# ABSTRACT 

## EDUCATIONAL LEADERSHIP

FRIZZELL, MELANIE M.
B.S. FLORIDA A \& M UNIVERSITY, 2002
M.S. TROY UNIVERSITY, 2007

# THE IDENTIFICATION OF VARIABLES AND FACTORS RELATED TO <br> PRESERVICE TEACHER CANDIDATES' PASSING A STATE <br> TEACHER CERTIFICATION EXAMINATION AT AN HBCU 

Committee Chair: Dr. Trevor Turner
Dissertation dated May 2014
This study sought to examine the outcome of teacher education candidates' performance on a state content exam. Seventeen participants from the class of 2012 were identified for the study of which 12 participants fully participated in the study.

This study utilized data collected from the participants through the Teacher Quality Enhancement Subcontract Grant Summer/Fall/Spring 2011-2012 Workshop Series held at the private HBCU. The research design used a QUAN- QUAL-QUAN to triangulate the data through three methods of data collection: GACE early childhood education (ECE) data, GACE ECE survey questionnaire and class of 2012 member interviews. The first QUAN correlations were run on the 17 participants. The survey instrument (qualitative and descriptive statistical constructs) was completed by 12 participants. The last QUAN correlations were run on the 12 participants who completed the survey instrument. Correlation analysis was used to determine if a significant
relationship existed between the independent variables (Scholastic Aptitude Test (SAT), American College Testing (ACT), high school grade point average (HSGPA), grade point average prior to preservice teaching (GPAPST), cumulative grade point average (CGPA), number of failed attempts test \# 001, number of failed attempts test \# 002) and dependent variables (GACE ECE test \# 001 pass or fail, GACE ECE test \# 002 pass or fail, exam first time pass or fail). Descriptive statistical analyses were extrapolated from the selected Likert scaled items collected from the survey instrument to test selected research questions.

The findings from the survey items related to program quality for the participants' mean was $3.05(\mathrm{n}=12)$ on a 1 to 5 Likert scale. The findings from the survey items related to motivation for the participants' mean was $4.35(\mathrm{n}=12)$ on a 1 to 5 Likert scale. A limitation was the total participants that were available for the case study of majors for the degree in the class of $2012(\mathrm{n}=17)$. Correlation analyses revealed a statistically significant relationship between first time pass or fail and number of failed attempts on \#001; first time pass or fail and number of failed attempts on \#002; test failures after first attempt on test \#001 and SAT; test failures after first attempt on test \#002 and SAT; program quality and GPAPST; first time pass or fail rate and perception of program quality. Recommendations for future studies include a concentrated study from public and private HBCUs and/or minority serving institutions with teacher preparation programs enrolling more than 30 candidates of color in their graduating classes.

THE IDENTIFICATION OF VARIABLES AND FACTORS RELATED TO PRESERVICE TEACHER CANDIDATES' PASSING A STATE TEACHER CERTIFICATION EXAMINATION AT AN HBCU

A DISSERTATION

SUBMITTED TO THE FACULTY OF CLARK ATLANTA UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION

## BY

MELANIE M. FRIZZELL

DEPARTMENT OF EDUCATIONAL LEADERSHIP

ATLANTA, GEORGIA

MAY 2014
© 2014

MELANIE M. FRIZZELL
All Rights Reserved

## ACKNOWLEDGMENTS

All in all, I am forever grateful and humbled by the blessings received from the Creator and the people and experiences that have molded me into who I am today.

To my parents, no words on a page could express how much your love and support have helped me through this process. You have been my rock. Thank you for listening to me and pushing me even when I felt like giving up.

To my big sister Taheerah, you inspire me to be a better me and it is because of you that I knew that I could do this. Thank you for putting up with me since the first grade and for loving me for me.

To my friend Yolanda, thank you for keeping me sane through it all, for checking on me, and for understanding what I was saying, even when all I would say is, "You know what I mean?" or "You know what I'm saying?"

Dr. Trevor Turner, thank you for agreeing to chair my dissertation. Dr. Noran L. Moffett, I am humbled to know that you always saw the researcher in me. I am sincerely grateful for your guidance. Thank you for seeing in me what I was unable to see in myself. Always know that you are appreciated for your willingness to teach and explain all things related to research. To Dr. Pearlie C. Dove, thank you for being you and for supporting my study from the start.

To my friends and family who faithfully listened to my stories and worked to keep me laughing and allowed me to be me-I love you.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS ..... ii
LIST OF FIGURES ..... vii
LIST OF TABLES ..... viii
CHAPTER
I. INTRODUCTION ..... 1
Purpose of the Study ..... 2
Statement of the Problem ..... 2
Significance of the Study ..... 5
Background of the Problem ..... 9
Institutional Accountability ..... 15
Certification Examinations Effects on Minorities ..... 16
Failure versus Success: A Glimpse at a Private HBCUs Testing
Certification Exam Results ..... 18
Research Questions ..... 21
Summary ..... 24
II. REVIEW OF THE LITERATURE ..... 26
Historical Overview of Teacher Certification ..... 26
Standardized Testing Programs for Teacher Education Candidates ..... 29
Use of GPAs and Standardized Examinations ..... 36
Teacher Certification Examinations and the Achievement Gap ..... 38
Reading Comprehension Effects on Content Examination Score ..... 39
How Motivation May Influence Testing Outcomes ..... 40
Review of Literature Related to Teacher Preparation Programs ..... 42
Federal Legislation that has Influenced Teacher Preparation ..... 44
Summary ..... 48
III. THEORETICAL FRAMEWORK ..... 50
Research Design ..... 50
Theory of the Variables ..... 51
Definition of Variables ..... 53
Definition of Terms. ..... 55
Relationships among the Variables ..... 59
Qualitative Conceptual Framework ..... 61
Research Questions ..... 63
Limitations of the Study ..... 64
Delimitations of the Study ..... 65
Summary ..... 65
IV. RESEARCH METHODOLOGY ..... 66
Research Design ..... 66
Description of the Setting ..... 68
Sampling Procedure ..... 69
Working with Human Subjects ..... 69
Instrumentation ..... 69
Participants/Location of Research ..... 70
Measurement of Research Questions ..... 70
Interview Procedure ..... 71
Statistical Applications/Description of Data Analysis Methods ..... 72
Summary ..... 73
V. ANALYSIS OF THE DATA ..... 75
Overview of Data Collection and Analysis ..... 75
Survey Participants ..... 76
Dependent and Independent Variables Correlations. ..... 77
Analysis of Survey Responses ..... 80
Interview Participants ..... 106
Summary and Analysis of Transcribed Responses ..... 106
Emerging Themes from Respondent Interviews. ..... 119
ECE Candidate Survey Correlations ..... 121
Class of 2012 Survey Alpha ..... 123
Data Response to the Research Questions ..... 125
Summary ..... 133
VI. FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS ..... 134
Purpose of the Study ..... 134
Review of the Literature ..... 135
Research Methods ..... 135
Findings ..... 136
Conclusions ..... 139
Implications ..... 140
Limitations of the Study ..... 145
Recommendations ..... 145
Summary ..... 151
APPENDIX
A. The Qualitative Conceptual Model ..... 152
B. GACE ECE Survey Questionnaire ..... 153
C. Participant Interview Protocol ..... 157
D. Letter to Participants ..... 160
E. Transcribed Participant Interviews ..... 162
REFERENCES ..... 167

## LIST OF FIGURES

FIGURE
PAGE

1. TQE Participants $(\mathrm{n}=19)$ : First Time Passing Rate on the GACE

ECE, June - December 2011 ............................................................................... 12
2. Theoretical Framework...................................................................................... 60
3. First Attempt Passers vs. Failures on Test \#001 ................................................ 76
4. First Attempt Passers vs. Failures on Test \# 002 ............................................... 77

## LIST OF TABLES

TABLE
PAGE

1. Preservice Teacher Test Taking Attempts .................................................... 20
2. State Constructed Teacher Examinations ..................................................... 22
3. Variables Associated with Each Research Question .................................... 70
4. Interview Format.......................................................................................... 71
5. Content Tests Taken First by Participants ..................................................... 76
6. Correlations: First Time Pass or Fail ............................................................ 79
7. Correlations: Number of Failed Attempts on Test \# 001.............................. 80
8. Correlations: Number of Failed Attempts on Test \# 002............................. 81
9. Participants' Responses to Survey Question 12............................................. 83
10. Participants' Responses to Survey Questions 13 .......................................... 84
11. Participants' Responses to Survey Question 14............................................ 85
12. Participants' Responses to Survey Question 15............................................ 86
13. Participants' Responses to Survey Question 16............................................ 88
14. Participants' Responses to Survey Question 17............................................ 89
15. Participants’ Responses to Survey Question 18............................................ 90
16. Participants' Responses to Survey Question 19............................................ 92
17. Participants' Responses to Survey Question 20............................................ 93
18. Participants’ Responses to Survey Question 21............................................ 94

## List of Tables (continued)

TABLE PAGE
19. Participants' Responses to Survey Question 22............................................ 96
20. Participants' Responses to Survey Question 23............................................ 97
21. Participants' Responses to Survey Question 24............................................ 98
22. Participants' Responses to Survey Question 25.......................................... 100
23. Participants' Responses to Survey Question 26......................................... 101
24. Participants' Responses to Survey Question 27.......................................... 102
25. Participants' Responses to Survey Question 28......................................... 104
26. Summary and Analysis of Interview Question 1 ........................................ 107
27. Summary and Analysis of Interview Question 2 ........................................ 109
28. Summary and Analysis of Interview Question 3 ........................................ 110
29. Summary and Analysis of Interview Question 4 ......................................... 111
30. Summary and Analysis of Interview Question 5 ........................................ 112
31. Summary and Analysis of Interview Question 6 ........................................ 113
32. Summary and Analysis of Interview Question 7 ........................................ 114
33. Summary and Analysis of Interview Question 8 ........................................ 116
34. Summary and Analysis of Interview Question 9........................................ 118
35. Correlations: Motivation............................................................................. 122
36. Correlations: Program Quality (progqua) .................................................. 123
37. Cronbach Alpha: Case Study Summary .................................................... 124
38. Cronbach Alpha: Reliability Statistics....................................................... 124
39. Pearson Correlation of Variables ................................................................. 126

## CHAPTER I

## INTRODUCTION

This chapter provides preliminary information about the demonstrated ability of minorities to pass teacher content examinations required for certification, variables and factors that may influence candidates passing the examinations. In addition, information is discussed on how this topic affects minorities and teacher preparation programs at Historically Black Colleges and Universities (HBCUs). Since testing is a federal requirement for students as they matriculate through $\mathrm{P}-12$, and with the inception of the No Child Left Behind (NCLB) Act and the highly qualified status requirement, the probability of additional testing required by states for certification coupled with impeding pressures to post a passing score on the first attempt may negatively affect candidates' performance on certification examinations (Barnes-Johnson, 2008; Gifford, 1985; Supon, 2004). The research selected to introduce the rationale for this study was grounded in the identification of the following variables related to teacher education candidates' performance on basic skills tests and content examinations (Anrig, Goertz, \& McNeil, 1986; Barnes-Johnson, 2008; Bennett, McWhorter, \& Kuykendall, 2006; Haney, Madaus \& Kreitzer, 1987; Moffett \& Frizzell, 2011; Wall, 2008). The variables that appear in the selected review of literature are the American College Testing (ACT) program score, Scholastic Aptitude Test (SAT) score, high school grade point average (HSGPA), grade
point average prior to preservice teaching (GPAPST), cumulative grade point average (CGPA), motivation and program quality (Fleming, 2000; Fleming \& Garcia, 1998; Liu, Bridgeman, and Adler (2012); Marable, 2011; Pardee, 1990; Perry, 2011; Slater, 19992000).

## Purpose of the Study

The purpose of this study was to examine the effectiveness of a selected traditional teacher preparation program and the planned program's responsibility to provide candidates with sufficient content knowledge to post a passing score on a stateconstructed teacher certification examination on the candidates first attempt, thus making them eligible to be highly qualified (Amerin-Beardsley, Barnett, 2010; Bennett et al., 2006; Boyd, Goldhaber, Lankford, \& Wyckoff, 2007; Carter, 1998; United States Department of Education [USDOE], 2011a; USDOE, 2011b). In addition, components of the study were based upon historical literature and conceptual factors. The study also reported selected findings from an ex post facto data set collected from an attempted treatment to the historic problem of failure among black candidates at the private HBCU chosen for this study.

## Statement of the Problem

The researcher has identified through the literature documented studies that address minority failure on teacher certification content exam and basic skills tests. The specific evidence of the problem for black preservice candidates enrolled in HBCUs has been validated by efforts to solve the problem at a private HBCU through the use of a federally funded subcontract award. The problem at the private HBCU identified for this
study caused many of the candidates to change their major from the certification tract to the non certification tract. The historical literature suggests that teacher education is emerging into an era where the accountability of outcomes of teacher preparation is tantamount to NCLB in 2001 for P-12 (Caviler, 1935; Pohan \& Ward, 2011). Thus, a literature review of Title II historical data for the selected HBCU located in the state of Georgia where a transition from the Praxis examination to a state identified content examination provides the overall conceptual and theoretical framework for the specific study.

The Higher Education Opportunity Act (HEOA) (Public Law 110-315) was enacted on August 14, 2008, and reauthorized the Higher Education Act of 1965 (HEA), as amended. With the reauthorization of the 1965 Higher Education Act (Higher Education Opportunity Act, 2008) section 201(2), Accountability for Programs that Prepares Teachers, institutions of higher learning that provide a traditional teacher preparation program or alternative route to state certification and receives federal funds are required to annually report the following to the state: (a) goals and assurances; (b) pass rates and scaled scores on assessments used for teacher certification or licensure; (c) program information, including criteria for admissions, the number of students in the program, the average number of hours of supervised clinical experience, the number of full-time equivalent faculty and students in the supervised clinical experience, and the total number of students who have been certified or licensed as teachers in states that require approval or accreditation of teacher preparation programs, and a statement of whether the institution's program is approved or accredited and by whom; (d) whether
the program has been designated as low-performing by the state; (e) a description of the activities that prepare teachers to integrate technology effectively; and (f) a description of the activities that prepare general education and special education teachers to teach students with disabilities effectively.

Title II of the Higher Education Opportunity Act provides requirements for teacher quality programs throughout the nation; thus, teacher preparation programs are required to report the number of candidates enrolled and candidates that have completed a professional teacher preparation program. According to the United States Department of Education's (2011a) report entitled "Our Future, Our Teachers: The Obama Administration's Plan for Teacher Education Reform and Improvement," states are not adequately reporting the number of low performing teacher preparation programs. For example, only 37 low performing programs at over 1,400 institutions were identified nationwide and 39 states identified no low performing programs. Among the reasons for an institution being low performing are three continuous years of late reports and passing rate on content exams falling below 80\% (Elementary and Secondary Education Act of 1965 as amended, Title II, Part A; 20 U.S.C. 6601-6641).

The inability of American colleges and universities to produce highly effective minority teachers has reached enormous proportions (Barnes-Johnson, 2008); hence, minorities continue to display difficulty in posting a passing score on teacher certification exams on their first attempt often failing to meet the required score by a few points (Bennett, McWhorter, \& Kuykendall, 2006). HBCUs prepare more teachers of color than other non-minority based institutions; however, these candidates comprise less than half
of all public classroom teachers (Powell, 2012; USDOE, 2011a). According to the USDOE (2011a), $14 \%$ of teachers identify as black or Hispanic, compared to $38 \%$ of students, while only $2 \%$ of black and Latino teachers are male. Low performing schools and districts (i.e. Title I schools) will continue failing to reflect the ethnic diversity of the students in their classrooms as long as future minority educators continue to fail teacher certification examinations (Gifford, 1985; USDOE, 2011a).

## Significance of the Study

The requirements of candidates (i.e. the term candidates will refer to college students enrolled in teacher preparation programs) enrolled in teacher preparation programs (initial teacher education program or advanced teacher education program) varies from program to program and from state to state. Programs leading to initial teacher certification should show evidence that they are preparing candidates to become highly qualified teachers who can teach, pass teacher content exams and prepare P-12 students (i.e. the term students will refer to children that attend P-12 schools) to pass standardized tests, or be expunged from the university's program offerings (AmerinBeardsley \& Barnett, 2010; Barnes-Johnson, 2008; Carter, 1998; USDOE, 2011a; USDOE, 2011b). Teacher preparation programs are being held accountable for the production of inadequately trained teachers whose candidates do not make sufficient academic progress (Boyd, Goldhaber, Lankford, \& Wyckoff, 2007; National Council for Accreditation of Teacher Education [NCATE], 2012; Powell, 2012; USDOE, 2011a). Although HBCUs have been the center of preparation for minority teachers for more than 100 years (Moffett \& Frizzell, 2011), the current role of teacher preparation
programs, particularly those at HBCUs may need to prepare for restructuring in order to remain current, effective and competitive as new federal, state and local policies are implemented (Amrein-Beardsley \& Barnett, 2010; Caliver, 1935). President Obama has called for Congress to make sweeping changes to policies affecting higher institutions of learning. During his 2013 State of the Union address, the President stated the following: Tonight I ask Congress to change the Higher Education Act, so that affordability and value are included in determining which colleges receive certain types of federal aid. And tomorrow, my administration will release a new 'College Scorecard' that parents and students can use to compare schools based on a simple criterion: where you can get the most bang for your educational buck. (The New York Times, para. 42)

If traditional teacher preparation programs at HBCUs cannot maintain the vitality of their undergraduate programs along with preparing candidates to obtain certification then not only are they putting their programs at risk of losing candidates but also at risk of losing their accreditation status and invariably, current teacher education programs (Carter, 1998; Dilworth, 1986; Marable, 2011; Perry 2011). Seemingly to combat this, many states, including Georgia, use state-constructed content examinations. Beginning September 1, 2006, Georgia officially transitioned from the Praxis to a state constructed examination entitled the Georgia Assessments for the Certification of Educators (GACE). This examination is based upon state objectives to test individuals entering teacher preparation programs and those seeking teacher certification in a content area. Conversely on a nation level, successful outcomes by candidates from an HBCU have
been noted and are significant. A recent example of an HBCU success story can be found in the United States Department of Education's (2011a) report as follows: At the program level, Fayetteville State University, a historically black university with an acceptance rate of $61 \%$ and in state tuition of less than $\$ 4,000$, is preparing some of the most effective high school teachers in North Carolina. According to a recent and extensive University of North Carolina study, Fayetteville State University, a non-selective and relatively low tuition school, consistently produces teachers who generate higher than average K-12 student academic achievement gains. Fayetteville State is more successful than colleges with comparable incoming student body demographics and more successful than colleges that have more selective admissions requirements.

It is significant to note that teacher preparation programs at HBCUs are successful according to measures reported by the Department of Education. As a result, the study is significant to all HBCUs who may currently need to review their preparation programs and maintain their advantages as the institution of choice for teachers of color in the 21st century where the competition for recruitment and retention is greater than in the years before desegregation. Moreover, the significance of this study to a private HBCU in an era of increased competition with public institutions due to the cost of enrollment may be an additional benefit for future studies for United Negro College Fund (UNCF) member institutions with teacher preparation programs.

Additionally, according to the National Council for Accreditation of Teacher Education's (NCATE) glossary located within NCATE's Unit Standards section, certification is defined as the process by which a nongovernmental agency or association grants professional recognition to an individual who has met certain predetermined qualifications specified by that agency or association (NCATE, 2012). Highly qualified eligibility includes successfully obtaining state certification through the passing of a required content-specific examination mandated by the teacher's state along with successful completion of a traditional teacher preparation program or alternative licensure program (Boyd et al., 2007; USDOE, 2011a; USDOE, 2011b). The examination of strong and weak teacher preparation programs is significant because it informs private HBCUs, public HBCUs and collaborative stakeholders responsible for the preparation of future teachers, as well as examines the professional development of inservice educators while informing educational leaders of their responsibility to retain newly hired teacher educators for our nation's schools (USDOE, 2010; USDOE, 2011a; USDOE, 2011b).

Finally, the role of P-12 and higher education educational leaders is to facilitate the opportunity for children to have highly effective, highly qualified and a diverse population of teachers for our nation's schools. Among the recommendations from Perry's (2011) dissertation in which she examined predictors of teacher candidates' success on Praxis I, she suggested the following:

The obtained results need to be replicated. This study was conducted with teacher candidates from one historically black university. Comparative studies could be conducted for other HBCUs. This would strengthen the results of this
study and provide a clearer overview of the nature of variables contributing to the success of teacher candidates on Praxis I examinations. (p. 146) The researcher has identified a set of participants, and similar predictive variables within an HBCU to measure significance as cited by Perry (2011).

## Background of the Problem

The historically black college and university antecedents' particularity in the southern states of the United States of America responded to the call for elementary and secondary education for formerly enslaved Africans through the development of public and private laboratory and normal schools. In some instances, the historical context for an HBCUs mission over the past two centuries included the pride and purpose of educating those children from communities where educational opportunities had been denied, minimized or possibly, in recent years, viewed to be "uncool" (Anderson, 1988; Bond, 1934; Drago, 1982; Kozal, 1991; Ladsen-Billings, 2006; Ogbu, 2003; Woodson, 1919). The historical literature cited throughout this study supports the background of teacher testing, possible variables that may affect teacher education candidates' demonstrated ability to pass certification examinations and possible factors that may affect candidates' placement in P-12 schools. The relationship between the current research on teacher education and the historical aspect is cited as follows:

How we have arrived at the present state of affairs can be understood only by studying the forces effective in the development of Negro education since it was systemically undertaken immediately after Emancipation. To point out merely the defects as they appear today will be of little benefit to the present and future
generations. These things must be viewed in their historic setting. The conditions of today have been determined by what has taken place in the past, and in a careful study of this history we may see more clearly the great theatre of events in which the Negro has played a part. We may understand better what his role has been and how well he has functioned in it. (Woodson, 2010, p. 13) Throughout the 20th and 21st centuries, researchers have investigated numerous plausible factors that may affect teacher education candidates' demonstrated ability on certification examinations, placement in the field (before and after preservice teaching) and paths for teacher education improvement (Barnes-Johnson, 2008; Bennett et al., 2006; Caliver, 1935; Dove, 1959; Marable, 2011; Moffett \& Frizzell, 2011; Perry, 2011; USDOE, 2011a; USDOE, 2011b). Schools, Colleges and Departments of Education (SCDEs) entrance and program requirements may include participation in weekly seminars and/or preparation programs, as well as, demonstration and application of content knowledge (Caliver, 1935; Dove, 1959; Marable, 2011; Perry, 2011; Wall, 2008; Wilson, 1985; USDOE, 2011a) to prepare candidates pursuing a careers in P-12 classrooms. For example, Dove (P. C. Dove, personal communication, April 5, 2012) posited, "we didn't believe in memorization. We had seminars and in collated the curriculum with what they [teacher education candidates] needed for the test as well as integrated portions into our lesson." Beginning in 1940 and continuing throughout the fifties and subsequent decades, the National Teacher Examination (NTE) was taken by candidates in teacher preparation programs throughout the country (Wilson, 1985).

Throughout the 20th and 21st centuries, teacher certification tests have seen numerous
variations in type and format. For example, in Georgia, teacher certification examinations have followed four phases prior to the current state constructed certification exam. These tests have included the NTE-1940-1975, Teacher Competency Test (TCT) 1975-2000, Praxis 2000-2006, and the Georgia Certification for the Assessments of Educators (GACE, 2006 - current) (Dove, 1959; GACE, 2012; Snyder, Hoffman, \& Geddes, 1996; Wilson, 1985). In order for early childhood education (ECE) teacher preparation candidates to be categorized as "highly qualified" in the state of Georgia, they must successfully pass the Georgia Assessments for the Certification of Educators (GACE) ECE Content Examination test \#001 and \#002 with a minimum score of 220 (GACE, 2012, GACE passing requirements, para 1-2). Selected findings suggest that first time passing rates for previously and currently enrolled candidates seeking certification in an early childhood education program at a private Historically Black College and University in a metropolitan city located in the southeastern part of the United States are detailed in Figure 1. Figure 1 depicts Teacher Quality Enhancement Subcontract Grant (TQE) participants' first time passing rate on the GACE ECE Content Examination test \#001 and \#002.

Nettles, Scantton, Steinberg, and Tyler (2011) compared first time white and black Praxis I test takers from November 2005 to November 2009. The study indicated that $84 \%$ of first-time test takers were white and $11 \%$ were black. From an analysis of the reading scores on the exam, a gap existed between the two previously mentioned ethnic groups.


$$
\square \text { Number Failed First Time (16) } \quad \text { Number Passed First Time (3) }
$$

Figure 1. TQE Participants $(\mathrm{n}=19)$ : First Time Passing Rate on the GACE ECE, June December 2011

The findings suggested that the Praxis I Reading score gap (1.14 Standard Deviation) between white and black candidates was larger than that of the SAT more like that for the GRE Analytical section. According to the National Center for Education Statistics (NCES) report titled "Status and Trends in the Education of Racial and Ethnic Minorities" (NCES, 2010), ACT score disparities for high school students indicated that the sample from the 2008 benchmark of subject performance revealed that AfricanAmerican test takers had the lowest readiness rate in all four subjects. An examination of six major standardized tests further indicated the pass/fail rates of black-white are a reflection of the test taker score gap (Nettles et al., 2011).

Moreover, HBCUs and other minority serving institutions tend to have lower admissions requirements including GPA and standardized test scores (Fleming, 2000; Garibaldi, 1997; Slater, 1999-2000; USDOE 2011a). Reflecting on the historical role of preparing teacher education candidates to pass teacher certification tests, Dove (2012) posited, "We don't care what they come with, our job is to take them from where they were and bring them to where they could function" (P. C. Dove, personal communication, April 5, 2012). As HBCUs find themselves competing with other universities in many aspects, one aspect that has remained stagnant and untouchable is the quality of instruction and practice that preservice teachers receive at HBCUs (Moffett \& Frizzell, 2011; USDOE, 2011a). The historical roots of HBCUs are grounded in teacher preparation where their mission and goal have been to prepare teachers to educate children of color (Moffett \& Frizzell, 2011). Despite being dramatically underfunded, minority serving institutions demonstrate better than average results when compared to peer institutions (USDOE, 2011a). Critics and supporters of traditional teacher preparation programs believe that a possible reform of current teacher preparation is needed (Angus, 2001; Boyd et al., 2007; Darling-Hammond, 2001; USDOE, 2011a). According to the USDOE (2011a), "Twenty-three percent of all teachers and only $14 \%$ of teachers in high poverty schools come from the top third of college graduates"(p. 5); therefore, minority serving institutions must take a more active role in recruiting and preparing the next generation of highly qualified minority teachers (Dilworth, 1986; Fleming, 2000; Holmes, 1986; Powell, 2012; USDOE, 2011a)

According to the United States Department of Education's (2011a) report titled "Our Future, Our Teachers: The Obama Administration’s Plan for Teacher Education Reform and Improvement," the National Council for Accreditation of Teacher Education (currently a parent of the Council for Accreditation of Education Preparation-CAEP) wants teacher preparation "turned upside down." In addition, the American Association of Colleges for Teacher Education's (AACTE) work with 21 states will seek to replace pencil tests with an assessment built around higher expectations where both teachers and programs will be held accountable and where accountability is based on candidate outcomes and program input characteristics. In 1946, the National Commission on Teacher Education and Professional Standards (TEPS) spearheaded the "professional standards movement" to establish control for teaching the same "control of entry" that other professions enjoyed (Angus, 2001). Due to current issues in the teaching field, the conference determined three purposes for imposing professional standards (a) the purpose of certification was to protect the public from incompetent teachers, (b) designed to protect members from incompetent teachers and unfair competition from untrained people, and (c) the amount of emergency certificates being issued had reached the tens of thousands (Angus, 2001).

Consequently, to further align their assessments with teacher educator preparation and performance standards, many states have begun to shift their teacher certification examinations to state constructed teacher examinations (GACE, 2012, GACE passing requirements, para 1-2; Wall, 2008). The mandated requirements for individuals seeking to teach have seen an upward shift. The more stringent requirements of teachers that
need to be highly qualified and schools to meet Annual Yearly Progress (AYP) has created a need for universities, specifically, minority serving institutions, to meet students' needs in diverse populations. As more importance has been put on passing required tests for entrance into teacher preparation programs and qualifying for teacher certification, the 21st century has brought new policies and requirements for preservice teachers, teacher preparation programs and the college and universities that house these programs (Barnes-Johnson, 2008; Title II of HEOA, 2012; USDOE, 2011a).

## Institutional Accountability

An essential requirement for teacher preparation programs in establishing their effectiveness in preparing candidates for teaching positions in P-12 schools is passing the professional accreditation process that recognizes their programs as effective. The National Council for Accreditation of Teacher Education (NCATE) is the profession's mechanism to help establish high quality teacher preparation. NCATE's performancebased system of accreditation fosters competent classroom teachers and other educators who work to improve the education of all P-12 students (NCATE, 2012, About NCATE, para. 2). Awareness of the quality of $\mathrm{P}-12$ education has shed light on the fact that minority students in poor low-performing schools are more likely to be taught by uncertified inexperienced teachers than students in suburban areas (Darling-Hammond, 2001; Boyd et al., 2007). Prior to the 2001 implementation of No Child Left Behind, teacher preparation programs were not required to meet the $80 \%$ pass rate that is now required by NCATE and Title II (NCATE, Standard 1a; Title II of HEOA, 2012). Title II of the HEOA provides for preservice teacher training and authorizes grant funds for
improving teacher education programs, strengthens teacher recruitment and technology training for teachers (Barnes-Johnson, 2008; USDOE, 2011b). Public and private teacher preparation programs must show through required reporting that candidates are being adequately prepared to become highly qualified teachers. Basic skills test and content examinations are used to measure the quality of the program and the level of preparation of teacher candidates (Boyd et al., 2007; Gifford, 1985). States require individuals interested in becoming teachers to pass a certification exam in the content area in which they seek to teach (Angus, 2001; Barnes-Johnson, 2008; Boyd et al., 2007; Gifford, 1985). Minority test takers tend to score lower and fail at a higher and more consistent rate than their peers from nonminority serving institutions; hence, it may be plausible to infer that minority serving institutions inability to provide candidates with the content knowledge needed to post passing scores on certification exams the first time may put the institutions at risk for loosing accreditation, funding, and students (Barnes-Johnson, 2008; Bennett et al., 2006, Carter, 1998; Dilworth, 1986; Gifford, 1985; Marable, 2011; Perry, 2011).

## Certification Examinations Effects on Minorities

The NCLB mandate requires that teachers in states must meet highly qualified criteria. To accomplish the requirements of NCLB many states began to implement high stakes testing benchmarks such as increased testing requirements for individuals seeking to become certified teachers in public schools. Although states set their own passing scores for content certification exams, the exams are based upon basic skills, liberal arts general knowledge, subject-matter knowledge and pedagogic skills (Boyd et al., 2007;

Gifford, 1985). Preservice teachers are required to take basic skills examinations to meet teacher preparation program entrance requirements and content examinations to meet state minimum certification requirements (Anrig et al., 1986; Bennett et al., 2006; Barnes-Johnson, 2008; Boyd et al., 2007; Gifford, 1985; Perry, 2011; Wilson 1985). These minimum requirements may consist of an established departmental GPA, recommendations and other school, college and/or department specifics. Many critics contend that the use of content exams to measure teacher candidates' knowledge is not a clear predictor of candidate success (Barnes-Johnson, 2008; Boyd et. al, 2007, Gifford, 1985).

According to Barnes-Johnson (2008), "standardized tests cannot be the sole mechanism by which a candidate for any job is measured, especially when that test is treated as objective in a highly subjective field" (p. 72). State mandated certification requirements, perpetuated by the NCLB 2001 requirement, continue to plague minorities desiring to become teachers. According to Gifford (1985), in 1983, 6,664 minority candidates attempted the California Basic Educational Skills Test (CBEST). Of the $6,664,3,854$ or $54 \%$ of minorities failed the examination. African Americans had the highest failure rate with a $26 \%$ passing rate of 530 out of the 2,040 that attempted the examination. Additionally, Mexican-Americans posted a $39 \%$ passing rate with only 834 of 2,133 passing the examination. Minorities' demonstrated inability to pass certification examinations on the first attempt not only keeps them out of the classroom but also hinders the learning of minority students in schools where minority teachers are far and
few (Boyd et al., 2007; Barnes-Johnson, 2008; Gifford, 1985; USDOE, 2011a; Perry, 2011).

## Failure versus Success: A Glimpse at a Private HBCUs Testing Certification Exam Results

In September 2006, Georgia officially moved from Praxis to GACE. The GACE tests were developed in consultation with committees of Georgia educators, educator preparation faculty, and other content and assessment specialists. The purpose of the Georgia Assessments for the Certification of Educators ${ }^{\circledR}$ (GACE®) is to assure that the knowledge and skills acquired by prospective Georgia public school educators are aligned with state and national standards for educator preparation as well as with state standards for the $\mathrm{P}-12$ student curriculum-the Common Core Georgia Performance Standards (CCGPS) (GACE, 2013, About the GACE assessments, para. 1). The GACE program helps the Georgia Professional Standards Commission (GaPSC) meet its goal of ensuring that candidates have the knowledge and skills needed to perform the job of an educator in Georgia public schools. The GACE are aligned with state and national standards for educator preparation and with state standards for the $\mathrm{P}-12$ student curriculum (Georgia Performance Standards). The GACE are criterion-referenced, objective-based assessments designed to measure a candidate's knowledge and skills in relation to an established standard rather than in relation to the performance of other candidates. The passing score of 220 is established by the GaPSC and is based on the professional judgments and recommendations of Georgia educators (GACE, 2012, GACE passing requirements, para. 1-2).

For candidates in teacher preparation programs, particularly minorities at a selected private HBCU, failure to post a passing score on the GACE early childhood education content examination prior to graduation prevents candidates from graduating with certification in the area of Early Childhood Education (per policy requirements at the time of this study). Furthermore, this failure requires candidates to return to school seeking certification through a post baccalaureate or master's degree program. Teacher preparation testers should not have to sit for content examinations multiple times (Barnes-Johnson, 2008; Carter, 1998); therefore, minority serving institutions must prepare their candidates to post passing scores on content examinations on the first attempt (Dilworth, 1986; USDOE, 2011a). An examination of the preservice teacher candidates' test taking attempts along with passing rates on the GACE ECE Content Examination test \#001 and \#002, from March 2011 to March 2012, at a private HBCU located in a metropolitan city in the southeastern part of the United States in comparison with Georgia statewide test takers and passers is shown in Table 1. The table depicts the numbers of completers who passed on each administration of the ECE GACE content examination test \#001 and \#002 in comparison with test takers throughout the state of Georgia.

According to the Evaluation Systems group of Pearson, custom teacher certification testing programs from the Evaluation Systems group of Pearson include rigorous tests based on state standards and are responsive to changes in standards and technology (Pearson Education, 2013).

## Table 1

## Preservice Teacher Test Taking Attempts

| Test |  | Program <br> Completers | Program <br> Completers | Percent |  |  | Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Program | Statewide | Statewide | Statewide |
| Type | Exam Period | Tested | Passed | Passed | Tested | Passed | Passed |
| \#001 | March 2012 | 6 | 1 | 16.7\% | 1,565 | 680 | 43.5\% |
| \#002 | March 2012 | 4 | 1 | 25\% | 1,286 | 779 | 60.1\% |
| \#001 | January 2012 | 6 | 2 | 33.3\% | 1,559 | 833 | 53.4\% |
| \#002 | January 2012 | 6 | 3 | 50\% | 1,359 | 900 | 66.2\% |
| \#001 | October 2011 | 17 | 9 | 52.9\% | 1,272 | 734 | 57.7\% |
| \#002 | October 2011 | 12 | 5 | 41.7\% | 1,048 | 641 | 61.2\% |
| \#001 | August 2011 | 8 | 1 | 12.5\% | 881 | 380 | 43.1\% |
| \#002 | August 2011 | 10 | 4 | 40\% | 786 | 415 | 52.3\% |
| \#001 | July 2011 | 9 | 2 | 22.2\% | 401 | 196 | 48.9\% |
| \#002 | July 2011 | 4 | 1 | 25\% | 352 | 171 | 48.6\% |
| \#001 | June 2011 | 7 | 2 | 28.6\% | 1,196 | 553 | 46.2\% |
| \#002 | June 2011 | 5 | 0 | 0 | 955 | 538 | 56.3\% |
| \#001 | May 2011 | 5 | 0 | 0 | 581 | 301 | 51.8\% |
| \#002 | May 2011 | 6 | 0 | 0 | 445 | 288 | 64.7\% |
| \#001 | March 2011 | 9 | 3 | 33.3\% | 1,764 | 810 | 45.9\% |
| \#002 | March 2011 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals (Test Taking |  |  |  |  |  |  |  |
| (Attempts) |  | 114 | 34 | 0 | 15,450 | 8,219 | 0 |
| Percentage of Passers |  |  |  | 25.4\% |  |  | 53.3\% |

The Evaluation Systems group of Pearson develops custom teacher licensure testing programs that are $100 \%$ aligned to state standards. Evaluation Systems provides states with a wide variety of teacher licensure testing services such as test development, administration, and scoring and collaborates with state education agencies and teacher preparation programs to provide support for prospective teachers preparing to take the exams.

The state proposed for this study is one of the states that has a state selected examination (see Table 2). Table 2 lists the current 18 states (as of the writing of this study) that have developed their own state facilitated content examinations for the purposes of teacher certification based on their states standards through the Evaluations Systems Group of Pearson (as of October 2013, the Educational Testing Service [ETS] began administering Georgia's Early Childhood Education content examination).

## Research Questions

RQ1: Is there a significant relationship between the first time pass or fail results on the GACE ECE tests \#001 and \#002 of selected ECE graduates and completers and each of the selected independent variables: ACT, SAT, HSGPA, GPAPST, CGPA, number of failed attempt test \#001, and number of failed attempts test \#002?

RQ2: Is there a significant relationship between number of failed attempts on test \#001 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

Table 2
State Constructed Teacher Examinations

| State | Name of Content Examination |
| :--- | :--- |
| Arizona | Arizona Educator Proficiency Assessments |
| California | California Basic Educational Skills Test |
|  | California Preliminary Administrative Credential Examination |
|  | California Subject Examination for Teachers |
| Colorado | California Teacher of English Learners |
| Connecticut | Program for Licensing Assessments for Colorado Educators |
| Florida | Connecticut Foundations of Reading |
| Florida Teacher Certification Examinations |  |
| Georgia | Florida Educational Leadership Examination |
| Illinois | Georgia Assessments for the Certification of Educators Assessment |
| Massachusetts | Illinois Certification Testing System |
| Michigan | Massachusetts Tests for Educator Licensure |
| Oklahoma | Michigan Test for Teacher Certification |
| Newnesota Mexico | Minnesota Teacher Licensure Examinations |
| New York | New Mexico Teacher Assessments |
| Nork State Teacher Certification Examinations Examinations for Oklahoma Educators |  |

Table 2 (continued)

| State | Name of Content Examination |
| :--- | :--- |
| Pennsylvania | Pennsylvania Educator Certification Tests |
| Texas | Texas Higher Education Assessment |
| Virginia | Virginia Communication and Literacy Assessment |
|  | Virginia Reading Assessment |
| Washington | Washington Educator Skills Test |

RQ3: Is there a significant relationship between number of failed attempts on test \#002 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

RQ4: What were the findings for the survey items from the survey completed by the purposively selected participants?

RQ5: As a result of the review of the survey items, what narrative reflections were provided from follow-up interviews of purposively selected participants who passed the test as Early Childhood Education majors and those who did not pass the test as Educational Studies majors?

RQ6: Is there a significant relationship between the motivation of candidates to take the GACE test and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

RQ7: Is there a significant relationship between perception of program quality and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

RQ8: Is there a significant relationship between first time pass or fail rate and perception of program quality for the class of 2012?

## Summary

Teacher certification programs serve as a gateway to the teaching profession (Boyd et al., 2007). Throughout history, numerous references can be found about requirements for individuals who sought to teach children, such as, ministers approving teachers during the 18th and 19th centuries (Angus, 2001; Wilson, 1985). Within the 21 st century, more emphasis has been placed on standardized examinations by federal, state, and local policy makers through the increase in requirements for educators including, individuals entering teacher preparation programs with states establishing their own procedures and cut off scores for basic skills and content examinations (Allen \& Jewell, 1995; Angus, 2001; Anrig et al., 1986; Boyd et al., 2007; Dilworth, 1986; Gifford, 1985; Holmes, 1986; Hood \& Parker, 1989; Wilson, 1985; USDOE, 2011a; USDOE, 2011b).

Haney, Madaus, and Kreitzer (1987) posit that, "teacher testing is regarded as a means of improving education in America" (p. 170). Attaining a passing score on a state mandated teacher content examination is one of many requirements teacher education candidates must meet to be certified (Bennett et al., 2006; Dilworth, 1986; Wilson 1985; USDOE, 2011b). Educational leaders should be cognizant of federal, state and local
requirements as they demonstrate to parents and stakeholders that teachers possess the content knowledge needed, in their area of certification, to provide students with the necessary content knowledge to meet state standards (Boyd et al., 2007; USDOE, 2011b). The numerous plausible variables and factors that have affected minority passing rates over the last few decades are examined in the following chapters of this study. For HBCU teacher preparation programs, continued candidate test failure is not an option. For candidates, failure means they can pass all required coursework, complete required preservice teaching requirements, meet the minimum university GPA requirements for graduation, and still not be considered a highly qualified candidate for failure to pass certification tests (Perry, 2011).

## CHAPTER II

## REVIEW OF THE LITERATURE

An overview of the literature related to teacher preparation in the United States of America is presented in this chapter. An examination of two state-constructed content examinations for teacher certification in the field of Early Childhood Education serves as the dependent variables. Continually, literature in the chapter provides insight on the independent variables of the study, which are the American College Testing (ACT) program and the Scholastic Aptitude Test (SAT) standardized test scores, high school grade point average (GPA), GPA prior to preservice teaching, cumulative undergraduate GPA, motivation, and program quality.

## Historical Overview of Teacher Certification

The historical literature presented in this review of literature seeks to provide insight into the background of teacher testing, licensing and certification. Through the increase of formal training requirements, including school degrees and certification tests, states have worked as early as Roman times through the 21st century to define teacher certification requirements (Angus, 2001). According to Anderson (1988), North Carolina and Alabama both required graduation from a college in order to obtain a teacher's certification. North Carolina required graduation from a "Standard A Grade college in academic or scientific sources, embracing 120 semester hours, and Alabama required three years of standard college work approved by the State Board of Education" (p. 73).

In the 1930s, southern states began to demand the examination of prospective teachers as a condition of certification:

Since there was a lack of high schools and normal schools for African Americans during this era, a substantial number of black teachers practicing without a license failed state teacher certification examinations, making it appear that the race did not measure up to established norms. Responding to cultural assumptions, white southern state officials proposed special examinations and separate, lower-grade certificates exclusively for black teachers. (Perry, 2011, p. 16)

Such examinations became the right of passage for prospective teachers seeking to teach students in public schools. Growing concern over teacher qualifications by not only parents of students but also the general public led to the growth of teacher testing in the early and mid-twentieth century (Wilson, 1985). The use of teacher testing sought to provide evidence of individual's qualifications prior to beginning their work with students. In addition, the inception of teacher testing also assisted school superintendents with selecting qualified candidates from an over populated field of individuals whose training and general knowledge varied (Wilson, 1985). When assessing the basis of teacher competence, Angus (2001) poses three questions that should be examined in individual cases of prospective teachers:

1. Should it be based on individuals' scores on examinations?
2. Should teacher competence be based upon successful completion of an "approved" teacher training program?
3. Should teacher competence be based upon a combination of both?

The use of public opinion or public agency credentialing as the evaluators of teacher competence has been a consistent historical debate.

The movement to centralize control over teacher licensing can be traced to the late nineteenth century as New York, Rhode Island, and Arizona led the teacher certificate movement with the issuance of new teaching certificates by state officials (Angus, 2001). Moreover, teacher exams were first used in colonial New England and were developed to license or certify teachers for medieval European church sponsored universities; hence, early exams accessed teacher competence, moral character and their ability to teach common subjects with criteria expanding to knowledge of subject matter and pedagogy (Angus, 2001; Haney, Madaus, \& Kreitzer, 1987; Wilson, 1985). During the second half of the 19th century, teachers received their first certificate to teach from local officials due to their performance on oral examinations (Angus, 2001).

Additionally, between 1843 and 1897 notable historical changes took place in the evolution of teacher licensing, such as, New York authorizing its state superintendent to set examinations and issue valid statewide certificates in 1843, Indiana in 1852, and Pennsylvania in 1854 (Angus, 2001). Continually, by 1897, 28 states certified teachers on the basis of graduation from a normal school or university with graduates receiving their certificates from state officials or trustees. Towards the end of the 19th century, colleges and universities began to format their programs to offer courses specifically for teachers with 114 of the roughly 400 institutions of higher learning structuring their programs for this purpose (Angus, 2001). As institutions of higher learning grew,
certification examinations were replaced by the acceptance of teachers proof of course completion or school (Angus, 2001; Wilson, 1985).

Due to an oversupply of certified teachers during the Great Depression of the 1930s, a movement to eliminate teacher examinations was requested by many teachers while opposers recommended higher standards and increased institutional testing (Wilson, 1985). According to Angus (2001), some state legislatures mandated the use of exams in teacher recruitment, selection and evaluation to hold institutions of higher learning and teacher preparation programs responsible for current and recent graduate performance. In addition, the use of teacher training dates back as early as 1785 when teacher preparation courses were founded in academies with the earliest form of teacher preparation being held in private or state-subsidized academies and seminaries. As higher qualifications for current and future teachers were legislated, various agencies were contracted to develop and implement testing for teachers that sought to specifically test teachers based upon subject matter and age group in which the tester sought to become certified to teach.

## Standardized Testing Programs for Teacher Education Candidates

Wilson (1985) indicates that from the late 1920s and early 1930s there were three large scale testing projects that were predecessors of the National Teacher Examination (NTE) Program: (a) Bureau of Public Personnel Association which consisted of selling tests for elementary and high school teachers and tested items such as the following: professional judgment, theory and practice of teaching, reading comprehension, social information, school and class management and professional information; (b) the Teachers

College Personnel Association was done in 1931 and consisted of approximately one hundred and six colleges using the Teachers College Personnel Association tests to evaluate incoming teachers knowledge. The results indicated that applicant quality varied not only by individual but also from college to college; and (c) The Carnegie Foundation for the Advancement for Teaching, initiated in Pennsylvania, was not originally designed for the purpose of testing teachers; however, it directly led to the formation of the National Teacher Examinations program (Wilson, 1985). These studies led to the formation of the National Teacher Examination and thus led to the numerous teacher certification examinations that are currently used throughout the country including Praxis and other state specific content examinations.

## The Pennsylvania Study

In Knowledge for Teachers: The Origin of the National Teacher Examinations
Program, Wilson (1985) provides the origins, details and outcomes of the Pennsylvania Study:

Begun in 1925 as a Carnegie Foundation project funded by the Carnegie Corporation, the Study of the Relations of Secondary and Higher Education in Pennsylvania evolved from concerns of Pennsylvania's college and state level school administrators as well as from an earlier Carnegie study comparing United States and European educational institutions. (p. 6).

Continually, high school and college students were randomly selected, between 1928 and 1934), to take "lengthy batteries of objective tests" (p. 6). The use of high school seniors and enrolled college students provided the test designers with a glimpse into how
individuals from different public schools and universities test and the depth of their knowledge base. Furthermore, the results of the test discovered great variability in test takers knowledge not only from college to college but also within classes in institution's departments (Haney et al., 1987; Wilson, 1985). This supports researchers' claims that teacher tests should not be the sole determinant as to the quality and success of future teacher candidates and that there is little to no relationship between candidates test scores and actual teaching performance (Angus, 2001; Anrig et al., 1986; Wilson, 1985).

## National Teacher Examinations Program

The National Teacher Examinations Program (NTE) was constructed from a collaboration between Cooperative Testing Service (CTS) and the American Council on Education due to the elimination of CTS' grant that would no longer support the supplying of new and unused testing materials to school officials for teacher candidates; thus creating the National Committee on Teacher Examinations. Assuming that admission to the profession in any capacity should be restricted to those above a certain minimum the first forms of the National Teacher Examinations Program were constructed between the fall and winter of 1939 and consisted of an eight-hour, two-day exam which was constructed for all prospective teachers designed to capture those who exhibited a certain amount of intelligence, culture and professional knowledge with the common examination consisting of 14 sections (Haney et al., 1987; Wilson, 1985).

The basic knowledge that prospective teachers were supposed to contain is similar to the Praxis I (taken in selected states throughout the country), GACE Basic Skills (taken in Georgia only) and other state specific examinations currently taken by teacher
education candidates throughout the country (Angus, 2001; Bennett et al., 2006; Haney et al., 1987). In addition to basic knowledge tests, the NTE also consisted of an assessment of professional information that could arguably be comparable to current content examinations (Anrig et al., 1986; GACE, 2012, GACE passing requirements, para. 1-2; Perry, 2011; Wilson, 1985).

## Teacher Competency Test

According to the report on states and certification cited in the Digest of Education Statistics, (Snyder et al., 1996) states requiring testing for initial certification of teachers, by authorization, year enacted, year effective, and test used: 1987, 1990, and 1996 is detailed in Table 154 of the digest. During the years researched, states such as Alabama (enacted in 1980 and effective in 1981) and Georgia (Georgia Competency Test enacted in 1975; effective date of 1980) administered state developed tests. However, North Carolina continued using the NTE (enacted and effective as of 1964) during this time period. In "Teacher Competency Testing: Realities of Supply and Demand in this Period of Educational Reform," Anrig et al., (1986) discuss the eighties as a period of reform where states required teachers to demonstrate academic ability on a standardized basic skills test. During this timeframe, 38 states tested new teacher candidates and 21 states required the passing of a test prior to acceptance into a teacher education program. Continually, a state's comparison of pass rates in Georgia, Oklahoma, California, and Colorado found that pass rates were higher in Georgia and Oklahoma due to the requirement of prospective teachers to demonstrate subject matter competency where "nearly $8 \%$ of first-time test takers passed state-developed teacher-competency tests
(TCT) in Georgia and Oklahoma. In Georgia, while 7\% of the white students who took the TCT in the period 1978 to 1982 passed the test on the 1st try, only $34 \%$ of the black students did so" (Anrig et al., 1986, p. 321). As states began to reexamine teacher testing for prospective teacher candidates the move from TCT and NTE brought about new tests and requirements as the 20th century closed and the 21 st century began.

## ACT and SAT

As the national debate lingers over the quality of teacher preparation and the corollary significance of increasing the diversity within the ranks of 21st century teachers in public schools with the highest number of and proportion of children from diverse backgrounds, this study proposes to examine causal variables and emerging themes from a southeastern metropolitan HBCU as its primary focus. Also, the correlation between student performance in elementary and secondary schools as measured by the Scholastic Aptitude Test (SAT) and American College Testing Program (ACT) with a participant pool of preservice teachers from communities around the United States of America may posit a glimpse into teacher preparation at HBCUs and other minority serving institutions.

According to Perry (2011), the College Board administered the first college admissions test in 1901. Founded in 1959 and designed to gain a usable description of students' skills and knowledge, the ACT assists students with making better decisions for themselves while enabling institutions to improve student success (ACT, 2009, para. 1). Throughout the last century, college entrants have been required to post a predetermined score, by post secondary institutions, on college admissions examinations for entrance
into the institution (Marable, 2011; Perry, 2011). Colleges use SAT I scores as a supplement to other information, notably the high school grade-point average (HSGPA), to make selection decisions (Bridgeman, McCamley-Jenkins, \& Ervin, 2000).

Traditional four-year institutions require a college admissions examination for acceptance (ACT and SAT) to examine student performance (NCES, 2012; Fleming \& Garcia, 1998). Bridgeman et al., (2000), Fleming (2000), NCES (2012), and Marable (2011) posit that the SAT is designed to predict college grades, especially in the freshman year. The percentages of students meeting the ACT English and reading benchmarks varied across racial/ethnic groups. Higher percentages of white (77\%) and Asian (76\%) students met the English benchmark than Native Hawaiian/Pacific Islander (55\%), American Indian/Alaska Native (47\%), Hispanic (47\% and black (35\%) students. (NCES, 2012)

Additionally, when examining candidate test performance, citing the type of university during the data collection process may assist with understanding the differences in test scores across racial/ethnic groups. For example, Fleming and Garcia (1998), posited that "several studies suggest that standardized test scores predict academic performance much better for black students who attend predominately black colleges, with the same consistency and level of prediction usually found for white students" (p. 489).

Variations in SAT scores of black students can be traced to whether the state's public university system requires SAT for its applicants or prefers the ACT (Slater, 19992000). Slater continues to state that this score disparity may come as a result of the type of institution an applicant is applying to for admissions and thus may lead to a scoring
gap among black test takers when compared with test takers from other states and test takers of other races.

According to the NCES (2012) report of SAT scores in 2011, the average score on the SAT critical reading section was 497 out of $800 \ldots$ black males scored five points lower than females on the critical reading section...the highest average score on the critical reading test was achieved by white students (528 points), followed by Asian/ Pacific Islander (517 points), American Indian/Alaska Native (484 points), Hispanic (451 points), and black students (428 points). Fleming (2000) and Fleming and Garcia (1998) posit that SAT scores for blacks is not an accurate reading of their performance since, predictive validity indicates they score lower on exams than whites; therefore, predictive validity of the SAT is irrelevant to blacks. Slater (1999-2000) uses descriptive statistical analysis to examine the differences by state of black and white SAT test takers. In his findings, blacks comprised about $10 \%$ of all students who took the SAT test nationwide while noting "the SAT results in the state are measuring two radically different pools of test takers" (p. 105).

Kobrin and Michel's (2006) study of SAT as a predictor of levels of college performance posited that the "SAT was a better predictor of successful African-American students when the freshman grade point average (FGPA) criterion level was between 2.0 and 3.25 " (p. 6). An examination of how Georgia test takers compared with test takers around the country was detailed in Slater's (1999-2000) study. The states with the lowest black SAT scores were listed with Georgia being number 7 out of 10 with test takers scoring 841. Continually in 1999, $64 \%$ of Georgia's high school students took the SAT
where blacks comprised $22.8 \%$ of test takers and had a combined scored of 841 in comparison of whites combined SAT score of 1019. The SAT also under predicts academic performance while some researchers contend it over predicts with students (undergraduates) performing lower in college than SAT scores predicted (Bennett et al., 2006; Fleming \& Garcia, 1998).

## Use of GPAs and Standardized Examinations

According to Kobrin and Michel (2006), the use of high school grades and scores on standardized tests such as the SAT are often used by colleges and universities to predict the probability of student's success during their college career. Standardized examinations are used as part of an application process into traditional four-year colleges, schools, departments and colleges of education, and as part of categorizing P-12 teachers as highly qualified. The use of standardized examinations is used to measure applicant projected success rates and for high school students who take the SAT and/or ACT these test scores are used to typically project freshman year success. According to Zwick and Sklar (2005), the two most studied measures of college academic success are high school grades and admissions test scores. In addition, the authors indicate the degree to which high school grade point average (HSGPA) and test scores predict freshman GPA and their use by institutional research offices and admissions offices. Whether applicants take the SAT or the ACT is often contingent upon state and university admissions requirements (Slater, 1999-2000).

In Affirmative Action and Standardized Test Scores, Fleming (2000) indicates that the SAT design allows for the predictability of applicant college grades, particularly
during the freshman year. Furthermore, use of the test has been restricted to predicting correlations with GPA. There are drawbacks to the use of standardized test scores to predict college success. Zwick and Sklar (2005) state that the use of college entrance criteria to predict first-year college GPA is a drawback to traditional studies on the subject. Furthermore, correlations of test scores with FGPA tend to be smaller for black and Latino students when compared to white students and the use of a common regression equation to predict FGPA produces over prediction among black and Latino students. Conversely, Bridgeman et al.(2000) state that FGPA is an important indicator because it reflects a cumulative judgment of the quality of college-level academic performance made by a number of faculty members in several different disciplines. The continued use of SAT/ACT to predict college success may lead to over prediction of enrolled students' success. Factors including student home life, quality of student's P-5 education, socioeconomic status and family expectations (USDOE, 2011a; Zwick \& Sklar, 2005; Zwick \& Green, 2007) should be taken into account as "SAT and high school grades are imprecise measures of academic abilities" (Zwick \& Sklar, 2005, p. 442).

Traditionally during the freshman and sophomore years in college, students enroll in and take general education courses preparing them for their respective majors. In teacher education, these general education classes assist with preparing candidates for acceptance into teacher preparation programs through the passing of basic skills examinations. As candidates complete their teacher preparation program requirements and prepare for graduation, factors such as grades earned and the cumulative
undergraduate GPA may be contributing factors to pass and/or failure rates on teacher certification examinations.

## Teacher Certification Examinations and the Achievement Gap

Since the implementation of standardized examination for the purposes of certifying teachers to hold teaching positions in elementary through secondary schools, blacks have continuously struggled with posting qualifying scores on examinations. According to Anderson (1988), The education of blacks in the South and their bout with certification indicates that, although $75 \%$ of the black high school teachers in the South had at least a bachelor's degree, only about $9 \%$ of the black elementary school teachers had at least a bachelor's degree. (p. 144)

The use of the National Teachers Examination and other standardized exams used for the purpose of certifying teachers have failed to correctly diagnose the competency of teachers and has caused a high failure rate among minorities (Hood \& Parker, 1989).

Zwick and Green (2007) conducted a meta-analysis in which they examined teachers' test scores and used their college GPA to measure their performance in their teacher preparation program. From 123 studies' results, it was identified that test scores were moderately related to teaching performance and more related to candidates' performance in their planned program to predict their teaching skill.

According to Dilworth (1986), ". . . blacks and other minorities tend to be less prepared than all others to pass standardized tests" (p.372). Moreover, it is contended that passage of content examinations, class placement nor school grades necessarily
corresponded to content knowledge attained by those who take the examinations (Wilson, 1985; USDOE, 2011b) and that their proficiently in reading comprehension may have an impact on their scores on content examinations.

## Reading Comprehension Effects on Content Examination Scores

Test takers' ability to read and comprehend the information that is presented may be a direct correlation to their ability to post passing scores on basic skills and teacher content examinations. In a report entitled "Study of Teacher Preparation in Early Reading Instructions" by the National Center for Education Statistics (2010), which examined 99 public and private teacher preparation programs in 24 states, $69 \%$ of those surveyed reported a moderate overall programmatic focus on the essential components of early reading instruction. Thus, the examination of reading comprehension as a moderating variable may lead to a clear relationship between content knowledge and preparation in the planned program. According to Holmes (1986), deficiencies in language skills account for the reason blacks do not perform well on standardized tests. Hess and Shipman's (1965) study of 160 Negro mothers and their four year old children sought to provide evidence of the effects of socio status differences among the research groups with respect to cognitive functioning and linguistic codes.

Standard language usage and learning is pertinent for children as they mature throughout adolescence as their teachers may make the difference in language acquisition. For example, blacks who attended segregated schools in the 1940s and 1950s use of standard English was more accurate and precise than blacks who attended desegregate public schools in the 1960s and 1970s (Holmes, 1986). According to the

National Center for Education Statistics (2012), 31\% of black males met the ACT English benchmark, compared with $38 \%$ of black females. Black males scored 5 points lower than females on the critical reading section of the SAT in 2011. Average critical reading scores on the SAT varied across racial/ethnic groups with black students earning 428 points. It was posited by Hess and Shipman (1965) that the communication style (complex vs. simple) of the mother makes a difference in how children learn to communicate and function within the learning environment.

The familiarity of students with teachers of the same ethnic background may attribute to the differences in language acquisition acquired in the classroom. Hess and Shipman's (1965) objective was to discover how teaching styles of the mothers induce and shape learning styles and information-processing strategies in the children. Additionally, factors such as cultural experiences and adolescent upbringing that preservice candidates are exposed to throughout their P-12 education, in and out of the home, may affect their demonstrated ability to comprehend and apply learned content knowledge to standardized test examination questions (Zwick \& Sklar, 2005). Moreover, individual motivation may affect candidates' demonstrated ability and content examination score outcomes.

## How Motivation May Influence Testing Outcomes

How well teacher candidates perform on basic skills and teacher certification exams contributes to whether they will be accepted into a teacher preparation program and whether they will become certified to teach. Various factors may influence how well test takers perform on these exams. In a study completed by Liu, Bridgeman, and Adler
(2012) on motivation in higher education, the researchers used random assignment to administer a multiple-choice test and an essay across three motivational conditions. Using 757 students from three different types of higher education institutions, the researchers sought to answer the critical question of how scores are influenced by students' motivation. The results indicated that motivation significantly predicted test scores and a substantial performance gap emerged between students in different motivational conditions.

Chan, Schmitt, Deshon, Clause, and Delbridge (1997) conducted a study with undergraduates where test-taking motivation was examined. Results indicated that testtaking motivation was positively related to performance on one of the two parallel tests even after race and performance were controlled from the first test. Their study also indicated that the some of the difference between blacks and whites in test performance may be explained by differences in test taking motivation.

Test takers motivation may influence their testing outcomes. Arvey, Strickland, Drauden, and Martin (1990) examined the motivation behind test taking.

The first phase of this research effort describes an effort to directly measure the attitudes and opinions of employment test takers toward the tests they just took; the instrument is called the Test Attitude Survey (TAS). Nine factors were developed which reflect test takers' expressed effort and motivation on the test, the degree of concentration, perceived test ease, and the like. (p. 695) According to Pardee (1990), motivation can be defined as "those forces within an individual that push or propel him to satisfy basic needs or wants." (p. 3). Maslow and

Herzburg (cited in Pardee, 1990) developed motivational theories that can be used by not only employers of teacher educators but also can be used by teacher preparation programs to improve program effectiveness and efficiency through the development of test preparation programs to assist with the improvement of candidate test productivity.

## Review of Literature Related to Teacher Preparation Programs

According to Carter (1998), "if a teacher preparation program cannot prepare its students to meet even the minimum standard of passing a licensing exam, the program should be deleted from the college or university offerings" (p. 88). The use of teacher training dates back as early as 1785 when teacher preparation courses were founded in academies and the earliest form of teacher preparation was in private or state-subsidized academies and seminaries (Angus, 2001). Teacher preparation programs are the pinnacle of traditional four year institutions where the goal of the program should be to produce highly qualified candidates for employment in P-12 schools. The field of teacher preparation is growing increasing competitive in the United States as teacher preparation has seen a growing trend in alternative preparation and the consistent comparison with teaching programs around the world (Darling-Hammond, 2001; USDOE, 2011a).

According to the United States Department of Education (2011) report, "Our Future, Our Teachers: The Obama Administration's Plan for Teacher Education Reform and Improvement," America is not recruiting the best and brightest teachers as other high performing countries. Additionally, teacher preparation programs are not providing students with rigorous, clinical experiences that will prepare them for the schools in which they may become employed as well as their absence in preparing candidates to
teach in high demand fields such as Special Education and Science, Technology, Engineering and Math (STEM). Two emerging themes can be gaged from a review of the report. The absence of rigor and recruitment may indicate that the possible problem with teacher candidates passing entrance and certification examinations to meet highly qualified status may be rooted in the design and structure of the planned program itself (Anrig et al., 1986; Carter, 1998; Dilworth, 1986).

In Dilworth's (1986) article about schools, departments and colleges of education, at the date of publication, the author posits that candidates entering college are not as prepared as other college entrants; hence, once they have completed their planned program they are not equipped with basic knowledge to teach. The aforementioned statement is not based on candidates' classroom performance but their inability to adequately perform on tests prior to, during and after college. In addition, as traditional teacher preparation programs were being met with more scrutiny and policies governing teacher preparation were being changed and developed, HBCUs public and private, met new and continuing problems during the 1980s. During this timeframe, the underlying problem with the decline and/or interest in teacher education is that schools of educations had a tendency to admit a large amount of borderline students (Holmes, 1986).

However, the last decade has seen improvements in teacher education programs through a more focused offering of courses in content and pedagogy and through "intensive coursework that focuses on the needs of diverse learners" (Perry, 2011, p. 11). Throughout the 20th and 21st centuries, numerous policy changes have been instituted surrounding the qualifications of classroom teachers and candidates prepared in
traditional preparation programs. Following the amendments to HEA enacted in 2008, states have been required to report more information on their Title II reports on the evaluation of their teacher preparation programs (USDOE, 2013). These amendments now require the following:

States now to report on new elements including: data on teacher preparation program admissions requirements; the number of students enrolled in each teacher preparation program by gender, race and ethnicity; for the state as a whole, and for each teacher preparation program, the number of teachers prepared by area of certification or licensure, major and subject area; the reliability and validity of the teacher certification or licensure assessments used by the state; and the average scaled score on these assessments. (USDOE, 2011b, p. 2)

Although these policies have been implemented to ensure that only highly trained and qualified individuals are in our nation's classrooms, many critics contend that the use of these measures do not ensure how well the individual will teach and/or how well their students will score on standardized examinations (Boyd et al., 2007; Dilworth; USDOE, 2011b). Teacher preparation programs must meet established rules and guidelines outlined by state and national accrediting agencies. Currently, that agency is the National Council for Accreditation of Teacher Education (NCATE).

## Federal Legislation that has Influenced Teacher Preparation

## National Council for Accreditation of Teacher Education (NCATE)

When teachers decide their mission is to educate the young minds of students in P-12, they are accepting that students enter their classrooms as a Tabula Rasa Theory of a
blank slate (Misencik, 2008). Their responsibility is to teach students fundamental basics such as letter recognition, phonics, and fine and gross motor skills (Anrig et al., 1986; Bennett et al., 2006; Misencik, 2008). Parents, community stakeholders and local and state officials expect classroom teachers to be knowledgeable of their content and highly qualified (Anrig et al., 1986; Carter, 1998; USDOE, 2011a; USDOE, 2011b). Teacher preparation programs are held responsible for providing high quality programs for their candidates and are held to these standards by NCATE (Powell, 2012). Founded in 1954 from a formation of several organizations (NCATE, 2012, About NCATE, para. 3), NCATE assumed responsibility for accreditation of programs with a promise to lift standards from states to a national body while lifting the "standards of teacher education programs to a higher common denominator" (Angus, 2001, p. 24).

NCATE's dual mission is accountability and improvement in education preparation. The NCATE accreditation process establishes rigorous standards for teacher education programs, holds accredited institutions accountable for meeting these standards, and encourages unaccredited schools to demonstrate the quality of their programs by working for and achieving professional accreditation. In NCATE's performance-based accreditation system, institutions must provide evidence of competent teacher candidate performance. NCATE accredited colleges of education are expected to ensure that teacher candidates know their subject and how to teach it effectively. (NCATE, 2012, About NCATE Quick Facts, para. 1-2)

For teacher preparation programs, meeting accreditation not only includes visits by NCATE but also includes annual Title II reporting on the program and its completers. This report assists state and national accrediting agencies along with the federal government in assessing the effectiveness of teacher preparation programs (USDOE, 2011a; USDOE, 2011b).

## Title II/Higher Education Act 1965

## The Higher Education Act of 1965 created financial aid and "represented a

 paradigm shift from policies that were race-specific and religion-focused to poverty" (Barnes-Johnson, 2008, p. 73). Prior to the implementation of No Child Left Behind (NCLB), teacher preparation programs were not required to meet the $80 \%$ pass rate that is now required by NCATE and Title II (NCATE, Standard 1a and 1e; Title II of HEOA, 2012, sec 205-208). Title II of the HEOA provides for preservice teacher training and authorizes grant funds for improving teacher education programs, strengthens teacher recruitment and technology training for teachers (Barnes-Johnson, 2008; Title II of HEOA, 2012, sec 205-208). State public and private teacher preparation programs must show through required reporting that candidates are being prepared to be highly qualified teachers. This reporting is documented through candidates' demonstrated ability to pass the content examination in the area in which they seek certification (Angus, 2001; Barnes-Johnson, 2008; Boyd et al., 2007; Gifford, 1985). The link between federal, state and local requirements have forced school districts to require teachers to meet the highly qualified requirements mandated by No Child Left Behind.
## Nation at Risk and No Child Left Behind

The citizens who pay taxes for public education and the educators who staff public schools want children to learn more and better than they have in recent years (Anrig et al., 1986, p. 316). According to Boyd et al. (2007), the commitment to school accountability and to improving educational outcomes for all students, together with improved monitoring of student achievement, has heightened public awareness of longstanding sociodemographic gaps in student achievement. Awareness of the quality of education has shown that minority students in poor low-performing schools are more likely to be taught by uncertified inexperienced teachers than students in suburban areas (Darling-Hammond, 2001; Boyd et al., 2007). Since the issuance of the 1983 report "A Nation at Risk: The Imperative of Educational reform," the move towards teacher testing has been a stampede (Gifford, 1985, p. 53). The National Commission on Excellence in Education's report alerted the country to the possibility that American schools were failing which in turn sent out a shock wave of federal, state and local education reforms.

The No Child Left Behind (NCLB) Act of 2001 transformed education as the act sought to improve the academic achievement of the disadvantaged through numerous tactics including, ensuring that high-quality academic assessments, accountability systems, teacher preparation and training, curriculum, and instructional materials are aligned with challenging state academic standards so that students, teachers, parents, and administrators can measure progress against common expectations for student academic achievement (Elementary and Secondary Education Act of 1965, 2013).


#### Abstract

Summary Throughout the last century there have been guidelines in place to qualify individuals interested in becoming teachers. Gaining momentum in the last few decades, teacher testing has seen a complete overhaul beginning with the Pennsylvania Study which led directly to the creation of the National Teacher Examinations Program. The use of the National Teachers Examination and other standardized exams used for certifying teachers have failed to correctly diagnose the competency of teachers and has caused a high failure rate among minorities (Hood \& Parker, 1989). Also, the correlation between student performance in elementary and secondary schools as measured by the SAT and ACT with a participant pool of preservice teachers from communities around the United States of America may posit a glimpse into teacher preparation at HBCUs and other minority serving institutions. Test takers' ability to read and comprehend the information that is presented may possibly be a direct correlation to their ability to post passing scores on basic skills and teacher content examinations (Holmes, 1986; National Center for Educational Statistics, 2010).

The absence of rigor and recruitment may indicate that the possible problem with teacher candidates' inability to pass entrance and certification examinations to meet highly qualified status may be rooted in the design and structure of the planned program itself (Carter, 1998; Dilworth, 1986; USDOE, 2011a). Teacher preparation programs must meet established rules and guidelines outlined by state and national accrediting agencies such as the National Council for Accreditation of Teacher Education (NCATE) whose dual mission is accountability and improvement in education preparation. The


citizens who pay taxes for public education and the educators who staff public schools want children to learn more and better than they have in recent years (Anrig et al., 1986). The commitment to school accountability and to improving educational outcomes for all students, together with improved monitoring of student achievement, has heightened public awareness of long-standing sociodemographic gaps in student achievement (Boyd et al., 2007).

## CHAPTER III

## THEORETICAL FRAMEWORK

The researcher examined preservice teacher education candidates' performance on the Georgia Assessments for the Certification of Educators Early Childhood Education content examination tests (\#001 in the areas of reading and English language arts and social studies, and \#002 in the areas of mathematics, science, health, physical education and the arts).

## Research Design

A QUAN-QUAL-QUAN model and selected ex post facto findings from an attempt to treat the problem of student failure was used by the researcher. The QUAN-QUAL-QUAN model allows for the use of both qualitative and quantitative methods during the data collection process. This model, also known as the triangulation mixed methods design, allows for both qualitative and quantitative data to be weighed equally and collected concurrently throughout the study (Gay, Mills, \& Airasian, 2012). The quantitative portion of the research study focused on selected variables possibly influencing black teacher education candidates' demonstrated ability to post passing scores on content examinations on the first attempt. The research design used correlation analysis. Descriptive statistical analysis was utilized from the data collected from the research questions. The historical record and policy data analyses of certification history (Gay, Mills, \& Arisian, 2012; Howell \& Prevenier, 2001; Lange, 2013) were used to
inform the researchers development of the survey questionnaire and the interview protocol. The selected findings from the ex post facto data are also conceptualized in the development of the research designs use of phenomenology. According to Gay et al. (2012), phenomenology allows the researcher to ask participants about the meaning of their experiences. This approach allows the researcher to gain candid views from the participants.

## Theory of the Variables

## Quantitative

When reviewing the literature and historical factors, some of the factors and variables that emerged as it relates to minorities' demonstrated inability to post passing scores on teacher content examinations on the first attempt, included, but were not limited to, SAT score, ACT score, high school GPA, GPA prior to preservice teaching, cumulative undergraduate GPA and number of attempts on test \#001 and \#002. For example, Perry's (2011) study used a methodology that measured the significance of the SAT, HSGPA and Praxis I: Pre-Professional Skills Test (PPST) at an HBCU. Perry suggested that "comparative studies could be conducted for other Historically Black Colleges and Universities (HBCUs)" (p. 146). Additionally, selected studies produced descriptive statistical data with noticeable score differences between blacks and whites on basic skills as well as content examinations (Bennett et al., 2006; Nettles, Scatton, Steinberg, \& Tyler, 2011; Slater, 1999-2000). Also, differences exist between blacks' and whites' performance on the ACT and SAT. There are also noted freshman GPA (FGPA) differences between minorities and whites and the use of FGPA in predicting
college success. Additionally, Zwick and Sklar (2005) have indicated that background (related to family education), P-5 education, and type of college or university chosen may ultimately affect candidates' first time test score.

## Qualitative

Teacher education has seen numerous changes over the last few decades. Federal, state, and local policy modifications have not only affected teacher education programs as a whole but also the candidates enrolled in those programs (Dilworth, 1986; Gifford, 1985). Federal reports such as "Our Future, Our Teachers: The Obama Administration's Plan for Teacher Education Reform and Improvement" (2011) cite that teacher preparation programs are not providing students with rigorous, clinical experiences that will prepare them for the schools in which they may become employed. Additionally, candidates entering teacher education programs are not as prepared when compared with other college entrants (Dilworth, 1986). Continually, the author states that once candidates have completed their planned program they are not equipped with basic knowledge to teach citing their inability to adequately perform on tests prior to, during and after college.

Arvey, Strickland, Drauden, and Martin (2006) examined the motivation behind test taking. "Describing an effort to directly measure the attitudes and opinions of employment test takers toward the tests they just took, the instrument is called the Test Attitude Survey (TAS)" (p. 695). According to Pardee (1990), motivation can be defined as those forces within an individual that push or propel him to satisfy basic needs or wants.

Title II of the HEOA provides for preservice teacher training and authorizes grant funds for improving teacher education programs, strengthens teacher recruitment and technology training for teachers (Barnes-Johnson, 2008; Title II sec 205-208). The 1983 report "A Nation at Risk: The Imperative of Educational reform," The National Commission on Excellence in Education's report alerted the country to the possibility that American schools were failing, which in turn sent out a shock wave of federal, state, and local education reforms. The No Child Left Behind (NCLB) Act of 2001, added additional rules and regulations for school districts requiring the academic improvement of disadvantaged students through the inception of an accountability system for student achievement and employing highly qualified teachers by 2014. Under the Obama administration, states have been offered waivers allowing them to submit detailed plans for how they will establish new targets to improve student achievement (Hefling \& Feller, 2012).

## Definition of Variables

American College Testing (ACT): An examination that is taken by individuals interested in gaining admission into a college or university.

Cumulative Grade Point Average (CGPA): CGPA is used as an independent variable and is the accumulation of all university coursework completed once the candidate has matriculated through the planned program and graduated from the university.

Exam first time pass or fail: In this research study, exam first time pass or fail is defined as whether participants passed both test \#001 and \#002, passed either test \#001
or \#002 or passed neither test \#001 or \#002 of the GACE ECE examination on their first attempt.

Georgia Assessments for the Certification of Educators (GACE): For this study, the Early Childhood Education content examination consisting of test \#001 (reading and English language arts and social studies) and test \#002 (mathematics, science, health, physical education and the arts) were examined. The GACE are criterion-referenced, objective-based assessments designed to measure a candidate's knowledge and skills rather than an established standard (GACE, 2012, Program Overview).

Grade Point Average before Preservice Teaching (GPAPST). GPAPST is used as an independent variable and is the GPA of all university coursework completed before candidates' enrollment in preservice teaching course.

High School Grade Point Average (HSGPA): HSGPA is used as an independent variable and is the cumulative GPA reported on teacher education majors' university admission related documents from the high school of record.

Motivation: In this research study, motivation is defined as the "forces within an individual that push or propel him to satisfy basic needs or wants" (Pardee, 1990, p. 3).

Number of failed attempts test \#001: In this research study, the number of times participants took and failed the examination past the first attempt. The researcher calculated values each failed attempt to pass either test from the GACE content examination for Early Childhood Education of all participants identified for the study in the class of 2012 for the administration of the examination through March 2011 to March

2012 (e.g. if participant one passed both tests of the examination on the first attempt, the coded value was a positive coded value; if participant two passed either test \# 001 or test \#002 and had to attempt to pass either or both tests more than once, the coded value for each became a negative coded value in the calculation of the variable).

Number of failed attempts test \#002: In this research study, the number of times participants took and failed the examination past the first attempt. The researcher calculated values each failed attempt to pass either test from the GACE content examination for Early Childhood Education of all participants identified for the study in the class of 2012 for the administration of the examination through March 2011 to March 2012 (e.g. if participant one passed both tests of the examination on the first attempt, the coded value was a positive coded value; if participant two passed either test \#001 or test \#002 and had to attempt to pass either or both tests more than once, the coded value for each became a negative coded value in the calculation of the variable).

Program Quality: In this research study, program quality is the candidates' level of perception in which they feel they were adequately prepared to meet GACE goals.

Scholastic Aptitude Test (SAT): A test taken by individuals seeking admission to a college or university.

## Definition of Terms

Achievement Gap: In NAEP reading scores, the achievement gap is seen by the differences between the average scores of two student subgroups on the standardized assessment.

Alternative route to licensure: A teacher preparation program that primarily serves candidates that are the teacher of record in a classroom while participating in the route. Alternative route teacher preparation programs are defined as such by the state (cited from Glossary of Terms, Federal Title II Report).

Candidacy for Accreditation: The status granted to a non-accredited unit seeking accreditation that has established itself as a pre-candidate and has met NCATE's preconditions for accreditation (NCATE, 2012, NCATE Glossary).

Candidates: Individuals admitted to, or enrolled in, programs for the initial or advanced preparation of teachers, teachers continuing their professional development, or other school professionals (NCATE, 2012, NCATE Glossary).

Certification: The process by which a non-governmental agency or association grants professional recognition to an individual who has met certain predetermined qualifications specified by that agency or association (NCATE, 2012, NCATE Glossary).

Clinical Faculty: P-12 school personnel and professional education faculty responsible for instruction, supervision, and/or assessment of candidates during field experiences and clinical practice (NCATE, 2012, NCATE Glossary).

Clinical Practice: Student teaching or internships that provide candidates with an intensive and extensive culminating activity. Candidates are immersed in the learning community and are provided opportunities to develop and demonstrate competence in the professional roles for which they are preparing (NCATE, 2012, NCATE Glossary).

Cut score: The minimum score required by states to pass a teacher certification or licensure assessment.

Demonstrated ability: Candidates' posting a passing score on the content examination.

Demonstrated inability: Candidates' inability to post a passing score on the content examination.

Essence: Commonality of experience or invariant structure of the experience (Johnson \& Christensen, 2008, p. 397).

Ex Post Facto: Defined as "after the fact" because both the cause and the effect have already occurred and must be studied to determine the cause of the problem.

First time score attempt: Scores achieved by test takers on their first attempt of the Georgia Assessments for the Certification of Educators Early Childhood Education test \#001 and test \#002.

Highly qualified teacher: A highly qualified teacher has a bachelor's degree, full state certification and has demonstrated competency in all subjects in which he or she teaches; a highly qualified teacher has not had any certification or licensure requirements waived on an emergency, temporary or provisional basis (Glossary of Terms, Federal Title II Report).

Historically Black College and University: According to the Higher Education Act of 1965 , a HBCU is any historically black college and university established prior to 1964, whose principal mission was, and is, the education of black Americans, and that is accredited by a nationally recognized accrediting agency or association.

Minority Serving Institution: An institution that serves individuals that are considered minorities according to the Census Bureaus categories for ethnicity.

National Teacher Examination: First given in March 1940 to individuals interested in becoming teachers.

NCATE Standard 1: Candidate Knowledge, Skills, and Professional Disposition Candidates preparing to work in schools as teachers or other school professionals know and demonstrate the content knowledge, pedagogical content knowledge and skills, pedagogical and professional knowledge and skills, and professional dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards.

No Child Left Behind: 2001 mandate requiring that all teachers teaching in public schools in the United States be highly qualified by 2014.

Pedagogy: Includes knowledge of instructional methods, learning theories, measurement and testing and classroom management (Boyd et al., 2007, p. 50).

Phenomenology: A qualitative approach in which the researcher focuses on capturing the experience of an activity or concept from participants' perspectives (Gay et al., 2012, p. 629).

Praxis: Examination used by some states in America to test teacher candidates prior to their entrance into a teacher preparation program and to test the content knowledge of those candidates seeking to obtain certification.

Student: Children enrolled in P-12 schools.
Teacher Competency Test: Teacher certification examinations that were given in lieu of states using the NTE for certification purposes.

Teacher Preparation Program: Shaped by combination of state regulations, criteria of accreditation groups, and choices made by individual programs and institutions (Boyd et al., 2007, p. 48).

Traditional: A teacher preparation program that primarily serves undergraduate students without prior teaching or work experience and leads at least to a bachelor's degree (Glossary of Terms, Federal Title II Report).

Title II: Provides requirements for teacher quality programs throughout the nation; thus, teacher preparation programs are required to report the number of candidates enrolled and candidates that have completed a professional teacher preparation programs.

## Relationship among the Variables

To determine the causal factors that could possibly be affecting black teacher education candidates' demonstrated inability to post passing scores on the Georgia Assessments for the Certification of Educators (GACE) Early Childhood Education (ECE) examination on the first attempt, selected independent variables (number of attempts failed test \#001, number of attempts failed test \#002, ACT, SAT, high school grade point average [HSGPA], grade point average prior to pre service teaching [GPAPST], cumulative grade point average [CGPA], motivation, and program quality) and selected dependent variables (Exam first time pass or fail; GACE ECE test \#001 pass or fail; GACE ECE test \#002 pass or fail) have been illustrated and operationally defined through the theoretical framework. GACE ECE test \#001 and GACE ECE test \#001 and Exam first time pass or fail are illustrated as interdependent in the theoretical framework. In order for candidates to pass the entire content examination they must earn a passing
score of at least 220 on both GACE ECE test \# 001 and GACE ECE test \#002 (see Figure
2).

Selected Independent Variables
Selected Dependent Variables


Figure 2. Theoretical Framework

## Qualitative Conceptual Framework

The qualitative conceptual model (see Appendix A) was designed by the principle investigator of the Teacher Quality Enhancement Subcontract Grant to chart the external and internal factors that were perceived to possibly affect candidates' passing rates on the Georgia Assessments for the Certification of Educators Early Childhood Education examination test \#001 and \#002. Tutorial support was developed and implemented to assist candidates with passing the sections (reading and English language arts; mathematics, science, health, physical education and the arts) of the ECE examination. The model depicts the ECE candidates entering the HBCU. The content knowledge attained during their high school preparation led to college admission. During the candidates' freshman and sophomore years of study, courses in the core curriculum at the university level should assist in the preparation of demonstrated ability to pass the basic skills examination. The candidates had to pass basic skills or be exempt from basic skills prior to acceptance into the ECE program. Participants for this study have accomplished graduation from high school, admission to the university, successful completion of the university's core curriculum of study and passing of the basic skills examination as conditions for acceptance into the teacher preparation program. At the time of treatment they had passed the basic skills examination, had completed the junior year and had matriculated into their senior year of the preparation program. As a result, external and internal factors for the participants are identified as follows: frequency is aligned with individual motivation to attend GACE workshop series prior to sitting for the administration exam or after failing the exam test \#001, test \#002 or both test period.

Frequency is aligned with attending GACE summer workshop series and attending the GACE fall workshop series because frequency of attendance is perceived to be one of the individual motivation indicators to support those who have failed to pass the test. The workshop series in summer, fall and spring was funded through the TQE subcontract grant. Reading and English language arts support, social studies support and mathematics, science, health, physical education and the arts support are listed as external components of the moderating variable because they were offered to support the candidates above and beyond what the planned program offered. Freshman core courses and sophomore core courses are listed as internal components because candidates take these courses in the core curriculum at the university level.

Conceptually, it is perceived that attendance and motivation are among factors that may emerge from the interview protocol and instrumentation to explain the phenomena of passing the GACE content exam. The model is framed similar to Getzel and Guba's open systems model (Lunenburg \& Ornstein, 2007). The setting for the study was a private HBCU that has historically accepted students into the university from backgrounds that may be first generation college students and does not necessarily use the ACT or SAT as primary gateways to admission. The overall research design utilized the unpublished manuscript of Moffett, Frizzell, Brownlee-Williams, and Thompson (2012) to support the data collection procedures.

## Research Questions

RQ1: Is there a significant relationship between the first time pass or fail results on the GACE ECE tests \#001 and \#002 of selected ECE graduates and completers and each of the selected independent variables: ACT, SAT, HSGPA, GPAPST, CGPA, number of failed attempt test \#001, and number of failed attempts test \#002?

RQ2: Is there a significant relationship between number of failed attempts on test \#001 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

RQ3: Is there a significant relationship between number of failed attempts on test \#002 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

RQ4: What were the findings for the survey items from the survey completed by the purposively selected participants?

RQ5: As a result of the review of the survey items, what narrative reflections were provided from follow-up interviews of purposively selected participants who passed the test as Early Childhood Education majors and those who did not pass the test as Educational Studies majors?

RQ6: Is there a significant relationship between the motivation of candidates to take the GACE test and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

RQ7: Is there a significant relationship between perception of program quality and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

RQ8: Is there a significant relationship between first time pass or fail rate and perception of program quality for the class of 2012?

## Limitations of the Study

This study was limited to a private HBCU as the primary focus. The researcher was an observer and administered part of the treatment for the problem identified in this study. The selected approach of a primary case study of the findings from the private HBCU with the review of data drawn from historical documents, interviews from former administrators, and Department of Education reports and findings required of institutions of higher education engaged in teacher preparation leading to certification were examined. Due to the HBCU teacher preparation program enrolling less than 30 undergraduate teacher education candidates per graduating class, the researcher did not have 30 plus one (31) participants for the statistical portion of this study to be considered valid and reliable. The selected findings from the private HBCU should not be used to generalize beyond the documented and observed phenomena within the research settings.

## Delimitations of the Study

Data are inclusive of historical records, primary documents to include the 1959 dissertation study findings of the professor emeritus who served as the departmental chair for the undergraduate programs in teacher education through 1986. As such, the individual reflections served as a singular lens through which the history of teacher certification at the private HBCU is established. Selected participants from the class of 2012 participated in the treatment identified in the conceptual model. The researcher was a research participant in the treatment phase of the study. The researcher observed selected participants during the treatment phase known as the GACE Workshop Series. Another delimitation is that the researcher took the GACE ECE content examination (test \#001 and \#002) required of the participants in preparation for conducting this study.

## Summary

In an effort to assist candidates who had not successfully passed at least one portion of the GACE Early Childhood Education content examination, a GACE tutorial workshop series was developed (moderating variable/treatment plan). The intervention plan was conceptualized as the internal case study for the research plan. This study was designed to use the conceptual model that was conceptualized by the principle investigator (for the Summer/Fall/Spring 2011-2012 Workshop Series) when the subcontract agreement was written for inclusion in the major teacher quality enhancement award by a partnership university agreement.

## CHAPTER IV

## RESEARCH METHODOLOGY

This chapter defines the type of research that was conducted to investigate an internal problem within a teacher education program at a private HBCU located in a metropolitan city in the southeastern part of the United States that uses a state constructed teacher certification examination known as the Georgia Assessments for the Certification of Educators (GACE).

## Research Design

A QUAN-QUAL-QUAN model and selected ex post facto findings from an attempt to treat the problem of student failure were used by the researcher. The QUAN-QUAL-QUAN model allows for the use of both qualitative and quantitative methods during the data collection process. This model, also known as the triangulation mixed methods design, allows for both qualitative and quantitative data to be weighed equally and collected concurrently throughout the study (Gay, Mills, \& Airasian, 2012). The quantitative portion of the research study focused on selected variables possibly influencing black teacher education candidates' demonstrated ability to post passing scores on content examinations on the first attempt. The research design used correlation analysis to determine if a relationship existed between the quantitative variables (Gay et al., 2012). Descriptive statistical analysis was utilized on the data collected to test the research questions. The historical record and policy data analyses of certification history
were used to inform the researcher's development of the survey questionnaire and the interview protocol (Gay, Mills, \& Arisian, 2012; Howell \& Prevenier, 2001; Lange, 2013),

This study used data gathered from the Teacher Quality Enhancement (TQE) Subcontract Grant GACE Summer/Fall/Spring 2011-2012 workshop series held at a selected private HBCU located in a metropolitan city in the southeastern part of the United States and Title II reports from 2007-2011. In addition, historical background from interview protocols were provided on the Georgia Assessments for the Certification of Educators (GACE) Early Childhood Education content examinations in an attempt to uncover the causal variables and factors of black candidates' demonstrated inability to successfully post a passing on their first attempt taking the teacher certification examinations.

Specifically, this study, through QUAN-QUAL-QUAN methodological design, sought to examine causal variables and conceptual themes from data sets and interviews of selected candidates who had to pass the GACE under the selected teacher preparation program's new mandated testing requirements. The interview protocol sought to purposively collect the reflective narrative and emerging themes and triangulate these qualitative findings with the quantitative independent and dependent variables from those who were enrolled candidates in the program, those that enrolled in the program and decided to pursue an Educational Studies degree instead of an Early Childhood Education degree, and those who sought GACE examination preparation assistance through a tutorial program.

The qualitative approach that was used to guide the qualitative portion of this study was phenomenology. Goulding (2005) states the following:

With regard to the process of enquiry, the phenomenologist has only one legitimate source of data, and that is the views and experiences of the participants themselves. This in itself assumes that the participant's view is taken as 'fact.' Furthermore, participants are selected only if they have lived the experience under study. Sampling is therefore purposive and prescribed from the start and the main instrument of data collection is the interview. (p. 302)

Phenomenologists focus on describing what all participants have in common as they experience a phenomenon (Creswell, 2012, p. 78). Additionally, phenomenology allows the researcher to conclude with a descriptive passage in which they discuss how and what the participants have experienced (Creswell, 2012; Johnson \& Christensen, 2008). In this research study, purposely selected participants reflected upon their preparation for the GACE ECE content examination through the use of their lived experiences, thus allowing the researcher to extrapolate recurring themes common to all participants.

## Description of the Setting

This study was conducted using data that was captured in the setting where the participants were matriculating for the completion of the planned program leading to the degree and certification. The data used in this study are from a private HBCU located in a metropolitan city in the southeastern part of the United States.

## Sampling Procedure

For this research study, the type of sampling that was used is termed as purposive sampling. The sample for this research study consisted of purposively selected Early Childhood Education and Educational Studies majors who were members of the class of 2012.

## Working with Human Subjects

The researcher sought to provide assurance that participant identities remained confidential. The private HBCU that was selected for this research will not be disclosed to ensure the confidentiality of the participants in this research study. Graduates that voluntarily participated in the survey and follow up interviews were informed they had the right to discontinue or withdraw from the study at any time.

## Instrumentation

The instrument used to assess selected variables that affect black preservice teachers first attempt performance on the GACE was the Georgia Assessments for the Certification of Educators Early Childhood Education content examination (GACE). The relationship among the variables was drawn from data collected as part of the Teacher Quality Enhancement Subcontract Grant (TQE). A survey, developed by the researcher, included 28 questions that were related to GACE passing, ACT and SAT, motivation, and perception of program quality. A semistructured interview protocol was used to interview selected participants to discern their view of the planned program and their GACE preparation.

## Participants/Location of Research

Participants for this study were members of the class of 2012. These members were purposefully selected because their cohort was the first class that completely went through the new program (2008-2012). Between March 2011 and March 2012, one or more participants took one or more tests of the GACE ECE examination. Of the 18 purposively selected members of the cohort, one participant chose not to take the GACE ECE examination and decided to pursue the Bachelor of Arts degree in Educational Studies. Therefore, this participant was not included in the analysis of the data for statistical purposes.

## Measurement of Research Questions

Table 3 lists the variables associated with each research question and the source of data for the variables.

Table 3
Variables Associated with Each Research Question

| Research | Variables Associated with | Source of Data for |
| :---: | :---: | :--- |
| Questions | Research Questions | Variables |
| RQ1 | ACT, SAT, HSGPA, GPAPST, CGPA | Teacher Quality Enhancement |
|  |  | Subcontract Grant |
| RQ2 | ACT, SAT, HSGPA, GPAPST, CGPA | Teacher Quality Enhancement |
|  |  | Subcontract Grant |
| RQ3 | ACT, SAT, HSGPA, GPAPST, CGPA | Teacher Quality Enhancement |
|  |  | Subcontract Grant |

Table 3 (continued)

| Research | Variables Associated with | Source of Data for |
| :---: | :--- | :--- |
| Questions | Research Questions | Variables |
| RQ4 | Motivation and Program Quality | Survey |
| RQ5 | Motivation and Program Quality | Class of 2012 member interviews |
| RQ6 | ACT, SAT, HSGPA, GPAPST, CGPA | Teacher Quality Enhancement |
|  |  | Subcontract Grant |
| RQ7 | ACT,SAT, HSGPA, GPAPST, CGPA | Teacher Quality Enhancement |
|  |  | Subcontract Grant |
| RQ8 | Program Quality | Survey and Class of 2012 Member |
|  |  | Interviews |

## Interview Procedure

The use of social networking was used to identify selected graduates. The researcher purposefully sought permission from members of the class of 2012. The process was convenience sampling and the follow-up interviews were conducted via phone and email to ensure that only those who completed the survey within the allotted time for the survey were interviewed utilizing the following information in Table 4.

Table 4
Interview Format

|  | Graduating | Degree |  | \# of Times |
| ---: | :---: | :---: | :---: | :---: |
| Participant | Class | Granted | SAT/ACT | Took GACE |
| $1-$ Participant n |  |  |  |  |

## Statistical Applications/Description of Data Analysis Methods

## Quantitative

The researcher utilized data collected through the Teacher Quality Enhancement Subcontract Grant. After collecting the GACE data that supported the analysis of the selected research questions, the researcher entered the data into an Excel spreadsheet. Once the data was gathered and coded, the researcher then input the data in the Statistical Package for the Social Sciences (SPSS). When the SPSS report was complete, the researcher analyzed the data.

## Qualitative

A survey was distributed to members of the class of 2012 who had graduated with the Early Childhood Education and Educational Studies degree. The participants were given a four week window to complete the survey. The researcher followed-up via email and social networking (e.g. Facebook) to remind the participants to complete the survey (see Appendix B for survey and Appendix C for interview protocol). Once the surveys had been submitted, the researcher analyzed and interpreted the results. The Class of 2012 members that completed the survey within the allotted time period was purposefully selected for follow-up interviews. The interviews were conducted via phone and email. Four graduates were selected to participate in the interview portion; they included two Early Childhood Education graduates and two Educational Studies graduates. The interview questions were semi structured used to discern each graduates level of motivation and their level of perception of program quality. The researcher noticed from the survey results patterns of inconsistency in respondents' answers to the questions about
the methods courses and the planned program providing them with sufficient content knowledge to understand objectives presented in questions 23-28 and how participants performed on the content examination. The format for the semistructured interviews was the same for each graduate only for Question 1. The continuing format for the semistructured interviews was based around the graduates' responses to the survey items and their performance on the GACE ECE examination. The researcher then analyzed and interpreted the results. In the results section of this research document, the data gathered from the survey and interviews are included. The interview protocol and questions asked of each interviewee are outlined in this research document (see Appendix C).

## Summary

The inability of American colleges and universities to produce highly effective minorities has reached enormous proportions (Barnes-Johnson, 2008); hence, minorities continue to display difficulty in posting a passing score on teacher certification exams on their first attempt often failing to meet the required score by a few points (Bennett, McWhorter, \& Kuykendall, 2006).

The purpose of this study was to examine the effectiveness of a selected traditional teacher preparation program and their responsibility to provide candidates with sufficient content knowledge to post a passing score on a state constructed teacher certification examination on the candidates first attempt thus making them eligible to be highly qualified (Amerin-Beardsley \& Barnett, 2010; Bennett et al., 2006; Boyd et al., 2007; Carter, 1998; Higher Education Amendment, 2007; USDOE, 2011a; USDOE, 2011b). Using data from the Teacher Quality Enhancement Subcontract Grant and
purposively selected graduates from the class of 2012, the researcher analyzed the data to ascertain if any significance existed.

## CHAPTER V

## ANALYSIS OF THE DATA

The purpose of this study was to examine a selected traditional teacher preparation program's effectiveness in providing their candidates with the content knowledge needed to post a passing score on a state constructed teacher certification examination on the first attempt.

## Overview of Data Collection and Analysis

There were three methods of data collection: GACE ECE data, GACE ECE survey questionnaire, and class of 2012 member interviews. GACE ECE results were obtained from data collected through the Teacher Quality Enhancement Subcontract Grant. GACE ECE data included number of testing attempts and scores on content examination. The candidate survey was distributed to purposefully selected Early Childhood Education majors who completed the planned program, were enrolled in CEDC 444 or CEDC 492 during the spring 2012 semester and were members of the class of 2012. The survey was designed to obtain class of 2012 members' perception about their experiences preparing for the GACE ECE content examination. Selected respondents that completed a survey participated in semistructured interviews that were conducted via phone and email.

## Survey Participants

Table 5 shows which content test (\#001 English language arts and social studies; \#002 mathematics, science, health, physical education and the arts) participants indicted they took first-Test \#001: 2.2\% ( $\mathrm{n}=1$ ); Test \#002: 4.4\% ( $\mathrm{n}=2$ ); Both $20 \%(\mathrm{n}=9)$.

## Table 5

Content Tests Taken First by Participants

| Test \# 001 | Test \# 002 | Both Tests |
| :---: | :---: | :---: |
| 1 | 2 | 9 |

Figure 3 shows the total number of survey respondents $(\mathrm{n}=12)$ that indicated they passed or failed GACE ECE test \#001 on the first attempt. Four respondents (33\%; $\mathrm{n}=4$ ) indicated they passed GACE ECE test \#001 on the first attempt; however, eight respondents $(67 \% ; n=8)$ indicated they failed test $\# 001$ on the first attempt.

$\square$ Pass Test \#001 $\square$ Failed Test \#001
Figure 3. First Attempt Passers vs. Failures on Test \#001

Figure 4 shows the total number of survey respondents $(\mathrm{n}=12)$ that indicated they passed or failed GACE ECE test \#002 on the first attempt. Three respondents (25\%; $\mathrm{n}=3$ ) indicated they passed GACE ECE test \#002 on the first attempt; however, eight respondents ( $67 \% ; n=8$ ) indicated they failed test $\# 002$ on the first attempt. One respondent $(8.3 \% ; \mathrm{n}=1)$ did not indicate whether they passed or failed test $\# 002$ on the first attempt.


ロPassed Test \#002 $\square$ Failed Test \#002 目No Response

Figure 4. First Attempt Passers vs. Failures on Test \#002

## Dependent and Independent Variables Correlations

In this section, tables describe the correlations revealed between the dependent variables and independent variables.

## First Time Pass or Fail

- First time pass or fail and ACT have a correlation of .541 and a significance of .106; therefore, there is no significant relationship.
- First time pass or fail and SAT have a correlation of . 625 and a significance of .098; therefore, there is no significant relationship.
- First time pass or fail and HSGPA have a correlation of .015 and a significance of .959 ; therefore, there is no significant relationship.
- First time pass or fail and CGPA have a correlation of .440 and a significance of .077 ; therefore, there is no significant relationship.
- First time pass or fail and GPAPST have a correlation of .463 and a significance of .062 ; therefore, there is no significant relationship.
- First time pass or fail and the number of failed on attempts on test \#001 have a correlation of .504 and a significance of .039 ; therefore, there is a positive correlation between first time pass or fail and the number of failed attempts on test \#001 and the relationship was proven to be statistically significant.
- First time pass or fail and the number of failed attempts on test \#002 have a correlation of .532 and a significance of .028 ; therefore, there is a positive correlation between first time pass or fail and the number of failed attempts on test \#002 the variables and the relationship was proven to be statistically significant (see Table 6).


## Number of Failed Attempts on Test \#001

- The number of failed attempts on test \#001 and ACT has a correlation of .255 and a significance of .478 ; therefore, there is no significant relationship.

Table 6
Correlations: First Time Pass or Fail

|  | First Time | \# of Failed \# of Failed |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pass or | Attempts | Attempts |  |  |  |  |  |  |
| First Time Pass or Fail | Fail | $\# 001$ | $\# 002$ | ACT | SAT | HSGPA | CGPA | GPAPST |  |
| Pearson Correlation | 1 | $.504^{*}$ | $.532^{*}$ | 0.541 | 0.625 | 0.015 | 0.440 | 0.463 |  |
| Sig (2-tailed) |  | 0.039 | 0.028 | 0.106 | 0.098 | 0.959 | 0.077 | 0.062 |  |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 |  |

- The number of failed attempts on test \#001 and SAT has a correlation of . 847 and a significance of .008 ; therefore, there is a positive correlation between the variables and the relationship was proven to be statistically significant.
- The number of failed attempts on test \#001 and HSGPA has a correlation of .287 and a significance of .320 ; therefore, there is no significant relationship.
- The number of failed attempts on test \#001 and GPAPST has a correlation of .174 and a significance of .505 ; therefore, there is no significant relationship.
- The number of failed attempts on test \#001 and CGPA has a correlation of . 223 and a significance of .390 ; therefore, there is no significant relationship (see Table 7).


## Number of Failed Attempts on Test \#002

- The number of failed attempts on test \#002 and ACT has a correlation of . 354 and a significance of .316 ; therefore, there is not a significant relationship.

Table 7
Correlations: Number of Failed Attempts on Test \#001

|  | First Time | \# of Failed | \# of Failed |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Failed | Pass or | Attempts | Attempts |  |  |  |  |  |  |
| Attempts \#001 | Fail | $\# 001$ | $\# 002$ | ACT | SAT | HSGPA | CGPA | GPAPST |  |
| Pearson Correlation | $.504 *$ | 1 | $.567 *$ | 0.255 | $0.847 * *$ | 0.287 | 0.223 | 0.174 |  |
| Sig (2-tailed) | 0.039 |  | 0.018 | 0.478 | 0.008 | 0.320 | 0.390 | 0.505 |  |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 |  |

- The number of failed attempts on test \#002 and SAT has a correlation of . 731 and a significance of .039 ; therefore, there is a significant relationship.
- The number of failed attempts on test \#002 and HSGPA has a correlation of .369 and a significance of .194 ; therefore, there is no significant relationship.
- The number of failed attempts on test \#002 and GPAPST has a correlation of .095 and a significance of .717 ; therefore, there is no significant relationship.
- The number of failed attempts on test \#002 and CGPA has a correlation of . 069 and a significance of .792; therefore, there is no significant relationship (see Table 8).


## Analysis of Survey Responses

The analyses covered in this section were developed around the responses to the GACE ECE Survey questionnaire completed by purposefully selected respondents. The survey was developed based on a five-point Likert scale where respondents were asked to rate items from strongly agree to strongly disagree.

Table 8
Correlations: Number of Failed Attempts on Test \#002

| Number of Failed | First Time \# of Failed \# of Failed |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pass or | Attempts | Attempts |  |  |  |  |  |
| Attempts \#002 | Fail | \#001 | \#002 | ACT | SAT | HSGPA | CGPA | GPAPST |
| Pearson Correlation | .532* | .567* | 1 | 0.354 | .731* | 0.369 | 0.069 | 0.095 |
| Sig (2-tailed) | 0.028 | 0.18 |  | 0.316 | 0.039 | 0.194 | 0.792 | 0.717 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 |

The researcher designed a questionnaire to conceptualize and capture perceptions of purposively selected respondents identified for the research study. The conceptual design was to identify, through the analysis, emerging themes within the narrative descriptions and respondents ratings from the survey instrument and interview comments. The questionnaire consisted of 28 questions that were designed around the dependent and independent variables and asked respondents to rate their overall GACE ECE preparation experience, motivation, and perception of program quality (progqua). The analysis of the findings sought to follow a phenomenological approach for the data analyses captured from the survey and the interview protocol.

Survey Questions (SQ) 9-11 asked respondents to answer questions about their recollection of the ACT and SAT. From an examination of participants' responses, more than half of the participants indicated they participated in either tutorial sessions for the SAT and/or ACT. It was revealed that participants took either one or both tests as part of admissions requirements for college. Additionally, it emerged that the choice to take
only one test was due to either an individual decision or the receiving of a satisfactory score on one of the exams.

In this section, tables provide an item analysis of survey participants' responses to questions on whether they could determine their individual need for additional assistance beyond the classroom setting to pass the GACE content examination.

SQ12: I felt I needed additional assistance outside of my academic program to pass GACE content test \#001 (English language arts and social studies).

There were 12 respondents to SQ12. The context for the question sought to discern the respondents' ability to determine whether or not they could ascertain if they needed to seek additional assistance outside of their program in order to pass GACE content test \#001. From an examination of SQ12, 75\% of respondents selected strongly agree or agree, no respondents selected uncertain, and $25 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests that more than half of the respondents felt as if they needed assistance outside of their planned program in order to successfully pass GACE content test \#001 (see Table 9).

SQ13: I felt I needed additional assistance outside of my academic program to pass GACE content test \#002 (mathematics, science, health, physical education, and the arts).

There were 12 respondents to survey item Q13. The context for the question sought to discern the respondents' ability to determine whether or not they needed to seek additional assistance outside of their program in order to pass GACE content test \#002.

Table 9
Participants' Responses to Survey Question 12

|  | Agree/ | Disagree/ |
| :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | | Strongly Disagree |
| :---: |
| RSP-1 |
| RSP-2 |

From an examination of SQ13, 67\% of respondents selected strongly agree or agree, $8 \%$ of respondents selected uncertain, and $25 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents felt as if they needed assistance outside of their planned program in order to successfully pass GACE content test \#002 (see Table 10).

Table 10
Participants' Responses to Survey Question 13

|  | Agree/ |  | Disagree/ <br> Respondent |
| :---: | :---: | :---: | :---: |
| Strongly Agree | Uncertain | Strongly Disagree |  |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 |  |  | X |
| RSP-4 | X | X | X |
| RSP-5 |  |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

In this section, tables provide an item analysis of survey participants' responses to questions on motivation and perception of program quality.

SQ14: During the time that I matriculated through the program, I was motivated to study for the exam prior to taking it the first time.

There were 12 respondents to SQ14. The context for the question sought to discern the respondents' motivation to study as the matriculated through their planned program. From an examination of SQ14, $100 \%$ of respondents selected strongly agree or agree. Overall, the analysis of the respondents' rating for the question suggests all
respondents were motivated to study for the exam prior to taking it the first time (see
Table 11).

Table 11
Participants' Responses to Survey Question 14

|  | Agree/ | Disagree/ |  |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 | X |  |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 | X |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

SQ15: While matriculating through the program, I was motivated to obtain supplemental material in order to pass the test on the first attempt.

There were 12 respondents to survey item SQ15. The context for the question sought to discern the respondents' motivation to seek additional study materials to assist with them obtaining a passing score on the GACE ECE examination on the first attempt. From an examination of SQ15, $92 \%$ of respondents selected strongly agree or agree, no
respondents selected uncertain, and $8 \%$ of respondents selected disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents were motivated to obtain supplemental material in order to pass the test on the first attempt (see Table 12).

Table 12
Participants' Responses to Survey Question 15

| Agree/ |  |  | Disagree/ |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 | X |  |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 | X |  |  |
| RSP-11 |  |  | X |
| RSP-12 | X |  |  |

SQ16: While matriculating through the planned program, I was motivated to seek tutorial support to pass the GACE content test \#001 (English language arts and social studies).

There were 12 respondents to survey item SQ16. The context for the question sought to discern the respondents' motivation to participate in tutorials in order to pass the GACE content test \#001. From an examination of SQ16, $83 \%$ of respondents selected agree, no respondents selected uncertain, and $17 \%$ of respondents selected disagree. Overall, the analysis of the respondents' rating for the question suggests that more than half of all respondents were motivated to seek tutorial support to pass the GACE content test \# 001 (see Table 13).

SQ17: While matriculating through the planned program, I was motivated to seek tutorial support to pass the GACE content test \#002 (mathematics, science, physical education, and the arts).

There were 12 respondents to survey item SQ17. The context for the question sought to discern the respondents' motivation to participate in tutorials in order to pass GACE content test \#002. From an examination of SQ17, $92 \%$ of respondents selected strongly agree or agree, no respondents selected uncertain, and $8 \%$ of respondents selected disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of all respondents were motivated to seek tutorial support to pass the GACE content test \#002 (see Table 14).

Table 13
Participants' Responses to Survey Question 16

|  | Agree/ | Disagree/ |  |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 | X |  |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X | X |  |
| RSP-9 |  |  |  |
| RSP-10 | X |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

Table 14
Responses to Survey Question 17

| Respondent | Agree/ <br> Strongly Agree | Uncertain | Disagree/ <br> Strongly Disagree |
| :---: | :---: | :---: | :---: |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 | X |  |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 |  |  | X |
| RSP-11 | X |  |  |
| RSP-12 | X |  |  |

SQ18: The "Methods of Teaching Reading and Writing" course in my planned program assisted with me passing test \#001 (English language arts and social studies).

There were 12 respondents to survey item SQ18. The context for the question sought to discern the respondents' ability to determine whether or not their reading and writing methods course assisted them with passing the GACE content test \#001. From an examination of SQ18, 83\% of respondents selected strongly agree or agree, no
respondents selected uncertain, and $17 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents indicated that the course assisted them with passing test \#001. However, only 4 of the 12 respondents indicated they passed test \#001 on the first attempt (see Table 15).

Table 15
Participants' Responses to Survey Question 18

| Respondent | Agree/ Strongly Agree | Uncertain | Disagree/ <br> Strongly Disagree |
| :---: | :---: | :---: | :---: |
| RSP-1 | X |  |  |
| RSP-2 |  |  | X |
| RSP-3 | X |  |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 |  |  | X |
| RSP-11 | X |  |  |
| RSP-12 | X |  |  |

SQ19: The "Early Childhood Curriculum and Methods" course in my planned program assisted me with passing test \# 001 (English language arts and social studies).

There were 12 respondents to survey item SQ19. The context for the question sought to discern the respondents' ability to determine whether or not their methods course in early childhood curriculum assisted them with passing GACE content test \#002. From an examination of SQ19, 67\% of respondents selected strongly agree or agree, no respondents selected uncertain, and $33 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents indicated that the course assisted them with passing test \#001. However, only 4 of the 12 respondents indicated they passed test \#001 on the first attempt (see Table 16).

SQ20: The "Integrated Teaching of Social Studies and Language Arts" course in my planned program assisted me with passing test \# 001 (English Language arts and social studies).

There were 12 respondents to survey item SQ20. The context for the question sought to discern the respondents' ability to determine whether or not the course covering social studies and language arts assisted them with passing the GACE content test \#001. From an examination of SQ20, 33\% of respondents selected strongly agree or agree, 17\% of respondents selected uncertain, and $50 \%$ of respondents selected disagree or strongly disagree.

Table 16
Participants' Responses to Survey Question 19

|  | Agree/ | Disagree/ |  |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 | X |  |  |
| RSP-2 |  | X |  |
| RSP-3 |  | X |  |
| RSP-4 | X | X |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

Overall, the analysis of the respondents' rating for the question suggests that more than half of all respondents indicated that the course did not assist them with passing test \#001 (see Table 17).

SQ21: The "Methods of Teaching Early Childhood Health and Physical Education" course in my planned program assisted me with passing test \#002 (mathematics, science, physical education, and the arts).

Table 17
Participants' Responses to Survey Question 20

| Respondent | Agree/ <br> Strongly Agree | Uncertain | Disagree/ <br> Strongly Disagree |
| :---: | :---: | :---: | :---: |
| RSP-1 | X |  |  |
| RSP-2 |  |  | X |
| RSP-3 |  |  | X |
| RSP-4 |  |  | X |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 |  | X |  |
| RSP-8 |  |  | X |
| RSP-9 | X |  |  |
| RSP-10 |  |  | X |
| RSP-11 |  |  | X |
| RSP-12 |  | X |  |

There were 12 respondents to survey item Q21. The context for the question sought to discern the respondents' ability to determine whether or not the course in teaching EC health and physical education assisted them with passing GACE content test \#002. From an examination of SQ21, 33\% of respondents selected strongly agree or agree, $33 \%$ t of respondents selected uncertain, and $33 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests $66 \%$ of respondents indicated they were uncertain, disagreed or strongly disagreed with whether the course assisted them with passing GACE test \#002.

However, only 3 of the 12 respondents indicated they passed test \#002 on the first attempt (see Table 18).

Table 18
Participants' Responses to Survey Question 21

|  | Agree/ |  | Disagree/ <br> Respondent |
| :---: | :---: | :---: | :---: |
| Strongly Agree | Uncertain | Strongly Disagree |  |
| RSP-1 |  | X |  |
| RSP-2 | X |  |  |
| RSP-3 |  |  |  |
| RSP-4 | X | X | X |
| RSP-5 |  | X |  |
| RSP-6 | X | X |  |
| RSP-7 |  |  |  |
| RSP-8 |  |  | X |
| RSP-9 |  |  |  |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

SQ22: The "Integrated Teaching of Elementary Math and Science" course in my planned program assisted me with passing test \#002 (mathematics, science, physical education, and the arts).

There were 12 respondents to survey item SQ22. The context for the question sought to discern the respondents' ability to determine whether or not the course in elementary math and science assisted them in passing the GACE content test \#002.

From an examination of SQ22, $67 \%$ of respondents selected strongly agree or agree, $8 \%$ of respondents selected uncertain, and $25 \%$ of respondents selected disagree. Overall, the analysis of the respondents' rating for the question suggests that more than half of the respondents indicated that the course assisted them with passing test \#002. However, only 3 of the 12 respondents indicated they passed test \#002 on the first attempt (see Table 19).

SQ23: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the development of vocabulary knowledge and skills across the curriculum" as I prepared for the GACE exam.

There were 12 respondents to survey item SQ23. The context for the question sought to discern the respondents' ability to determine whether or not their planned program provided them with adequate content knowledge to understand the development of vocabulary. From an examination of SQ23, 50\% of respondents selected strongly agree or agree, $8 \%$ of respondents selected uncertain, and $42 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests that half of the respondents indicated they strongly agreed or agreed the planned program provided them with enough content knowledge to assist with understanding the GACE objective presented in SQ23.

Table 19
Participants' Responses to Survey Question 22

|  | Agree/ |  | Disagree/ <br> Respondent |
| :---: | :---: | :---: | :---: |
| Strongly Agree | Uncertain | Strongly Disagree |  |
| RSP-1 | X |  |  |
| RSP-2 |  |  | X |
| RSP-3 |  | X | X |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  | X |
| RSP-9 | X |  |  |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

Conversely, the other half of the respondents indicated they were either uncertain, disagreed or strongly disagreed with whether the planned program provided them with enough content knowledge to assist with understanding the GACE objective presented in SQ23 (see Table 20).

Table 20
Participants' Responses to Survey Question 23

|  | Agree/ |  | Disagree/ <br> Respondent |
| :--- | :---: | :---: | :---: |
| Strongly Agree | Uncertain | Strongly Disagree |  |
| RSP-1 | X |  |  |
| RSP-2 |  | X |  |
| RSP-3 | X |  |  |
| RSP-4 | X | X |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  | X |
| RSP-8 |  | X |  |
| RSP-9 |  |  | X |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

SQ24: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as I prepared for the GACE exam.

There were 12 respondents to survey item SQ24. The context for the question sought to discern the respondents' ability to determine whether or not their planned program provided them with adequate content knowledge to assist with the social studies portion of GACE test \#001. From an examination of SQ24, $8.3 \%$ of respondents selected
strongly agree or agree, $8.3 \%$ of respondents selected uncertain, and $83.3 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents indicated that the planned program did not provide them with enough content knowledge to assist with understanding the GACE objective presented in the SQ24 (see Table 21).

Table 21
Participants' Responses to Survey Question 24

| Agree/ |  |  | Disagree/ |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 |  |  | X |
| RSP-2 |  |  | X |
| RSP-3 |  |  | X |
| RSP-4 |  |  | X |
| RSP-5 |  |  | X |
| RSP-6 | X |  |  |
| RSP-7 |  | X |  |
| RSP-8 |  |  | X |
| RSP-9 |  |  | X |
| RSP-10 |  |  | X |
| RSP-11 |  |  | X |
| RSP-12 |  |  | X |

SQ25: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the processes and approaches for exploring mathematics and solving problems" as I prepared for the GACE.

There were 12 respondents to survey item SQ25. The context for the question sought to discern the respondents' ability to determine whether or not their planned program provided them with adequate content knowledge in order for them to understand how to explore mathematics and solve problems. From an examination of SQ25, 83\% of respondents selected strongly agree or agree, no respondents selected uncertain, and $17 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents indicated that the planned program did provide them with enough content knowledge to assist with understanding the GACE objective presented in the SQ25 (see Table 22).

SQ26: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the characteristics and processes of science" as I prepared for the GACE exam.

There were 12 respondents to survey item SQ26. The context for the question sought to discern the respondents' ability to determine whether or not their planned program provided them with adequate content knowledge to understand the characteristics and processes of science. From an examination of SQ26, 42\% of respondents selected strongly agree or agree, no respondents selected uncertain, and 58\% of respondents selected disagree or strongly disagree.

Table 22
Participants' Responses to Survey Question 25

|  | Agree/ |  | Disagree/ <br> Respondent |
| :---: | :---: | :---: | :---: |
| Strongly Agree | Uncertain | Strongly Disagree |  |
| RSP-1 | X |  |  |
| RSP-2 |  | X |  |
| RSP-3 | X | X |  |
| RSP-4 | X |  |  |
| RSP-5 | X |  |  |
| RSP-6 | X |  |  |
| RSP-7 | X |  |  |
| RSP-8 | X |  |  |
| RSP-9 | X |  |  |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

Overall, the analysis of the respondents' rating for the question suggests more than half of the respondents indicated that the planned program did not provide them with enough content knowledge to assist with understanding the GACE objective presented in the SQ26 (see Table 23).

SQ27: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the basic principles and practices related to health and safety" as I prepared for the GACE exam.

Table 23
Participants' Responses to Survey Question 26

|  | Agree/ | Disagree/ |
| :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | | Strongly Disagree |
| :---: |
| RSP-1 |
| RSP-2 |

There were 12 respondents to survey item SQ27. The context for the question was to discern the respondents' ability to gage whether or not their planned program provided them with adequate content knowledge to understand the basic principles and practices related to health safety. From an examination of SQ27, 42\% of respondents selected strongly agree or agree, $17 \%$ of respondents selected uncertain, and $42 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests that $59 \%$ of respondents indicated they were either uncertain, disagreed or strongly disagreed with whether the planned program
provided them with enough content knowledge to assist with understanding the GACE objective presented in the SQ27 (see Table 24).

Table 24
Participants' Responses to Survey Question 27

|  | Agree/ | Disagree/ |  |
| :---: | :---: | :---: | :---: |
| Respondent | Strongly Agree | Uncertain | Strongly Disagree |
| RSP-1 | X |  |  |
| RSP-2 | X |  |  |
| RSP-3 |  |  | X |
| RSP-4 | X | X |  |
| RSP-5 | X | X |  |
| RSP-6 |  |  | X |
| RSP-7 |  |  | X |
| RSP-8 | X |  |  |
| RSP-9 |  |  | X |
| RSP-10 |  |  |  |
| RSP-11 |  |  |  |
| RSP-12 |  |  |  |

SQ28: My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding basic elements, concepts, and techniques associated with the arts" as I prepared for the GACE exam.

There were 12 respondents to survey item SQ28. The context for the question sought to discern the respondents' ability to determine whether or not their planned
program provided them with adequate content knowledge to understand basic elements, concepts and techniques associated with the arts.

From an examination of SQ28, 25\% of respondents selected strongly agree or agree, $8 \%$ of respondents selected uncertain, and $67 \%$ of respondents selected disagree or strongly disagree. Overall, the analysis of the respondents' rating for the question suggests that more than half of the respondents indicated that the planned program did not provide them with enough content knowledge to assist with understanding the GACE objective presented in the SQ28 (see Table 25).

The analysis of the respondents' ratings indicates that more than $50 \%$ of the respondents felt they needed to seek assistance outside of their planned program so they could successfully pass GACE Early Childhood Education content test \#001 and \#002. Also, all respondents were motivated to study for the content examination prior to taking it the first time with more than $50 \%$ of respondents indicating they were motivated to obtain supplemental material to assist them with passing the examination on the first attempt. Additionally, when respondents were asked to rate their level of motivation for seeking tutorial support to pass GACE content test \#001 and \#002, again, more than 50\% percent were motivated to seek support.

Table 25
Participants' Responses to Survey Question 28
\(\left.\begin{array}{ccc}\hline \& Agree/ \& Disagree/ <br>

Respondent \& Strongly Agree \& Uncertain\end{array} $$
\begin{array}{c}\text { Strongly Disagree }\end{array}
$$\right]\)| X |
| :--- |
| RSP-1 |
| RSP-2 |
| RSP-3 |
| RSP-4 |
| RSP-5 |

For the researcher to understand the essence of how the respondents experienced preparing for the GACE ECE content examination, respondents were asked to rate whether their methods courses in their planned program assisted them passing either test \#001 or test \#002. More than $50 \%$ of the respondents indicated that the Methods of Teaching Reading and Writing course and the English Language Arts and Social Studies course assisted them with passing test \#001 (English language arts and social studies); however, only 4 of the 12 respondents indicated they passed test \#001 on the first attempt. Conversely, more than $50 \%$ of the respondents indicated that the Integrated

Teaching of Social Studies and Language Arts course did not assist them with passing test \#001.

Although only 3 of the 12 respondents indicated they passed test \#002 on the first attempt, $66 \%$ of respondents indicated they were uncertain, disagreed or strongly disagreed with whether the course assisted them with passing GACE test \#002 to the item asking them to rate how the Methods of Teaching Early Childhood Health and Physical Education course assisted them with passing test \#002 (mathematics, science, health, physical education, and the arts) and more than $50 \%$ of them indicated the Integrated Teaching of Elementary Math and Science course assisted them with passing test \#002 as well.

Reflecting upon their lived experiences, respondents were asked to rate whether the planned program provided them with enough content knowledge to assist with understanding the GACE objective presented in questions 23-28. The phenomena that was revealed through the responses indicates that on $67 \%$ of the questions $(n=4)$ participants consistently indicated that the planned program did not provide them with enough content knowledge to assist with understanding the GACE objective presented in the question.

Overall, the analysis of the respondents' ratings suggests that they needed, sought and wanted supplemental support and therefore were motivated to seek supplemental support outside of their plan program to pass the GACE ECE content examination due to gaps in the content knowledge provided by the planned program.

## Interview Participants

For this study, the researcher purposively selected interview participants from the respondents that completed the survey. Four participants were selected based on similar patterns in their answers to survey items on motivation and program quality. Two participants were selected that graduated with the Bachelor of Arts in Early Childhood Education and two were selected that graduated with the Bachelor of Arts degree in Educational Studies. Two of the interview participants were females and two participants were males.

## Summary and Analysis of Transcribed Responses

Four purposefully selected members of the class of 2012 that completed the ECE Survey Questionnaire were selected for follow-up interviews. Using phenomenology, the purposively selected participants answered follow-up questions based on their lived experiences of preparing for the GACE ECE content examination based upon emerging themes that were uncovered during an analysis of participants' survey responses (Johnson \& Christensen, 2008). This section provides a summary and analysis by the researcher of each interview question (IQ).

IQ1. What motivated you to seek supplemental materials in order to pass the test on the first attempt?

Participants consistently responded they were motivated to study in order to pass the test on the first attempt to make up for the gaps created in their planned program. Additionally, participants understood their individual responsibility to supplement the
course content provided in their planned program with outside material and sources to assist them with posting a passing score on the first attempt (see Table 26).

## Table 26

## Summary and Analysis of Interview Question 1

| Early |  |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Childhood | Passed Test | Passed Test | Mean of |  |  |
| Education | \#001 First | \#002 First | Motivation | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Transcribed Response | Transcribed Response |
| P3ECE | Yes | Yes | 5.00 | I sought out supplemental | The intrinsic need to pass the test |
|  |  |  |  | materials because I knew I | led to acquiring supplemental |
|  |  |  |  | needed to rely on other | materials. Although the program |
|  |  |  |  | sources other than just my | should have been aligned |
|  |  |  |  | planned program. I believed | differently, the participant |
|  |  |  |  | that the program should have | understood the need to do |
|  |  |  |  | aligned to exactly what I | individual studying beyond the |
|  |  |  |  | needed to know for the test, | planned program. |
|  |  |  |  | however, it is not the |  |
|  |  |  |  | programs sole mission to |  |
|  |  |  |  | prepare me for the GACE II. |  |
|  |  |  |  | At some point I realized I |  |
|  |  |  |  | had to do some studying on |  |
|  |  |  |  | my own if I wanted to pass |  |
|  |  |  |  | and excel on the test. |  |

Table 26 (continued)

| Early |  |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Childhood | Passed Test | Passed Test | Mean of |  |  |
| Education | \#001 First | \#002 First | Motivation | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Transcribed Response | Transcribed Response |
| P9ECE | No | Yes | 5.00 | My desire to become an educator was always my number 1 motivator. To me, I decided that I would do whatever it took for me to achieve my goal | An individual dream of becoming an educator pushed me to achieve my goal. |
|  |  |  | Individual |  |  |
| Educational | Passed Test | Passed Test | Mean of |  |  |
| Studies | \#001 First | \#002 First | Motivation | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Transcribed Response | Transcribed Response |
| P2ES | No | No | 4.50 | I understood that I was | A review of supplemental |
|  |  |  |  | unfamiliar with what would be on the test, so I needed to look at and review supplemental materials. | material assisted with my <br> lack of content knowledge |
| P10ES | No | No | 3.25 | To study so it could help me | To assist with passing the |
|  |  |  |  | pass the test and know the | test. |
|  |  |  |  | types of questions... and what |  |
|  |  |  |  | information I needed to know |  |
|  |  |  |  | to pass. |  |

The researcher noticed that the Educational Studies participants had the taking of the ACT and SAT in common. A question was developed to ascertain why these participants took both standardized examinations prior to college. It was stated by the participants that to increase their chances of gaining admission into college they took both examinations (see Table 27).

## Table 27

## Summary and Analysis of Interview Question 2

| Educational |  |  |
| :---: | :--- | :--- |
| Studies | Summary of | Analysis of |
| Participant | Transcribed Responses | Transcribed Responses |
| P2ES | It was told to me by my counselor that a lot of |  |
|  | colleges look at SAT and ACT scores to determine |  |
| my acceptance into their program. | To increase changes of getting into college |  |
| P10ES | Because it was needed to enter college. | In order to enter college, both tests were were taken |

IQ3: What factors led you to disagree that the "Integrated Teaching of Social Studies and Language Arts" course assisted you with passing test \# 001 (English Language Arts and Social Studies)?

The Early Childhood Education participant realized that the reason this course did not prepare them to pass test \#001 was the untimely illness of the professor of record and the absence of substitute personnel to assist the candidates with moving forward with the course work as needed. Additionally, the researcher noticed that P3ECE passed both test
\#001 and test \#002 on the first attempt (on the same testing administration day) and rated the course and the planned program with a mean of 2.45 (see Table 28).

Table 28
Summary and Analysis of Interview Question 3

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Early | Test | Test | Individual | Mean of |  |  |
| Childhood | \#001 | \#002 | Mean of | Program |  |  |
| Education | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P3ECE | Yes | Yes | 5.00 | 2.45 | I disagreed with the | The illness of the |
|  |  |  |  |  | Integrated Social Studies | professor of record caused |
|  |  |  |  |  | and language arts course | the participants and others |
|  |  |  |  |  | for a reason much | not to get to all the course |
|  |  |  |  |  | different than the others. | work that would have |
|  |  |  |  |  | I was apart of the class | prepared candidates for |
|  |  |  |  |  | that had Professor [shall | the exam. |
|  |  |  |  |  | not be named to protect |  |
|  |  |  |  |  | the confidentiality of the |  |
|  |  |  |  |  | participants] as the |  |
|  |  |  |  |  | teacher of this course. |  |
|  |  |  |  |  | The professor became ill |  |
|  |  |  |  |  | during that semester and |  |
|  |  |  |  |  | we ultimately just didn't |  |
|  |  |  |  |  | get to the course work that |  |
|  |  |  |  |  | I am sure would have |  |
|  |  |  |  |  | prepared me. |  |

IQ4: Why were you uncertain about the "Methods of Teaching Early Childhood Health and Physical Education" course assisting you with passing test \#002 (mathematics, science, physical education, and the arts)?

The researcher noticed that P9 indicated he/she were uncertain whether the methods course and material assisted them with passing test \#002. Although the content of the class was "enjoyable" it was not inclusive of the GACE material (see Table 29).

## Table 29

## Summary and Analysis of Interview Question 4

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Early | Test | Test | Individual | Mean of |  |  |
| Childhood | \#001 | \#002 | Mean of | Program |  |  |
| Education | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P9ECE | No | Yes | 5.00 | 3.45 | While I enjoyed the | The content did not match |
|  |  |  |  |  | content of the class I did | the GACE material |
|  |  |  |  |  | not feel as though |  |
|  |  |  |  |  | it "lined up" or matched |  |
|  |  |  |  |  | the actual material that I |  |
|  |  |  |  |  | was being tested on. |  |

IQ5: Why were you uncertain about the planned program providing you with SUFFICIENT content knowledge to "understand the basic principles and practices related to health and safety" as you prepared for the GACE exam?

The researcher noticed that P9 indicated he/she were uncertain whether the objective presented in the question assisted them with preparing for the GACE exam.

The uncertainty was infused by the participants' lack of experience teaching the subject area during their pre-service teaching experience (see Table 30).

Table 30
Summary and Analysis of Interview Question 5

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Early | Test | Test | Individual | Mean of |  |  |
| Childhood | \#001 | \#002 | Mean of | Program |  |  |
| Education | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P9ECE | no | yes | 5.00 | 3.45 | I feel that a lack of time | More time teaching would |
|  |  |  |  |  | spent teaching in this | have assisted with the |
|  |  |  |  |  | area led to me feeling | understanding of the |
|  |  |  |  |  | uncertain about the basic | objective |
|  |  |  |  |  | principles related to health |  |
|  |  |  |  |  | and safety. |  |

IQ6: Why were you uncertain about the planned program providing you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?

The researcher noticed that P9 indicated he/she were uncertain whether the objective presented in the question assisted them with preparing for the GACE exam. The uncertainty was infused by the participants indicating that social studies was not a strength of the planned program (see Table 31).

Table 31
Summary and Analysis of Interview Question 6

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Early | Test | Test | Individual | Mean of |  |  |
| Childhood | \#001 | \#002 | Mean of | Program |  |  |
| Education | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P9ECE | No | Yes | 5.00 | 3.45 | The area of social | The planned program did |
|  |  |  |  |  | studies was not | not display strength in the |
|  |  |  |  |  | necessarily a strong | area of social studies |
|  |  |  |  |  | point for the planned |  |
|  |  |  |  |  | program. |  |

IQ7: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

The Early Childhood Education participant cited that taking the history courses during the first two years as an undergraduate disabled them from retaining the information to when they took the test during their last two/three semesters of enrollment as undergraduate candidates. The Educational Studies participants consistently stated that the material presented in the course had nothing to do with the GACE. Material that was presented did not focus on state or U.S. history as professors presented information that was not relevant to the course (see Table 32).

## Table 32

## Summary and Analysis of Interview Question 7

| Early | Individual | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Mean of |  |  |
| Childhood | Mean of | Program |  |  |
| Education | Motivation | Quality | Summary of | Analysis of |
| Participant | Items | Items | Transcribed Responses | Transcribed Responses |
| P3ECE | 5.00 | 2.45 | In the planned program of the | The history courses that were needed |
|  |  |  | school of education it is suggested <br> that we take two courses of U.S. | for the GACE test \# 001 were taken during the first 60 hours. The test was |
|  |  |  | Africa and the World. These two | not taken until the junior/senior year of |
|  |  |  | semesters are done freshman year. en | enrollment; therefore, the history |
|  |  |  | During that year we are urged to cour | course materials that would have |
|  |  |  | focus on taking the GACE I test a | assisted with preparing for the GACE |
|  |  |  | the GACE II is never explained or | were not kept by the candidates. |
|  |  |  | openly talked about until junior |  |
|  |  |  | year. As a student who is ultimately |  |
|  |  |  | preparing to take the GACE II for |  |
|  |  |  | my certification, it would have been |  |
|  |  |  | great if it were communicated that I |  |
|  |  |  | may have needed to take the courses |  |
|  |  |  | in my sophomore semester or at |  |
|  |  |  | least keep my books or notes for the |  |
|  |  |  | course. |  |

## Table 32 (continued)

|  |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Individual | Mean of |  |  |
| Educational | Mean of | Program |  |  |
| Studies | Motivation | Quality | Summary of | Analysis of |
| Participant | Items | Items | Transcribed Responses | Transcribed Responses |
| P2ES | 4.50 | 1.91 | The material covered in the class | The course material was not designed |
|  |  |  | had nothing to do with the content | around the GACE objective. Class |
|  |  |  | presented on the GACE. The bulk | assignments were not related to the |
|  |  |  | of our assignments were research | course title. |
|  |  |  | related presentations, but nothing |  |
|  |  |  | about Georgia or U.S. history. We |  |
|  |  |  | were also required to participate in |  |
|  |  |  | the practicum experience, which |  |
|  |  |  | was all day, so at the time of class, |  |
|  |  |  | many of us were mentally and |  |
|  |  |  | physically exhausted. |  |
| P10ES | 3.25 | 1.91 | We read material (newspapers, | The supplemental materials for the |
|  |  |  | etc.) that had nothing to do with | course were not relevant and course |
|  |  |  | the class and did not read the | instructors facilitated information they |
|  |  |  | course book. The instructors | felt was applicable not what was |
|  |  |  | taught what they thought was | relevant to candidates preparing and |
|  |  |  | important not what was going to | passing the GACE. |
|  |  |  | be GACE. Most of our studying |  |
|  |  |  | was on our own because the |  |
|  |  |  | information from the instructors |  |
|  |  |  | was not helpful. |  |

## IQ8: What factors led you to disagree about the "Methods of Teaching Early

Childhood Health and Physical Education" course assisting you with passing test \# 002 (mathematics, science, physical education, and the arts)?

In this question, the Educational Studies participants mean score of the survey motivation items was 3.25 and mean score of the survey items rating level of perception of program quality was 1.91 . This participant believed that the lack of structured lessons around the content material and testing material led to the class not assisting them with passing test \#002 (see Table 33).

Table 33
Summary and Analysis of Interview Question 8

|  | Passed | Passed |  | Individua 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Test | Test | Individual | Mean of |  |  |
| Educational | \#001 | \#002 | Mean of | Program |  |  |
| Studies | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P10ES | No | No | 3.25 | 1.91 | The instructor did not | The instructor's method |
|  |  |  |  |  | know how to teach the | of delivery for the course |
|  |  |  |  |  | course and was just | did not require higher |
|  |  |  |  |  | giving material of (f) the | order thinking skills nor |
|  |  |  |  |  | top of their head. The | was the instructor able to |
|  |  |  |  |  | class wasn't a challenge. It | facilitate the book's |
|  |  |  |  |  | wasn't a college class | information into a lesson |

Table 33 (continued)

|  | Passed | Passed |  | Individua 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Test | Test | Individual | Mean of |  |  |
| Educational | \#001 | \#002 | Mean of | Program |  |  |
| Studies | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
|  |  |  |  |  | how I thought it would |  |
|  |  |  |  |  | be. The information in |  |
|  |  |  |  |  | the book was helpful but |  |
|  |  |  |  |  | the instructor didn't |  |
|  |  |  |  |  | know how to teach it and |  |
|  |  |  |  |  | I didn't take it as |  |
|  |  |  |  |  | seriously. |  |

IQ9: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \# 001 (English language arts and social studies)?

According to the Early Childhood Education participant, one of the weaknesses in the course was that it did not focus on theory. The Educational Studies participants consistently stated that the course was not structured to provide them with the content knowledge needed to pass the test and that the professor of record was unable to provide test assistance in the course (see Table 34).

## Table 34

## Summary and Analysis of Interview Question 9

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Early | Test | Test | Individual | Mean of |  |  |
| Childhood | \#001 | \#002 | Mean of | Program |  |  |
| Education | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P3ECE | Yes | Yes | 5.00 | 2.45 | With the Early Childhood The course did not <br> Curriculum and methods focus on theory nor course, I thought it could were the course |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | have been more focused | assignments structured |
|  |  |  |  |  | on theory. Our | around the GACE |
|  |  |  |  |  | assignments and | content. |
|  |  |  |  |  | discussions definitely |  |
|  |  |  |  |  | linked to our practicum |  |
|  |  |  |  |  | work and experiences. |  |
|  |  |  |  |  | The coursework did not |  |
|  |  |  |  |  | truly link to the content |  |
|  |  |  |  |  | of the GACE |  |
|  | Passed | Passed |  | Individual |  |  |
|  | Test | Test | Individual | Mean of |  |  |
| Educational | \#001 | \#002 | Mean of | Program |  |  |
| Studies | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
| P2ES | No | No | 4.50 | 1.91 | One factor was that the | The course format was |
|  |  |  |  |  | course consisted of | not designed to |
|  |  |  |  |  | lesson planning projects | prepare us for the test. |
|  |  |  |  |  | and group presentations |  |

Table 34 (continued)

|  | Passed | Passed |  | Individual |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Test | Test | Individual | Mean of |  |  |
| Educational | \#001 | \#002 | Mean of | Program |  |  |
| Studies | First | First | Motivation | Quality | Summary of | Analysis of |
| Participant | Attempt | Attempt | Items | Items | Transcribed Responses | Transcribed Responses |
|  |  |  |  |  | But no material on the |  |
|  |  |  |  |  | test was covered in the |  |
|  |  |  |  |  | course work. Social |  |
|  |  |  |  |  | studies was not covered |  |
|  |  |  |  |  | at all in this course. |  |
| P10ES | No | No | 3.25 | 1.91 | The information that | The information |
|  |  |  |  |  | was given to me did not | provided was not |
|  |  |  |  |  | assist with passing the | helpful nor could the |
|  |  |  |  |  | test and the professor did | instructor provide test |
|  |  |  |  |  | not know what was on | assistance |
|  |  |  |  |  | the test. |  |

## Emerging Themes from Respondent Interviews

This section describes the emerging themes that were revealed through the follow-up interviews conducted by the researcher.

## Theme 1: Supplemental Materials

As participants recounted their experiences about preparing for the GACE ECE examination, each participant described a need to supplement their preparation with material outside of their planned program. From the interviews, it was ascertained that participants understood their roles in their preparation and were motivated to supplement their GACE preparation with additional study material.

I understood that I was unfamiliar with what would be on the test, so I needed to look at and review supplemental materials (Participant 2ES, personal communication, August 17, 2013).

I sought out supplemental materials because I knew I needed to rely on other sources other than just my planned program . . . (Participant 3ECE, personal communication, August 18, 2013).

## Theme 2: Program Alignment

Participants' reflections of their lived experiences and preparation for the GACE revealed varied but consistent responses about the course material. In their own words, respondents indicated that the format of the courses and the assignments chosen for the courses were not inclusive of material they felt was needed to prepare them for taking the GACE examination. Overall, the participants did not feel that the planned program assisted them with the content knowledge needed to post a passing score on the Early Childhood Education content examination. Lack of theory, unaligned course assignments and professor facilitation of course material were issues that participants noted in their responses.

We read material (newspapers, etc.) that had nothing to do with the class and did not read the course book. The instructors taught what they thought was important, not what was going to be GACE . . . (Participant 10ES, personal communication, August 15, 2013).

With the Early Childhood Curriculum and methods course, I thought it could have been more focused on theory. . . The coursework did not truly link to the content of the GACE (Participant 3ECE, personal communication, August 18, 2013).

The material covered in the class had nothing to do with the content presented on the GACE. The bulk of our assignments were research related presentations, but nothing about Georgia or U.S. history . . . (Participant 2ES, personal communication, August 17, 2013).

While I enjoyed the content of the class, I did not feel as though it lined up or matched the actual material that I was being tested on (Participant 9ECE, personal communication, August 19, 2013).

## ECE Candidate Survey Correlations

The tables that follow provide an analysis of the correlations revealed by the ECE candidate survey of the independent variables motivation and program quality.

## Motivation

- Motivation and ACT have a correlation of .293 and a significance of .573 therefore there is no significant relationship.
- Motivation and SAT have a correlation of .384 and a significance of .523 therefore there is no significant relationship.
- Motivation and HSGPA have a correlation of -. 254 and a significance of .509 ; therefore, there is no significant relationship but there is an inverse relationship between the variables.
- Motivation and GPAPST have a correlation of .238 and a significance of .456 therefore there is no significant relationship.
- Motivation and CGPA have a correlation of .268 and a significance of .400 therefore there is no significant relationship. (see Table 35)

Table 35
Correlations: Motivation

|  | Motivation | ACT | SAT | HSGPA | GPAPST | CGPA | Progqua |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Motivation |  |  |  |  |  |  |  |
| Pearson Correlation | 1 | 0.239 | 0.384 | -0.254 | 0.238 | 0.268 | 0.211 |  |
| Sig (2-tailed) |  | 0.573 | 0.523 | 0.509 | 0.456 | 0.400 | 0.510 |  |
| N | 12 | 6 | 5 | 9 | 12 | 12 | 12 |  |

## Progqua

- Progqua and ACT have a correlation of . 537 and a significance of .272 ; therefore, there is no significant relationship.
- Progqua and SAT have a correlation of .836 and a significance of .077 ; therefore, there is no significant relationship.
- Progqua and HSGPA have a correlation of .299 and a significance of .434 ; therefore, there is no significant relationship.
- Progqua and GPAPST have a correlation of .721 and a significance of .008 ; therefore, there is a positive correlation between the variables and the relationship was proven to be statistically significant.
- Progqua and CGPA have a correlation of . 554 and a significance of .062 ; therefore, there is no significant relationship. (see Table 36)

Table 36
Correlations: Program Quality (Progqua)

|  |  |  |  |  |  |  | First Time |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Progqua | ACT | SAT | HSGPA | GPAPST | CGPA | Pass or Fail |
| Progqua |  |  |  |  |  |  |  |
| Pearson Correlation | 1 | 0.537 | 0.836 | 0.299 | $.721^{* *}$ | 0.554 | .740 |
| Sig (2-tailed) |  | 0.272 | 0.077 | 0.434 | 0.008 | 0.062 | .006 |
| N | 12 | 6 | 5 | 9 | 12 | 12 | 12 |

## Class of 2012 Survey Alpha

According to Gay et al. (2012),
If items can have more than two scores, then Cronbach's Alpha should be used.
As another example, many affective instruments and performance tests are scored using more than two choices; if numbers are used to represent the response choices, analysis for internal consistency can be accomplished using Cronbach's Alpha. (p. 168)

A Cronbach Alpha was run on the survey items that asked participants to rate their level of motivation and perception of program quality to test the inter rater reliability of the items. According to Gilem and Gilem (2003), the "Cronbach's Alpha is a test reliability technique that requires only a single test administration to provide a unique estimate of the reliability for a given test" (p. 84). Furthermore, they state that this technique should not be used on single-test items as it is not reliable and should not be used to draw conclusions.

The reliability of the items is interrelated at $85 \%$; therefore, the items motivation and program quality are valid and reliable above $70 \%$. According to Johnson and Christensen (2008), the size of the Cronbach Alpha should be "at a minimum greater than or equal to .70 for research purposes (p. 149). Gliem and Gliem (2003) concluded that, When using Likert-type scales it is imperative to calculate and report Cronbach's Alpha coefficient for internal consistency reliability for any scales or subscales one may be using. The analysis of the data then must use these summated scales or subscales and not individual items. If one does otherwise, the reliability of the items is at best probably low and at worst unknown.

Cronbach's Alpha does not provide reliability estimates for single items. (p. 87).

Tables 37 and 38 display the internal consistency revealed by the Cronbach Alpha.

Table 37
Cronbach Alpha: Case Processing Summary

| Cases | Valid | N | $\%$ |
| :--- | :--- | :---: | :---: |
|  | Excluded $^{\mathrm{a}}$ | 12 | 26.7 |
|  | Total | 33 | 73.3 |
|  |  | 45 | 100.00 |

Table 38
Cronbach Alpha: Reliability Statistics

|  | Cronbach's Alpha Based on <br> Standard Items | N of Items |
| :---: | :---: | :---: |
| Cronbach's Alpha | 0.851 | 15 |
| 0.854 |  |  |

## Data Response to the Research Questions

## Findings

RQ1: Is there a significant relationship between the first time pass or fail results on the GACE ECE tests \#001 and \#002 of selected ECE graduates and completers and each of the selected independent variables: ACT, SAT, HSGPA, GPAPST, CGPA, number of failed attempt test \#001, and number of failed attempts test \#002?

According to the Correlations in Table 39:

- There is a .541 Pearson Correlation and a .106 significance; therefore there is no significance for first time pass or fail and ACT.
- There is a . 625 Pearson Correlation and a .098 significance; therefore there is no significance for first time pass or fail and SAT.
- There is a .015 Pearson Correlation and a .959 significance; therefore there is no significance for first time pass or fail and HSGPA.
- There is a . 440 Pearson Correlation and a significance of .077 ; therefore, there is no significance for first time pass or fail and CGPA.


## Table 39

Pearson Correlation of Variables

|  | First | \# of | \# of |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time | Failed | Failed |  |  |  |  |  |  |  |
|  | Pass | Attempts | Attempts |  |  |  |  |  |  |  |
|  | or Fail | \# 001 | \#002 | ACT | SAT | HSGPA | CGPA | GPAPST | Motivation | Progqua |
| First Time Pass or F |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | 1 | .504* | .532* | . 541 | . 625 | . 015 | . 440 | . 463 | . 385 | . $740 * *$ |
| Sig. (2-tailed) |  | 0.039 | 0.028 | . 106 | . 098 | . 959 | . 077 | . 062 | . 216 | . 006 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 | 12 | 12 |
| \# of Failed Attempt | \#001 |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . $504 *$ | 1 | .567* | . 255 | . $847^{* *}$ | . 287 | . 223 | . 174 | . 418 | . 311 |
| Sig. (2-tailed) | . 039 |  | . 018 | . 478 | . 008 | . 320 | . 390 | . 505 | . 176 | . 324 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 | 12 | 12 |
| \# of Failed Attempt | \#002 |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | $532 *$ | . $567 *$ | 1 | . 354 | . $731{ }^{*}$ | . 369 | . 069 | . 095 | . $581 *$ | . 424 |
| Sig. (2-tailed) | 0.028 | 0.018 |  | . 316 | . 039 | . 194 | . 792 | . 717 | . 048 | . 170 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 | 12 | 12 |
| ACT |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 541 | . 255 | . 354 | 1 | . 746 | -. 120 | . 333 | . 250 | . 293 | . 537 |
| Sig. (2-tailed) | . 106 | . 478 | . 316 |  | . 254 | . 741 | . 347 | . 486 | . 573 | . 272 |
| N | 10 | 10 | 10 | 10 | 4 | 10 | 10 | 10 | 6 | 6 |
| SAT |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 625 | . $847{ }^{* *}$ | .731* | . 746 | 1 | . 621 | . 251 | . 179 | . 384 | . 836 |
| Sig. (2-tailed) | . 098 | . 008 | . 039 | . 254 |  | . 100 | . 549 | . 672 | . 523 | . 077 |
| N | 8 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 5 | 5 |
| HSGPA |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 015 | . 287 | . 369 | -. 120 | . 621 | 1 | . 025 | . 147 | -. 254 | . 299 |
| Sig. (2-tailed) | . 959 | . 320 | . 194 | . 741 | . 100 |  | . 932 | . 617 | . 509 | . 434 |
| N | 14 | 14 | 14 | 10 | 8 | 14 | 14 | 14 | 9 | 9 |

Table 39 (continued)

|  | First | \# of | \# of |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time | Failed | Failed |  |  |  |  |  |  |  |
|  | Pass | Attempts | Attempts |  |  |  |  |  |  |  |
|  | or Fail | \# 001 | \#002 | ACT | SAT | HSGPA | CGPA | GPAPST | Motivation | Progqua |
| CGPA |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 440 | . 223 | . 069 | . 333 | . 251 | . 025 | 1 | . $957^{* *}$ | . 268 | . 554 |
| Sig. (2-tailed) | . 077 | . 390 | . 792 | . 347 | . 549 | . 932 |  | . 000 | . 400 | . 062 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 | 12 | 12 |
| GPAPST |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 463 | . 174 | . 095 | . 250 | . 179 | . 147 | . $957{ }^{* *}$ | 1 | . 238 | . $721^{* *}$ |
| Sig. (2-tailed) | . 062 | . 505 | . 717 | . 486 | . 672 | . 617 | . 000 |  | . 456 | . 008 |
| N | 17 | 17 | 17 | 10 | 8 | 14 | 17 | 17 | 12 | 12 |
| Motivation |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . 385 | . 418 | . $581{ }^{*}$ | . 293 | . 384 | -. 254 | . 268 | . 238 | 1 | . 211 |
| Sig. (2-tailed) | . 216 | . 176 | . 048 | . 573 | . 523 | . 509 | . 400 | . 456 |  | . 510 |
| N | 12 | 12 | 12 | 6 | 5 | 9 | 12 | 12 | 12 | 12 |
| Progqua |  |  |  |  |  |  |  |  |  |  |
| Pearson Correlation | . $740{ }^{* *}$ | . 311 | . 424 | . 537 | . 836 | . 299 | . 554 | . $721^{* *}$ | . 211 | 1 |
| Sig. (2-tailed) | . 006 | . 324 | . 170 | . 272 | . 077 | . 434 | . 062 | . 008 | . 510 |  |
| N | 12 | 12 | 12 | 6 | 5 | 9 | 12 | 12 | 12 | 12 |
| *. Correlation is significant at the 0.05 level (2-tailed). <br> **. Correlation is significant at the 0.01 level (2-tailed). |  |  |  |  |  |  |  |  |  |  |

- There is a . 463 Pearson Correlation and a significance of .062 ; therefore, there is no significance for first time pass or fail and GPAPST.
- There is a . 504 Pearson Correlation and a significance of .039 ; therefore, there is a significant relationship for first time pass or fail and \# of failed attempts on test \#001.
- There is a . 532 Pearson Correlation and a significance of .028 ; therefore there is a significance for first time pass or fail and \# of failed attempts on test \#002.

RQ2: Is there a significant relationship between number of failed attempts on test \#001 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

According to the Correlations in Table 39:

- There is a . 255 Pearson Correlation and a .478 significance; therefore, there is no significance for test failures after first attempt on GACE content test \#001 and ACT.
- There is a .847 Pearson Correlation and a .008 significance; therefore there is a significance for test failures after first attempt on GACE content test \#001 and SAT.
- There is a .287 Pearson Correlation and a .320 significance; therefore there is no significance for test failures after first attempt on GACE content test \#001 and HSGPA.
- There is a .174 Pearson Correlation and a .505 significance; therefore there is no significance for test failures after first attempt on GACE content test \#001 and GPAPST.
- There is a .223 Pearson Correlation and a .390 significance; therefore there is no significance for test failures after first attempt on GACE content test \#001 and CGPA.

RQ3: Is there a significant relationship between number of failed attempts on test \#002 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

According to the Correlations in Table 39:

- There is a .354 Pearson Correlation and a .316 significance; therefore, there is no significance for test failures after first attempt on GACE content test \# 002 and ACT.
- There is a .731 Pearson Correlation and a .039 significance; therefore, there a significance for test failures after first attempt on GACE content test \# 002 and SAT.
- There is a .369 Pearson Correlation and a .194 significance there is no significance for test failures after first attempt on GACE content test \# 002 and HSGPA.
- There is a . 095 Pearson Correlation and a .717 significance; therefore, there is no significance for test failures after first attempt on GACE content test \# 002 and GAPST.
- There is a .069 Pearson Correlation and a .792 significance; therefore, there is no significance for test failures after first attempt on GACE content test \# 002 and CGPA.

RQ4: What were the findings for the survey items from the survey completed by the purposively selected participants?

More than $50 \%$ percent of the respondents were motivated to do the following: seek assistance outside of their planned program, study for the test prior to taking it the first time, seek supplemental material, and tutorial support in order to pass the GACE ECE content test \#001 and \#002 on the first attempt. Eleven items asked participants to rate program quality. The analysis of participants' responses indicated that their level of perception of program quality was that the planned program did not provide them with the content knowledge needed to assist them with passing test \#001 and test \#002. Furthermore, only 4 of 12 respondents indicated they passed test \#001 on the first attempt and only 3 of 12 respondents indicated they passed test \#002 on the first attempt. From the results of the survey items related to motivation $(\mathrm{n}=12$; mean $=4.35)$ and the of items related to perception of program quality $(\mathrm{n}=12$; mean $=3.05)$, there is a relationship between participants intrinsic need to seek supplemental assistance and how participants rated the planned program in addition, the Cronbach Alpha is $85 \%$.

RQ5: As a result of the review of the survey items, what narrative reflections were provided from follow-up interviews of purposively selected participants who passed the test as Early Childhood Education majors and those who did not pass the test as Educational Studies majors?

From the survey results, the researcher recognized patterns of inconsistency between participants' answers to questions about the planned program's methods courses and the program providing sufficient content knowledge to understand GACE objectives as well as how participants indicated they scored on the GACE on the first attempt. For example, P 2 indicated that the program was effective in his/her passing the objective presented in SQ27 through a response of "agree." Conversely, P2 did not pass test \#001
on the first attempt. Participants' intrinsic motivation led them to take individual responsibility for the additional material they needed in order to post a passing score on the GACE ECE exam on the first attempt. Additionally, it was cited that the alignment of the courses were not structured around the GACE content nor was the course designed to prepare them for the test. Moreover, participants cited the facilitation methods of instructors as an additional reason course material was not retained and related to the GACE. Furthermore, the outline of the planned program and the order in which courses were taken was also mentioned as an inadequacy in program preparation. For example, P3 indicated the required history course was taken during the first 30 hours as an undergraduate student but that they were not encouraged to take the GACE until their junior year. As a result, books and notes were not kept from freshman year to participants' junior year when they began taking the GACE exam.

RQ6: Is there a significant relationship between the motivation of candidates to take the GACE test and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

According to the Correlations in Table 39:

- There is a . 293 Pearson Correlation and a .573 significance; therefore, there is no significance for motivation and ACT.
- There is a .384 Pearson Correlation and a .523 significance; therefore, there is no significance for motivation and SAT.
- There is a -.254 Pearson Correlation and a .509 significance; therefore, there is no significance for motivation and HSGPA.
- There is a .238 Pearson Correlation and a .456 significance; therefore, there is no significance for motivation and GPAPST.
- There is a .268 Pearson Correlation and a .400 significance; therefore, there is no significance for motivation and CGPA.

RQ7: Is there a significant relationship between perception of program quality and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

According to the Correlations in Table 39:

- There is a .537 Pearson Correlation and a .272 significance; therefore, there is no significance for perception of program quality and ACT.
- There is a .836 Pearson Correlation and a .077 significance; therefore, there is no significance for perception of program quality and SAT.
- There is a .299 Pearson Correlation and a .434 significance; therefore, there is no significance for perception of program quality and HSGPA.
- There is a .721 Pearson Correlation and a .008 significance; therefore, there is a significance for perception of program quality and GPAPST.
- There is a .554 Pearson Correlation and a .062 significance; therefore, there is no significance for perception of program quality and CGPA.

RQ8: Is there a significant relationship between first time pass or fail rate and perception of program quality for the class of 2012?

According to the Correlations in Table 39:

- There is a .740 Pearson Correlation and a .006 significance; therefore, there is a significance for first time pass or fail rate and perception of program quality.


## Summary

A purposefully selected private Historically Black College and University located in a metropolitan city in the Southeastern part of the United States was the focus of this research study. There were three methods of data collection: GACE ECE data, GACE ECE survey questionnaire and class of 2012 member interviews. The analysis of the GACE ECE results revealed the following:(a) there is a significance for candidates first time pass or fail rate and the number of failed attempts on test \#001 and test \#002, and (b) SAT was a significant indicator of performance on the GACE ECE content examination.

Survey participants included 12 Early Childhood Education and Educational Studies majors who were members of the class of 2012. The analysis of the data from the survey suggests the following: (a) significance for level of perception of program quality and GPAPST, (b) significance for first time pass or fail and program quality, and (c) no significance for motivation and CGPA.

Of the 12 participants, 4 participants were selected using convenience sampling. These participants were selected based on the degree obtained from the private HBCU and their ability and willingness to participate in a follow-up interview by the researcher. The interviews revealed two emerging themes that are included as follows: (a) Supplemental Materials and (b) Program Alignment.

## CHAPTER VI

## FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter provides the findings, conclusions, implications, and recommendations that were obtained from the research study conducted. This chapter includes the following: purpose of the study, a summary of the review of literature, and the research methods used in the study.

## Purpose of the Study

The purpose of this study sought to examine why teacher education candidates, at a private HBCU , were unable to post a passing score on the first attempt of the GACE ECE content examination. Through participants' lived experiences of preparing for the GACE ECE content examination, the study also examined participants' motivation and level of perception of program quality.

This study examined the relationship between selected variables and factors that influence minorities' demonstrated ability to pass the Georgia Assessments for the Certification of Educators Early Childhood Education content examination on the first attempt. Additionally, this research was conducted to build on the recommendations of educational researchers, particularly recommendations from doctoral dissertations on teacher education at HBCUs, state and federal accrediting agencies, and national reports on the affects of certification testing on minority preservice teacher candidates.

## Review of the Literature

The review of literature supports the selection of the variables for the study, which suggested that passing on the first attempt, related to minorities taking teacher certification examinations, is influenced by the following variables: HSGPA, SAT, ACT, GPAPST, CGPA, number of failed attempts on test \#001 and number of failed attempts on test \#002.

## Research Methods

A QUAN-QUAL-QUAN Model was used in this research study. The quantitative portion of the research study focused on the demonstrated ability to successfully pass content examinations on the first attempt. The research design required the use of correlation, descriptive statistical analysis and semistructured purposefully selected interviews based upon survey results. The qualitative research was utilized to provide the lived experiences of the purposively selected participants who responded to the survey \& participated in the follow-up interview. Using a survey questionnaire followed by semistructured interviews conducted by the researcher, the researcher analyzed the data to discern the themes that emerged from the interviews. Through triangulation, the last quantitative portion of the research study triangulated the qualitative findings with the quantitative independent and dependent variables to ascertain if any significance existed between number of attempts on test \#001, number of attempts on test \#002, ACT, SAT, HSGPA, CGPA, motivation, and program quality.

## Findings

As a result of the data analysis from Chapter V, the researcher has extrapolated the following findings:

RQ1: Is there a significant relationship between the first time pass or fail results on the GACE ECE tests \#001 and \#002 of selected ECE graduates and completers and each of the selected independent variables: ACT, SAT, HSGPA, GPAPST, CGPA, number of failed attempt test \#001, and number of failed attempts test \#002?

The analysis of the data revealed that there is a significance for first time pass or fail and number of failed attempts on $\# 001$. The analysis also revealed a significance for first time pass or fail and number of failed attempts on \#002. Conversely, there was no significance for first time pass or fail and ACT, SAT, HSGPA, GPAPST and CGPA.

RQ2: Is there a significant relationship between number of failed attempts on test \#001 after the first attempt and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

The analysis of the data revealed there is a significance for test failures after first attempt on GACE content test \#001 and SAT. Conversely, there was no significance for test failures after first attempt on GACE content test \#001 and ACT, SAT, HSGPA, GPAPST, CGPA.

RQ3: Is there a significant relationship between number of failed attempts on test \#002 after the first attempt and selected independent variables (ACT,

SAT, HSGPA, GPAPST, CGPA) for the class of 2012 between March 2011 - March 2012?

The analysis of the data revealed that there is a significance for test failures after first attempt on GACE content test \#002 and SAT. Conversely, there was no significance for test failures after first attempt on GACE content test \# 002 and ACT, SAT, HSGPA,

## GPAPST,CGPA.

RQ4: What were the findings for the survey items from the survey completed by the purposively selected participants?

From the answers gathered from survey participants, it was surmised that participants were motivated to obtain supplemental materials to assist with their preparation and passing of the GACE ECE examination for certification purposes. Additionally, participants' level of perception of program quality revealed that the planned program did not provide participants with the content knowledge needed to pass the GACE ECE content examination on the first attempt. There was a relationship between participants' innate need for supplemental support and how participants rated the planned program. The mean for the survey items related to motivation was $4.35(\mathrm{n}=12)$ and the mean for perception of program quality was $3.05(\mathrm{n}=12)$. The Cronbach Alpha is $85 \%$.

RQ5: As a result of the review of the survey items, what narrative reflections were provided from follow-up interviews of purposively selected participants who passed the test as Early Childhood Education majors and those who did not pass the test as Educational Studies majors?

From the answers gathered from interviewees, it was determined that inconsistencies existed between participants' answers to certain survey questions. Individual responsibility and participants' intrinsic motivation led them to acquire materials outside of the planned program so they could pass the test on the first attempt. According to the findings from the candidates' responses, instructors' facilitation methods of content material were not inclusive of GACE content nor assisted participants with passing the examination.

RQ6: Is there a significant relationship between the motivation of candidates to take the GACE test and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

From an analysis of the data, there was no significant relationship between the motivation of candidates to take the GACE test and ACT, SAT, HSGPA, GPAPST and CGPA. The findings from the survey instrument and the interview protocol indicated that participants were motivated to pass the test on the first attempt and were motivated to seek supplemental material outside of their planned program to assist with them posting a passing score on the first attempt. Participants' mean motivation was $4.35(\mathrm{n}=12)$.

RQ7: Is there a significant relationship between perception of program quality and selected independent variables (ACT, SAT, HSGPA, GPAPST, CGPA) for the class of 2012?

The analysis of the data revealed there is a significance for perception of program quality and GPAPST. Conversely, there was no significance for perception of program quality and ACT, SAT, HSGPA, and CGPA.

RQ8: Is there a significant relationship between first time pass or fail rate and perception of program quality for the class of 2012?

The analysis of the data reveled there is a significance for first time pass or fail rate and perception of program quality. First time pass or fail and Progqua have a correlation of .740 and a significance of .006 ; therefore, there is a positive correlation between the variables and the relationship was proven to be statistically significant.

## Conclusions

Based on the findings, the research study allows the researcher to conclude the following.

The demonstrated inability of preservice teacher candidates in this research study to successfully pass certification examinations on the first attempt are affected by many variables. The data and participant interviews revealed that individuals possessed high levels of motivation (overall mean of the participants' [ $n=12$ ] motivation was 4.35) and indicated that the gaps in the planned programs alignment with GACE objectives and professor's facilitation of course material were some of the issues instrumental in their demonstrated inability to post passing scores on their first attempt. From an analysis of the interviews, it was suggested that participants who passed the content examination and graduated with the desired degree of Early Childhood Education attributed their passing to their motivation not to what was attained through classes in the planned program. Additionally, Educational Studies participants also indicated they were motivated to pass on the first attempt and stated that material covered in their classes did not assist them with passing the content examination. The analysis suggests that by controlling for
attempts negatively it highlights the importance of SAT as a predictor of test performance as well as content knowledge. It appears that motivation is intrinsic and extrinsic since many participants took the examination up until the last minute. Furthermore, the research statistics and interview protocol have proven that participants were motivated to pass the test and that they indicated lack of alignment as one of the issues with the planned program. Although participants were motivated to pass the test, some still did not pass.

## Implications

The findings indicated that selected variables have an effect on teacher candidates first attempt passing rate. Additionally, results of this study are supported by historic and current research on minorities' failure rate on teacher certification examinations. From the results of the study, the following implications for educational leaders, state and local policy makers and teacher education programs have been provided.

## Implications for Educational Leaders

As a result of the findings of the variables, the following are implications. There was a significant relationship found between the following variables: first time pass or fail and number of attempts on test \#001, first time pass or fail and number of attempts on test \#002, number of attempt on test \#001 and SAT, number of attempts on test \#002 and SAT, program quality and GPAPST and first time pass or fail and program quality. Therefore, an implication from the statistically significant variables identified through the correlation analyses may include the use of the unit assessment coordinator as a curriculum auditor for the benefit of reporting to program administrators the
implications from failed testing attempts by candidates in the program. Although academic freedom is considered sacra saint in the academy, student performance outcomes on accreditation and certification related examinations are increasingly used to validate the quality of education programs in higher education institutions.

As a result of the findings from the survey, the following are implications. Because the average of the means of participants' motivation was 4.35 and the average of the means from their rating of their level of perception of program quality was 3.05. Additionally, since participants' level of motivation was extremely high, it is significant to note that their motivation was not the reason they did not pass the test; therefore, it is implied that the planned program is the responsibility of both program administrators and faculty. Additionally, based upon participants' answers to the questions on program quality, it is implied that the planned program did not provide participants with the content knowledge needed to pass the GACE ECE content examination. If traditional teacher preparation programs at HBCUs cannot maintain the vitality of their undergraduate programs along with preparing candidates to obtain certification, then not only are they putting their programs at risk of losing candidates but also at risk of losing their accreditation status and, invariably, current teacher education programs (Carter, 1998; Dilworth, 1986; Marable, 2011; Perry 2011).

As a result of the findings from the interview protocol, the following are implications. Because participants were motivated to get supplemental assistance outside of their planned program; therefore, it is implied that participants sought supplemental materials in order to pass the test on the first attempt due to the courses within the
planned program not being aligned to specifically provide candidates with the content knowledge needed to post a passing score on the GACE ECE test on the first attempt. If teacher education candidates cannot pass content examinations, then the number of employable minorities is affected; thus, the need for P-12 and higher educational leaders diminishes.

## Implications for State and Local Policy Makers

Under Title III of HEA, the Predominantly Black Institutions (PBIs) Competitive Grant Program aims to support eligible institutions serving low-income students who are also educationally disadvantaged, minority students, or from groups underrepresented in postsecondary education (USDOE, 2013, p. 19). As a result of the findings of the variables, the following are implications.

There was a significant relationship found between the following variables: first time pass or fail and number of attempts on test \#001, first time pass or fail and number of attempts on test \#002, number of attempt on test \#001 and SAT, number of attempts on test \#002 and SAT, program quality and GPAPST and first time pass or fail and program quality; therefore, it is implied that the structure and alignment of the planned program is the problem and not the content examination. Test takers cannot rely strictly on rote memory but also must utilize analytical skills in order to achieve a passing score on the first attempt.

As a result of the findings from the survey, the following are implications. Since participants average mean motivation was 4.35 and level of perception of program quality held an average mean of 3.05 , it is implied that the program is low performing
and failed to provide participants with sufficient content knowledge to pass the GACE ECE content examination on the first attempt. According to the United States Department of Education's (USDOE) 2011 report entitled "Our Future, Our Teachers: The Obama Administration's Plan for Teacher Education Reform and Improvement," states are not adequately reporting the number of low performing teacher preparation programs. For example, only 37 low performing programs at over 1,400 institutions were identified nationwide and 39 states identified no low performing programs.

As a result of the findings from the interview protocol, the following are implications. Participants indicated numerous and consistent responses that indicated they were highly motivated to pass the content examination in order to become highly qualified teachers. The deficiencies in their planned program were cited by participants as a serious problem; therefore, it is implied that the policies set forth by accrediting agencies and the planned program are not being implemented to advance candidates content knowledge and testing outcomes.

## Implications for Teacher Education Programs

HBCUs prepare more teachers of color than other non-minority based institutions; however, these candidates comprise less than half of all public classroom teachers (Powell, 2012; USDOE, 2011a). As a result of the findings of the variables, the following are implications.

There was a significant relationship found between the following variables: first time pass or fail and number of attempts on test \#001, first time pass or fail and number of attempts on test \#002, number of attempts on test \#001 and SAT, number of attempts
on test \#002 and SAT, program quality and GPAPST and first time pass or fail and program quality; therefore, it is implied that participants demonstrated inability to post a passing on the first attempt lies with the planned program, thus failing to produce highly qualified teachers for our nation's schools. According to the USDOE (2011a), 14\% of teachers identify as black or Hispanic compared to $38 \%$ of students, while only $2 \%$ of black and Latino teachers are male.

As a result of the findings from the survey, the following are implications. Since participants average mean motivation was 4.35 and level of perception of program quality held an average mean of 3.05 ; therefore, it is implied that participants were extremely motivated to pass the examination. Conversely, motivation does not equal content knowledge. The inability of American colleges and universities to produce highly effective minority teachers has reached enormous proportions (Barnes-Johnson, 2008); hence, minorities continue to display difficulty in posting a passing score on teacher certification exams on their first attempt often failing to meet the required score by a few points (Bennett et al., 2006).

As a result of the findings from the interview protocol, the following are implications. Since participants indicated they were motivated to seek supplemental material to pass the content examination on the first attempt due to gaps in their content knowledge; therefore, based on interviewees responses, it is implied that the alignment of the program, course assignment and instructor facilitation of course material was not inclusive of sufficient content knowledge to assist the participants with passing the GACE.

## Limitations of the Study

This section presents the limitations of the study. First, analyses were limited to a single private HBCU located in one metropolitan area in a Southern state. Second, the study was limited to members of the class of 2012 who graduated with a Bachelor of Arts degree in Early Childhood Education or a Bachelor of Arts degree in Educational Studies. Additionally, only participants who took the GACE ECE content examination at least one time were included in the research study. Furthermore, the HBCU teacher preparation program studied for this research enrolls less than thirty undergraduate teacher education majors per graduating class with the members of the class of 2012 only totaling 18; thus, the researcher did not have 30 plus one (31) participants for the statistical portion of this study to be considered valid and reliable. The survey was completed by twelve ( $\mathrm{n}=$ $71 \%$ ) of the seventeen participants completed the survey. Finally, the interview participants purposefully selected was guided by cooperation of participants who completed the survey and agreed to participate in follow-up interviews.

## Recommendations

Recommendations are provided for educational leaders, teacher education programs, state and local policy makers, and future researchers.

## Recommendations for Educational Leaders

As a result of the findings in Chapter V, it is this researcher's recommendation that educational leaders do the following:

- Structure their teacher education programs so that their candidates will be prepared for the $\mathrm{P}-12$ work environment.
- To improve their teacher education programs, educational leaders should assist faculty with delivering instruction that is inclusive of material vital to candidates successfully grasping ample content knowledge in preparation for successful passing of the GACE ECE examination.
- It is recommended that in addition to an internal audit of the planned program that a program assessment is completed by an outside agency to examine program alignment with GACE objectives, faculty and current leadership qualifications and performance (NCATE, 2012, "Unit Standards").
- Additionally, in order for teacher education programs to meet the changing policies mandated by governmental agencies; schools, departments and college educational leaders should seek external funding to assist Early Childhood Education faculty with methods to support candidates with passing the GACE ECE content examination on the first attempt.


## Recommendations for State and Local Policy Makers

It is this researcher's recommendation that State and Local Policy Makers do the following:

- Of the individuals enrolled in teacher preparation programs at HBCUs, $86 \%$ were enrolled at public institutions, compared to $14 \%$ enrolled in private not-for-profit institutions (USDOE, 2013, p.22). As a background to the problem of HBCU student performance, the fact that each state sets a minimum passing score on the certification examination lends to increased variation in cut off score requirements from state to state; therefore, how can the quality of teacher
preparation candidates' content knowledge be accurately measured from state to state? State and federal agencies assess teacher preparation programs based on standards including but not limited to Candidate Knowledge, Skills, and Professional Dispositions and Assessment System and Unit Evaluation Assessment System and Unit Evaluation (NCATE, 2012, "Unit Standards"). - It is recommended that the American Association of Colleges for Teacher Education (AACTE), National Association for Equal Opportunity in Higher Education (NAFEO), Council for the Accreditation of Educator Preparation (CAEP) and the United States President office for HBCUs through the facilitation of USDOE convene an annual state of accreditation conference for institutions that historically admit first generation college students, HBCUs with teacher education programs and other minority serving institutions whose admissions requirements for teacher education does not weigh heavily SAT scores in college admission and ACT scores in college admissions.
- Another recommendation is for policy makers at the state level where accreditation minimum scores are set in collaboration with major testing companies (e.g. Pearson, ETS, etc.) review the recommendations posited by Moffett and Frizzell (2011). For example, the researchers recommended that the gaps in the planned program be assessed and that teacher educator administrators and supervisors of preparation programs are held by practitioner-scholars who are relevant in the field of education (p. 26).

It is further recommended that human resource directors or local educational agencies personnel administrators are placed on school of education advisory councils to serves as external evaluators of program syllabi for their alignment with state curricula learning objectives for methods courses.

## Recommendations for Teacher Education Programs

It is this researcher's recommendation that teacher preparation programs at HBCUs do the following:

- Based on candidates' interview responses, it is recommended that the entire program's alignment be reviewed and changes made where necessary to support candidates passing the GACE ECE content examination on the first attempt.
- Next, candidates who declare Early Childhood Education as a major upon entry into the university or college and have an SAT score of less than 1000 should begin to receive tutorial support in preparation for the content examination. "Several studies suggest that standardized test scores predict academic performance much better for black students who attend predominately black colleges, with the same consistency and level of prediction usually found for white students (Fleming \& Garcia, 1998, p. 489).
- Furthermore, programs should be able to produce evidence that not only are they preparing twenty-first century teachers but are also preparing candidates with sufficient content knowledge to effectively teach and advance P-12 students. Also, recruiting, retaining and employing faculty, inclusive of

Clinical Faculty, with relevant and current P-12 experience, theory and practice is needed for candidates to make the connection between the text and realistic experiences.

- Finally, teacher preparation programs, specifically private HBCUs, whose candidates continue to fail content examinations at increased rates along with low enrollment numbers for numerous years put themselves at risk failing to meet the required $80 \%$ passing rate in place at the time of this study (Elementary and Secondary Education Act of 1965, as amended, Title II, Part A; 20 U.S.C. 6601-6641; NCATE, 2012, " 80 percent rule Q \& A").

Therefore, it is recommended that teacher education programs, particularly those at private HBCUs, develop a method of inclusion consisting of P-12 topics and certification testing thus allowing all teacher education majors to benefit. In addition, private HBCUs that historically enroll less than 30 teacher education candidates in their graduating classes should begin to recruit larger graduating classes. For HBCU teacher preparation programs, continued candidate test failure is not an option. Programs leading to initial teacher certification should show evidence that they are preparing candidates to become highly qualified teachers who can teach, pass teacher content exams and prepare $\mathrm{P}-12$ students to pass standardized tests, or be expunged from the university's program offerings (Amerin-Beardsley \& Barnett, 2010; BarnesJohnson, 2008; Carter, 1998; USDOE, 2011a; USDOE, 2011b).

## Recommendations for Future Researchers

It is this researcher's recommendation that future researchers do the following:

- First, development of a concentrated study for public and private HBCUs, in particular private HBCUs, with teacher education programs that enroll graduating classes of more than 30 candidates.
- Next, a review of course syllabi intended to prepare candidates for the content examination should be conducted to determine if the test objectives and course content are aligned. This should enable the researcher to understand why the planned program is not meeting the content knowledge needs of its candidates.
- Examine administrator and faculty knowledge of currently required content knowledge used by state and national licensure tests.
- Review administrator and faculty knowledge of curriculum theory and planning of teacher education and certification for educator preparation programs.
- Develop a study that examines participants test taking skills; also, an evaluation of the profile of professors teaching the major courses in candidates last 60 hours should indicate professors' familiarity with the content examination and whether they have taken the examination. Furthermore, an analysis of private and public HBCUs clinical practice program and how they provide opportunities for candidates to develop and demonstrate competence in the professional roles for which they are preparing (NCATE, 2012, "NCATE Glossary").
- Finally, it is the researchers recommendation that this study be replicated at another HBCU as a longitudinal study with a larger data set.


## Summary

It was the aim of this research study to disclose some of the variables that directly affect pre-service teacher education candidates demonstrated ability to successfully pass the GACE ECE content examination on the first attempt in order to improve passing rates of pre-service teacher candidates, the quality of teacher education programs, the awareness of educational leaders on the needs of the candidates in their Schools, Colleges and Departments of Education and the responsibility of the planned program to provide candidates with instruction that will prepare them to pass content examinations on the first attempt. Through the triangulation of the data, this research study revealed some variables that have an impact on the first time passing rate of pre-service teacher education candidates on the GACE. The research findings suggest the following independent variables were statistically significant with the dependent variables of first time attempt on the GACE ECE content exam: SAT, test failures after the first attempt on test $\# 001$, test failures after the first attempt on test \#002, GPAPST and program quality, and first time pass or fail rate and perception of program quality directly affect candidate performance on the GACE ECE content examination. Recommendations were provided for educational leaders, teacher education programs, state and local policy makers and future researchers.

## APPENDIX A

## The Qualitative Conceptual Model



## APPENDIX B

## GACE ECE Survey Questionnaire

Revised from Questionnaire used for the GACE Summer Workshop Series 2011 and used by Melanie M. Frizzell for Dissertation Research (© NLM)

1. What is your gender?* $\square$ Female $\square$ Male
2. What is your ethnicity?* $\square$ White $\square$ Black, not Hispanic Hispanic $\square$ Pacific Islander $\square$ Native American
M Multi-Racial
3. What year did you graduate from high school? $\qquad$
4. What year did you enter the higher education institution from which you graduated?
$\qquad$
5. In what month and year did you first take the GACE examination? $\qquad$
6. Which content test did you take first?

Test \# 001 (English Language Arts and Social Studies)
Test \# 002 (Mathematics, Science, Physical Education and the Arts)

- Both

7. Did you pass test \#001 (English Language Arts and Social Studies) on the first attempt? Yes No
8. Did you pass test \#002 (Mathematics, Science, Physical Education and the Arts) on the first attempt? Yes $\square$ No
9. Did you take both the ACT and SAT tests? If yes, why? If no, why?
10. From your memory of your high school preparation for college, did you participate in tutorials before taking the ACT Test? Yes No

Appendix B (continued)
11. From your memory of your high school preparation for college, did you participate in tutorials before taking the SAT Test? Yes No

Read the statements listed below and rate each statement based upon your reflections and memory of your preparation for the GACE exam.

Strongly Agree $=5$
Disagree $=2$

$$
\begin{array}{ll}
\text { Agree }=4 & \begin{array}{l}
\text { Uncertain }=3(\text { Select uncertain if } \\
\text { Strongly Disagree }=1
\end{array} \\
\begin{array}{l}
\text { your rating is less than agree but } \\
\text { does not equal disagree or below })
\end{array}
\end{array}
$$

12. I felt I needed additional assistance outside of my academic program to pass GACE content test \#001 (English Language Arts and Social Studies).
$\square$ Strongly Agree $\square$ Agree $\square$ Uncertain Disagree $\square$ Strongly Disagree
13. I felt I needed additional assistance outside of my academic program to pass GACE content test \# 002 (Mathematics, Science, Health, Physical Education and the Arts).
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
14. During the time that I matriculated through the program, I was motivated to study for the exam prior to taking it the first time.
$\square$ Strongly Agree $\square$ Agree $\square$ Uncertain Disagree $\square$ Strongly Disagree
15. While matriculating through the program, I was motivated to obtain supplemental material in order to pass the test on the first attempt
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
16. While matriculating through the program, I was motivated to seek tutorial support to pass the GACE content test \# 001 (English Language Arts and Social Studies) on the first attempt
$\square$ Strongly Agree Agree Uncertain Disagree $\square \square$ Strongly Disagree
17. While matriculating through the program, I was motivated to seek tutorial support to pass the GACE content test \# 002 (Mathematics, Science, Physical Education and the Arts) on the first attempt.
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square$ Strongly Disagree

Appendix B (continued)
18. The "Methods of Teaching Reading and Writing" course in my planned program assisted me with passing test \#001 (English Language Arts and Social Studies).
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
19. The "Early Childhood Curriculum and Methods" course in my planned program assisted me with passing test \# 001 (English Language Arts and Social Studies).
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
20. The "Integrated Teaching of Social Studies and Language Arts" course in my planned program assisted me with passing test \# 001 (English Language Arts and Social Studies).
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
21. The "Methods of Teaching Early Childhood Health and Physical Education" course in my planned program assisted me with passing test \# 002 (Mathematics, Science, Physical Education and the Arts).
$\square$ Strongly Agree $\square$ Agree Uncertain $\square \square$ Disagree Strongly Disagree
22. The "Integrated Teaching of Elementary Math and Science" course in my planned program assisted me with passing test \# 002 (Mathematics, Science, Physical Education and the Arts).
$\square$ Strongly Agree $\square$ Agree $\square$ Uncertain $\square$ Disagree $\square$ Strongly Disagree
23. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the development of vocabulary knowledge and skills across the curriculum" as I prepared for the GACE exam.
$\square$ Strongly Agree $\square$ Agree $\square$ Uncertain Disagree $\square$ Strongly Disagree
24. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as I prepared for the GACE exam.
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree

Appendix B (continued)
25. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the processes and approaches for exploring mathematics and solving problems" as I prepared for the GACE exam.
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square \square$ Strongly Disagree
26. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the characteristics and processes of science" as I prepared for the GACE exam.
$\square$ Strongly Agree Agree Uncertain Disagree $\square \square$ Strongly Disagree
27. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding the basic principles and practices related to health and safety" as I prepared for the GACE exam.
$\square$ Strongly Agree $\square$ Agree Uncertain Disagree $\square$ Strongly Disagree
28. My planned program provided me with SUFFICIENT content knowledge needed to assist with my "understanding basic elements, concepts, and techniques associated with the arts" as I prepared for the GACE exam.
$\square$ Strongly Agree Agree Uncertain Disagree $\square \square$ Strongly Disagree

## APPENDIX C

## Participant Interview Protocol

The Identification of Variables and Factors Related to Preservice Teacher Candidates'
Passing a State Teacher Certification Examination at an HBCU
Interview Question = IQ

## Educational Studies Participant 10

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

IQ2: What caused you to take the SAT and ACT in high school?
IQ3: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \# 001 (English Language Arts and Social Studies)?

IQ4: What factors led you to disagree about the "Methods of Teaching Early Childhood Health and Physical Education" course assisting you with passing test \# 002 (Mathematics, Science, Physical Education and the Arts)?

IQ5: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

## Early Childhood Education Participant 3

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

IQ2: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \# 001 (English Language Arts and Social Studies)?

Appendix C (continued)
IQ3. What factors led you to disagree that the "Integrated Teaching of Social Studies and Language Arts" course assisted you with passing test \# 001 (English Language Arts and Social Studies)?

IQ4: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

## Early Childhood Education Participant 9

IQ1. What motivated you to seek supplemental materials in order to pass the test on the first attempt?

IQ2. Why did you agree that the "Integrated Teaching of Social Studies and Language Arts" course assisted you with passing test \# 001 (English Language Arts and Social Studies)?

IQ3. Why were you uncertain whether the planned program providing you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

IQ4: Why were you uncertain whether the "Methods of Teaching Early Childhood Health and Physical Education" course assisted you with passing test \# 002 (Mathematics, Science, Physical Education and the Arts)?

IQ5: Why were you uncertain about the planned program providing you with SUFFICIENT content to "understanding the basic principles and practices related to health and safety?"

## Educational Studies Participant 2

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

IQ2: What caused you to take the SAT and ACT in high school?
IQ3: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \# 001 (English Language Arts and Social Studies)?

Appendix C (continued)
IQ4: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

## APPENDIX D

## Letter to Participants

Title of Study: The Identification of Variables and Factors Related to Preservice Teacher Candidates' Passing a State Teacher Certification Exam at an HBCU

You are invited to be in a research study of the possible variables and factors that may affect pre-service teacher candidates passing a certification examination. You were selected as a possible participant because of your experiences and/or involvement in test preparation and enrollment and matriculation through a teacher preparation program pursuing an Early Childhood Education degree between 2008-2012. I ask that you read this letter and ask any questions before agreeing to be in the study.

This study is being conducted by: Melanie M. Frizzell (doctoral candidate at Clark Atlanta University)

## Background Information

The purpose of this study is: to examine the effectiveness of a selected teacher preparation program and the programs role in providing candidates with sufficient content knowledge to post a first time passing score on a teacher certification examination.

## Risks and Benefits of Being in the Study

There is not any known risk to proposed participants or subjects in this research.
The benefits to participation include: recommendations for the improvements of the preparation of candidates preparing to become $\mathrm{P}-12$ educators and teacher preparation programs located at HBCUs, Minority Serving Institutions (MSIs) and Predominately White Institutions (PWIs) preparing teachers to work with children of color while providing a more diverse pool of teachers for our nation's schools.

## Confidentiality

The records of this study will be kept private. Your willingness to participate through completing a survey instrument, participation in individual interview protocol, group interview protocol and submission of related artifacts that may derive from the interview protocol will remain strictly confidential. Selected statements and/or findings from your

Appendix D (continued)
participation may appear in research publications; however, I will not include any information that will make it possible to identify a participant. Research records (including recording and/or videotapes) will be kept in a locked file and only the researcher (Melanie M. Frizzell) and dissertation chair (Dr. Trevor Turner) will have access to the records. The data will be erased and destroyed within three years after completion of study.

## Voluntary Nature of the Study

Your decision whether or not to participate will not affect your current or future relationship with the researcher, or Clark Atlanta University. Your participation in this research study is completely voluntary. At any time during this study, you have the right to withdraw from the study without affecting the relationship previously identified. You may withdraw from the study by contacting the researcher and your data will be kept in a locked file as identified in the previous section.

## Contacts and Questions:

The researcher conducting this study is Melanie M. Frizzell. You may ask any questions you have now. If you have questions later about the research, you may contact the researcher at: (334)462-2899 or mfrizzell2014@ gmail.com or Dr. Trevor Turner at (404) 880-8980 or tturner@cau.edu.

If you have any questions now, or late, related to the integrity of the research, (the rights of research subjects or research-related injuries, where applicable), you are encouraged to contact Dr. Georgianna Bolden at the Office of Sponsored Programs (404) 880-6979 or Dr. Paul I. Musey, (404) 880-6829 at Clark Atlanta University.

Melanie M. Frizzell
Clark Atlanta University
Doctoral Candidate

## APPENDIX E

## Transcribed Participant Interviews

The Identification of Variables and Factors Related to Preservice Teacher Candidates’ Passing a State Teacher Certification Examination at an HBCU

## Interview Question = IQ

## Educational Studies Participant 10

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

The reason I needed the supplemental materials to study so it could help me pass the test and know the types of questions are on the test and what information I needed to know to pass.

IQ2: What caused you to take the SAT and ACT in high school?
The reason I took the SAT in high school because it was needed to enter college.
IQ3: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \#001 (English Language Arts and Social Studies)?

The factors that led me to disagree about this course is because I felt the information that was giving to me did not help me pass the test and the instructor didn't really know what would be on the test.

IQ4: What factors led you to disagree about the "Methods of Teaching Early Childhood Health and Physical Education" course assisting you with passing test \#002 (Mathematics, Science, Physical Education and the Arts)?

The factors that led me to disagree with this course is because the instructor did not know how to teach the course and was just giving material of the top of his/her head. The class wasn't a challenge it wasn't a college class how I thought it would be. The information in the book was helpful but the instructor didn't know how to teach it and I felt didn't take it as seriously.

Appendix E (continued)
IQ5: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?

The factors that led me to disagree to this course is because for one we didn't read the book. We read newspapers and things that had nothing to do with that course. I was very and still [am] disappointed with the Early childhood program at [shall not be named to protect the confidentiality of the participant] university. I don't even remember taking this course that's how bad it is. The instructors taught what they thought was important not what was going to be GACE we had to study on our own that was the only reason why you could pass otherwise getting information from the instructors you would fail.

## Early Childhood Education Participant 3

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

I sought out supplemental materials because I knew I needed to rely on other sources other than just my planned program at [shall not be named to protect the confidentiality of participant]. I believed that the program should have aligned to exactly what I needed to know for the test, however, it is not the programs sole mission to prepare me for the GACE II. At some point I realized I had to do some studying on my own if I wanted to pass and excel on the test.

IQ2: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \#001 (English Language Arts and Social Studies)?

With the Early Childhood Curriculum and methods course, I thought it could have been more focused on theory. Our assignments and discussions definitely linked to our practicum work and experiences. The coursework did not truly link to the content of the GACE.

IQ3: What factors led you to disagree that the "Integrated Teaching of Social Studies and Language Arts" course assisted you with passing test \#001 (English Language Arts and Social Studies)?

I disagreed with the Integrated Social Studies and language arts course for a reason much different than the others. I was apart of the class that had Professor [shall not be named to protect the confidentiality of the participant] as the teacher

Appendix E (continued)
of this course. She became ill during that semester and we ultimately just didn't get to the course work that I am sure would have prepared me.

IQ4: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?

In the planned program of the school of education it is suggested that we take two courses of U.S Africa and the World. These two semesters are done freshman year. During that year we are urged to focus on taking the GACE I test. The GACE II is never explained or openly talked about until junior year. As a student who is ultimately preparing to take the GACE II for my certification, it would have been great if it were communicated that I may have needed to take the courses in my sophomore semester or at least keep by books or notes for the course.

In my opinion, it is not the educations department's job to teach to the GACE II test. I do believe it is their job to help in as many ways possible to ensure their courses work for their students. If the courses were thoughtfully planned where GACE content was covered, the courses were taught in an order that would align with when students needed to take the test, and students would take ownership of their learning and seek supplemental materials the number of students passing in the first attempt will increase.

## Early Childhood Education Participant 9

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

My desire to become an educator was always my number 1 motivator. To me, I decided that I would do whatever it took for me to achieve my goal.

IQ2: Why did you agree that the "Integrated Teaching of Social Studies and Language Arts" course assisted you with passing test \#001 (English Language Arts and Social Studies)?

A large amount of what I saw when i took test \#001 was the same material that was taught in my course work so naturally I felt prepared.

IQ3: Why were you uncertain whether the planned program providing you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

Appendix E (continued)
The area of social studies was not necessarily a strong point for the planned program.

IQ4: Why were you uncertain whether the "Methods of Teaching Early Childhood Health and Physical Education" course assisted you with passing test \#002 (Mathematics, Science, Physical Education and the Arts)?

While I enjoyed the content of the class I did not feel as though it "lined up" or matched the actual material that I was being tested on.

IQ5: Why were you uncertain about the planned program providing you with SUFFICIENT content to "understanding the basic principles and practices related to health and safety?"

I feel that a lack of time spent teaching in this area led to me feeling uncertain about the basic principles related to health and safety.

## Educational Studies Participant 2

IQ1: What motivated you to seek supplemental materials in order to pass the test on the first attempt?

I understood that I was unfamiliar with what would be on the test, so I needed to look at and review supplemental materials.

IQ2: What caused you to take the SAT and ACT in high school?
It was told to me by my counselor that a lot of colleges look at SAT and ACT scores to determine my acceptance into their program.

IQ3: What factors led you to disagree about the "Early Childhood Curriculum and Methods" course assisting you with passing test \#001 (English Language Arts and Social Studies)?

One factor was that the course consisted of lesson planning projects and group presentations. But no material on the test was covered in the course work. Social studies was not covered at all in this course.

IQ4: What factors led you to disagree that the planned program provided you with SUFFICIENT content knowledge to "understand important events, concepts, and methods of inquiry related to Georgia, U.S., and world history" as you prepared for the GACE exam?"

Appendix E (continued)
As I stated above, the material covered in the class had nothing to do with the content presented on the GACE. The bulk of our assignments were research related presentations, but nothing about Georgia or U.S. history. We were also required to participate in the practicum experience, which was all day, so at the time of class, many of us were mentally and physically exhausted.

## REFERENCES

Allen, W. R., \& Jewell, J. O. (1995). African American education since "an American dilemma," Daedalus, 124(1), 77-100.

American College Testing (ACT). (2009). Retrieved from http://www.act.org.about.us/ our-story/

Amerin-Beardsley, A., \& Barnett, J. H. (2010). The sinking state of public colleges of education: Lessons learned without lifeboats. Action in Teacher Education, 32(4), 314.

Anderson, J. D. (1988). The education of blacks in the south, 1860-1935. Chapel Hill, NC: University of North Carolina Press.

Angus, D. L. (2001). Professionalism and the public good: A brief history of teacher certification. Thomas B. Fordham Foundation. Retrieved from http://www. edexcellence.net

Anrig, G. R., Goertz, M. E., \& McNeil, R. C. (1986). Teacher competency testing: Realities of supply and demand in this period of educational reform. The Journal of Negro Education, 55(3), 316-325.

Arvey, R. D., Strickland, W., Drauden, G., \& Martin, C. (1990). Motivational components of test taking. Personal Psychology, 43(4), 695-716.

Barnes-Johnson, J. M. (2008). Preparing minority teachers: Law and out of order. Journal of Negro Education, 77(1), 71-81.

Bennett, C. I., McWhorter, L. M., \& Kuykendall, J. A. (2006). Will I ever teach? Latino and African American students' perspectives on PRAXIS I. American Educational Research Journal, 43(3), 531-575.

Bridgeman, B., McCamley-Jenkins, L., \& Ervin, N. (2000). Predictors of freshman grade-point average from the revised and recentered SAT I: Reasoning Test. New York: College Entrance Examination Board.

Bond, H. M. (1934). The education of the Negro in the American social order. New York: Octagon Books.

Boyd, D., Goldhaber, D., Lankford, H., \& Wyckoff, J. (2007). The effect of certification and preparation on teacher quality. The Future of Children, 17(1), 45-68.

Carter, J. L. (1998). Producing effective teacher preparation programs. Black Issues in ... Higher Education, 14(14), 88. Retrieved from http://www.proquest.umi.com

Caliver, A. (1935). Some problems in the education and placement of Negro teachers. The Journal of Negro Education, 2, 99-112.

Chan, D., Schmitt, N., Deshon, R. P., Clause, C. S., \& Delbridge, K. (1997). Reactions to cognitive ability tests: The relationships between race, test performance, face validity perceptions, and test-taking motivation. Journal of Applied Psychology, 82(2), 300-310.

Creswell, J. W. (2012). Qualitative inquiry and research design: Choosing among five approaches. Thousand Oaks, CA: Sage Publications.

D’Agostino, J. V., \& Powers, S. J. (2009). Predicting teacher performance with test scores and grade point average: A meta-analysis [Abstract]. American Educational Research Journal, 46(1), 146-182. Retrieved from http://www. jstor.org/stable/27667175

Darling-Hammond, L. (2001). The research and rhetoric on teacher certification: A response to "teacher certification reconsidered." National Commission on Teaching and America's Future. Retrieved from http://www.nctaf.org/documents/ abell_response.pdfc

Drago, E. L. (1982). Black politicians and reconstruction of Georgia: A splendid failure. Athens, GA: University of Georgia Press.

Dilworth, M. E. (1986). Teacher testing: Adjustments for schools, colleges, and departments of education. The Journal of Negro Education, 55(1), 368-378.

Dove, P. C. (1959). A study of the relationship of certain selected criteria and success in student teaching programs at Clark College in Atlanta, Georgia (unpublished doctoral dissertation). University of Colorado-Boulder, Boulder, CO.

Elementary and Secondary Education Act of 1965. (2013). USDOE. Retrieved from http://www2.ed.gov/policy/elsec/leg/esea02/pg1.html\#sec101).

Fleming, J. (2000). Affirmative action and standardized test scores. The Journal of Negro Education, 69(1/2), 27-37.

Fleming, J., \& Garcia, N. (1998). Are standardized tests fair to African Americans? Predictive validity of the SAT in black and white institutions. The Journal of Higher Education, 69(5), 471-495.

Garibaldi, A. (1997). Four decades of progress . . . and decline: An assessment of African American education attainment. The Journal of Negro Education, 66(2), 105-120.

Gay, L. R., Mills, G. E., \& Airasian, P. W. (2012). Educational research: Competencies for analysis and applications. Upper Saddle River, NJ: Pearson.

Georgia Assessments for Certification of Educators (GACE). (2012). Retrieved from http://www.gace. nesinc.com/GA6_overview.asp

Georgia Assessments for Certification of Education (GACE). (2013). Retrieved from http://gace.ets.org/program_providers/about

Gliem, J. A., \& Gliem, R. R. (2003). Calculating, interpreting and reporting Cronbach's alpha reliability Coefficient for Likert-type scales. Retrieved from https://scholarworks.iupui.edu/bitstream/handle/1805/344/Gliem+\&+Gliem.pdf? sequence $=1$

Gifford, B. (1985). Teacher competency testing and its effect on minorities: Reflection and recommendations. In Freeman, E. E. (ed.), Education standards, testing and access: Proceedings of the 1984 ETS forty-fifth invitational conference (pp. 5562). Princeton, NJ: Education Testing Service.

Goulding, C. (2005). Grounded theory, ethnography, and phenomenology: A comparative analysis of three qualitative strategies for marketing research. European Journal of Marketing, 39(3/4), 294-308.

Haney, W., Madaus, G., \& Kreitzer, A. (1987). Charms talismanic: Testing teachers of the improvement of American education. Review of Research in Education, 14, 169-239.

Hefling, K., \& Fuller, B. (2012). No child left behind: 10 states receive waivers from education law's sweeping requirements. Huffington Post. Retrieved from http://www.huffingtonpost.com/2012/02/09/no-child-left-behind-waivers_n_ 1264872.html

Hess, R. D., \& Shipman, V. (1965). Early experiences and socialization of cognitive modes in children. Child Development, 36(4), 869-886.

Higher Education Amendment. (2007). S. 1642--110th Congress: Higher Education Amendments of 2007. Retrieved from http://www.govtrack.us/congress/ bills/110/s1642

Higher Education Opportunity Act. (2008). Retrieved from http://www.2ed.gov/policy/ highered/leg/hea08/index.html

Holmes, B. J. (1986). Do not buy the conventional wisdom: Minority teachers can pass the test. The Journal of Negro Education, 55(3), 334-346.

Hood, S., \& Parker, L. J. (1989). Minority bias review panels and teacher testing for initial certification: a comparison of two states' effects. The Journal of Negro Education, 58(4), 511-519.

Howell, M. L., \& Prevenier, W. (2001). From reliable sources: An introduction to historical methods. Ithaca, NY: Cornell University Press.

Johnson, B., \& Christensen, L. (2008). Educational research: Quantitative, qualitative and mixed methods. Thousand Oaks, CA: Sage.

Kobrin, J. L., \& Michel, R. S. (2006). The SAT as a predictor of different levels of college performance (College Board Research Report no. 2006-3). New York: College Board.

Kozal, J. (1991). Savage inequalities: Children in America's schools. New York: Crown Publications.

Ladsen-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. Educational Researcher, 36(5), 3-12.

Lange, M. (2013). Comparative historical methods. Thousand Oaks, CA: Sage.
Liu, O. L., Bridgeman, B., \& Adler, R. M. (2012). Measuring learning outcomes in higher education: Motivation matters. Educational Researcher, 41(9), 352-362.

Lunenburg, F. C., \& Ornstein, A. C. (2007). Educational administration: Concepts and practices. Belmont, CA: Wadsworth Publishing.

Marable, R. D. (2011). Using SAT scores, high school grade point average, and high school credits as predictors of academic performance of African Americans enrolled in HBCUs (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3492818)

McMillan, J. H. (2012). Educational Research: Fundamentals for the consumer. Boston, MA: Pearson.

Misencik, M. (2008). The three big educational theorists: Dewy, Tyler, Montessori. Bowling Green, OH: Bowling Green University.

Moffett, N. L., \& Frizzell, M. M. (2011, Fall). Attention: All schools need highly qualified and highly effective teachers now. Teachers of Color, 26-27.

Moffett, N. L., Frizzell, M. M., Brownlee-Williams, Y., \& Thompson, J. (2012). Impact of first-time passing rates of teacher candidates at an HBCU. Manuscript submitted for publication in Association of Teacher Educators Yearbook XXIII. National Center for Education Statistics. (2010). Status and trends in the education of racial and ethnic minorities. Retrieved on from http://nces.ed.gov/pubs2010/ 2010015/index.asp

National Center for Education Statistics. (2011). Reading achievement gaps. Retrieved from http://nces.ed.gov/programs/coe/indicator_rgp.asp

National Center for Education Statistics. (2012). Higher education: Gaps in access and persistence study. Chapter 4: Academic preparation and achievement, indicator 24: college entrance exams. Retrieved from http://nces.ed.gov/pubs2012/ 2012046/chapter 4_8.asp

National Council for the Accreditation of Teacher Education (NCATE) Standards. (2012). http://www.ncate.org/Standards/NCATEUnit Standards/UnitStandards inEffect2008/tabid/476/Default.aspx\#stnd1

Nettles, M. T., Scatton, L. H., \& Steinburg, J. H., Tyler, L. (2011). Performance and passing rate differences of African American and white perspective teachers on Praxis examinations: A joint project of the national education association (NEA) and educational testing service (ETS). Research Report ETS RR-11-08.

Washington, DC: ERIC Publications.

Obama's State of the Union Address. (2013). New York Times. Retrieved from http://www.nytimes.com/2013/02/13/us/politics/obamas-2013-state-of-the-unionaddress.html?pagewanted=all\&_r=1\&

Ogbu, J. (2003). Black American students in an affluent suburb: A study of academic disengagement: Sociocultural, political, and historical studies in education. Mahwah, NJ: Lawrence Erlbaum Associates.

Pardee, R. L. (1990). Motivation theories of Maslow, Herzberg, McGregor and McClelland. A literature review of selected theories dealing with job satisfaction and motivation. Retrieved from http://www.eric.ed.gov/PDFS/ED316767.pdf

Pearson Education. (2013). Retrieved from http://www/pearsonassessments.com/teacher licensure/custom-programs.html

Perry, E. M. (2011). Predictors of teacher candidates' success on Praxis I: Academic skills assessment: The correlations between the SAT, HSGPA, and Praxis I: PreProfessional Skills Test (PPST) (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses.

Pohan, C. A., \& Ward, M. J. (2011). Testing candidates' basic reading skills to ensure teacher quality: Promising practice or problematic policy? Action in Teacher Education, 33(3), 246-253.

Powell, J. S. (2012). Historically black colleges and teacher accreditation: Successes and challenges (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (3518107)

Snyder, T. D., Hoffman, C. M., \& Geddes, C. M. (1996). States requiring testing for initial certification of teachers, by authorization, year enacted, year effective, and test used: 1987, 1990, and 1996. Washington, DC: Digest of Education Statistics.

Slater, R. B. (1999-2000, Winter). Ranking the states by the black-white SAT scoring gap. The Journal of Blacks in Higher Education, 26, 105-110.

Supon, V. (2004). Implementing strategies to assist test anxious students. Journal of Instructional Psychology, 31(4), 292-296. Retrieved from http://www.proquest. umi.com

Title II Higher Education Act. (2013). Retrieved from https://title2.ed.gov/default.asp United States Department of Education [USDOE]. (2010). ESEA blueprint for reform. Retrieved from www2.ed.gov

United States Department of Education [USDOE]. (2011a). Our future, our teachers: The Obama administration's plan for teacher education reform and improvement. Retrieved from http://www.2ed.gov/inits/ed/index/html

United States Department of Education [USDOE]. (2011b). Preparing and credentialing the nation's teachers: The secretary's eighth report on teacher quality (based on data provided for 2008, 2009 and 2010). Office of Postsecondary Education. Retrieved from http://www2.ed.gov/about/reports/annual/teachprep/2011title2report.pdf

United States Department of Education [USDOE]. (2013). Preparing and credentialing the nation's teachers: The secretary's ninth report on teacher quality. Office of Postsecondary Education. Retrieved from https://title2.ed.gov/TitleIIReport13. pdqf

United States Department of Education [USDOE]. (2013). No Child Left Behind of the Elementary and Secondary Education Act. Retrieved from http://www2.ed.gov/ nclb/landing.jhtml

Wall, T. (2008). Evaluation of the impact of participation in the T.E.S.T. examination preparation program on elementary education teacher candidate C-Base and Praxis II performance (Doctoral dissertation). Retrieved from https://mospace. umsystem.edu/xmlui/bitstream/handle/10355/5609/research.pdf

Wilson, A. J. (1985, April). Knowledge for teachers: The origin of the national teacher examinations program. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Woodson, C. G. (1919). The education of the Negro prior to 1861: A history of the education of the colored people of the United States from the beginning of slavery to the civil war. Washington, DC: Associated Publishers.

Woodson, C. G. (2010). The mis-education of the Negro. New York: SoHo Books
Zwick, R., \& Green, J. G. (2007). New perspectives on the correlation of SAT scores, high school grades and socioeconomic factors [Abstract]. Journal of Educational Measurement, 44(1), 23-45.

Zwick, R., \& Sklar, J. G. (2005). Predicting college grades and degree completion using high school grades and SAT scores: The role of student ethnicity and first language. American Educational Research Journal, 42(3), 439-464. Retrieved from http://www.jstor.org/stable/3700459

