee and assess academic success programs for all Concordia students
- Assess University policies regarding academic honesty, academic grievances, academic probation, and dismissal
- Serve as graduation coordinator
- Monitor retention, persistence, and graduation rates, implement program changes based on such data
- Participate in strategic planning at an administrative and unit level
- Supervise the Directors of Career Services, Academic Advising, and the Learning Resource Centers
- Serve as an academic liaison to student life
- Collaborate with others on campus to identify and secure internal and external resources to support student success efforts

2014-2016 Red Lake Nation College, Red Lake, Minnesota
Vice President of Student Success

- Oversee and provide student support services, including counseling services, career counseling, and study skill development
- Established and coordinate Disability Services for eligible students
- Developed new program initiatives in an effort to increase persistence, retention, and graduation rates
- Supervise the Retention and Recruitment Counselor regarding retention initiatives and recruitment efforts
- Supervise the Director of Library Services and Tribal Archives
- Lead college faculty/staff in identifying, assisting, and monitoring "at-risk" students
- Assist with Higher Learning Commission tasks and duties
- Chair the Progressive Academic Student Success Committee, working closely with colleagues to assess student performance and address retention efforts
- Lead and coordinate RLNC staff and faculty to assist in identifying, supporting, and monitoring students to improve retention of students and recruiting efforts

2015-2016 Red Lake Nation College, Red Lake, MN
Adjunct Faculty, Associate of Arts Degree Program/Associate in Applied Science, Social and Behavioral Sciences Degree Program

- Redesigned and instructed EDU 102 Path to Success
- Instruct HUM 110 Introduction to Human Services
- Assisted in developing curriculum and coursework for Associate in Applied Science, Social and Behavioral Sciences Program

2006-2013 Counseling Program Coordinator, Department of Counseling

- Served as primary contact for prospective students regarding program information
- Advised students academically and assisted them with daily academic requests
- Provided administrative support for the department faculty
- Represented University as a liaison to adjunct faculty
- Coordinated course schedule, directed student enrollment and class closures
- Tracked book usage to provide updated research and materials
- Wrote and reviewed Adjunct Faculty contracts on a semester basis
- Assessed and implemented changes to program curriculum
- Supervised work study students and two graduate assistants
- Initiated and maintained department's social networking presence
- Updated program handbooks and program planners yearly
- Established the use of the *Praxis* II *Series* Tests at the university
- Developed new hiring procedures and job descriptions/profiles for Full-Time Faculty, Adjunct Faculty, Graduate Assistants, and Work and Learn Students
- Assisted in developing new recruitment strategies for the program

2010-2013 Lindenwood University, St. Charles, Missouri
Adjunct Faculty, Department of Teacher Education & Department of Counseling

- Redesigned and instructed EDU 32400 Assessment of Intellectual Skills for undergraduate students
- Instructed EDU 20200 Psychology of Teaching & Learning for undergraduate students
- Instructed IPC 58300 Analysis of the Individual for graduate students

2011-2013 Higher Learning Commission (HLC) Assessment Committee

- Facilitated communication between HLC and Counseling Department
- Developed assessment procedures for the Department of Counseling, per HLC
- requirements
- Designed data collection and interpret results of data collected
- Authored all assessment reports regarding curriculum alignment to state and university standards, per the Higher Learning Commission and the Missouri Department of Elementary and Secondary Education

2008 Success Advisor, Office of First-Year Programs

- Assisted first-year freshman in implementing a 'success contract'

- Assessed academic progress for those on academic probation in an effort to assist with retention
- Provided guidance in study habits and time management

2007-2009 Instructor, First-Year Programs

- Instructed Freshman Experience for undergraduate students
- Assisted students in their transition to college through additional mentoring for academic, personal, and vocational development

Previous Work Experience

2005-2006 American Red Cross, St. Louis, Missouri
AmeriCorps Member, Safety Education Corps

- Created health, safety, and disaster presentations
- Educated K-12 age students (6500 reached) through classroom presentations
- Managed 30 high school age volunteers
- Served as a caseworker for Hurricane Katrina/Rita victims
- Conducted First Aid/CPR/Automated External Defibrillator training

2003-2005 YMCA, Hannibal, Missouri
Site Director, After School Program,

- Conducted after school activities
- Addressed disciplinary issues with children
- Maintained children's records to meet state requirements

Presentations

Polzin, E., & Miller, A. (2017). *More than just a number: Maintaining a student-centric approach while taking the data plunge*. Oral Presentation. NACADA Annual Conference. St. Louis, Missouri.

Polzin, E. (2017). *Helping students achieve success*. Oral Presentation. CUW/CUAA Faculty Retreat 2017. Mequon, WI.

Polzin, E. (2013, April). *A correlational study of academic locus of control, study preparation, and the Praxis II.* Poster presented at the Missouri Professors of Educational Administration Conference. Columbia, MO.

Karraker, H., & **Polzin, E.** (2010 & 2011, November). *Adding school psychological examiner credentials*. Presentation at the Missouri School Counselor Association Conference.

Publications

Polzin, E. (2013). *Using technology to demonstrate the effectiveness of counseling interventions*. Exploring New Frontiers: Technology for the Classroom. Lindenwood University 2013 Academic Report, pg. 18.

Polzin, E. (2012). *Quadrennial Comprehensive Program Assessment: School Counseling*. Report submitted to the Higher Learning Commission for accreditation review. Lindenwood University, St. Charles, MO.

Polzin, E. (2012). *Yearly Student Learning Outcome Assessment: Professional Counseling.* Report submitted to the Higher Learning Commission for accreditation review. Lindenwood University, St. Charles, MO.

Polzin, E. (2012). *Yearly Student Learning Outcome Assessment: School Psychological Examiner Certification.* Report submitted to the Higher Learning Commission for accreditation review. Lindenwood University, St. Charles, MO.

Service

2015-2016	Member, Headwaters Alliance for Suicide Prevention, Bemidji, MN
2014-2016	Chair, Faculty Senate, Red Lake Nation College
2013	Member, Steering Committee for Missouri Department of Elementary and Secondary Education and Council for the Accreditation of Educator Preparation Accreditation Review, Lindenwood University
2011-2013	Member, Higher Learning Commission Assessment Committee Representative, Lindenwood University
2009-2013	Member, Counselor Educator Committee, Missouri Department of Elementary and Secondary Education

Professional Affiliations

2017-present	Member, National Academic Advising Association
2013-2014	Member, Minnesota School Psychologists Association
2007-2011	Member, Missouri School Counselor Association
2008-2009	Member, National Association of Peer Programs
2008-2009	Member, Chi Sigma Iota Honor Society, Lambda Chi Chapter