

5-1-2014

## **A Comparison of the Success of Community College Graduates Who Entered College with a GED, a High School Diploma, or an Alternative Diploma**

April Danielle Miles

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A comparison of the success of community college graduates who entered college with a  
GED, a high school diploma, or an alternative diploma

By

April Danielle Miles

A Dissertation  
Submitted to the Faculty of  
Mississippi State University  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy  
in Community College Leadership  
in the Department of Leadership and Foundations

Mississippi State, Mississippi

May 2014

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2014

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GED, a high school diploma, or an alternative diploma

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Pages in Study: 75

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In this study, the researcher compared the success of community college graduates who entered college with a GED, a high school diploma, or an alternative diploma. The researcher used a quantitative analysis method with the existing data of students for three years within a single community college system to answer research questions to determine success of community college graduates who entered college with various high school diplomas or equivalences. The researcher asked four research questions to compare the success of the selected community college graduates:

What is the grade point average (GPA) at the end of the first semester, number of credits earned, and graduation rate for community college graduates who entered college with a GED, a high school diploma, or an alternative diploma?

Is the GPA at the end of the first semester for community college graduates who entered college with a GED, a high school diploma, or an alternative diploma statistically significantly different?

Is the number of credits earned for community college graduates who entered with a GED, a high school diploma, or an alternative diploma statistically significantly different?

Is the graduation rate for community college students who entered college with a GED, a high school diploma, or an alternative diploma statistically significantly different?

The researcher's purpose in this study was to compare the success of community college graduates who entered college with a GED, a high school diploma, or an alternative diploma. In Conclusion 1, the researcher determined that findings from this study show that GED graduates have the least success as community college students with a lower GPA and credit hours attempted than high school diploma graduates, but they do have a statistically equivalent graduation rate of 22.7% compared to alternative diploma graduates of 19.6%. Supporting Conclusion 2, the researcher's analysis shows that high school graduates are more successful in community college studies with a higher GPA the first semester, more credit hours earned, but a statistically equivalent graduation rate compared to GED graduates or alternative diploma graduates.

## DEDICATION

This dissertation is dedicated to The Delta Kappa Gamma Society International for its devoted dedication to women educators, the sisters of the Alpha Xi Chapter of Delta Kappa Gamma for their needed support, gracious receiving of the Norma Bristow Salter Scholarship from the Delta Kappa Gamma International Scholarship Committee, my coworkers and students at Beville State Community College, my grandmother, Chrystell Hankins, and my two sons, Blaise and Miles, which helped me through this enduring process.

## ACKNOWLEDGEMENTS

I would like to acknowledge the faculty, staff and administration at Bevill State Community College and my dissertation committee, Dr. Ed Davis, Dr. Stephanie King, Dr. William Wiseman and Dr. Wayne Stonecypher, at Mississippi State University for their support in this dissertation process, as well as, the Alabama Association for Public and Continuing Adult Education and the Commission on Adult Basic Education for encouraging professional development in the adult education field.

## TABLE OF CONTENTS

DEDICATION .....	ii
ACKNOWLEDGEMENTS .....	iii
LIST OF TABLES .....	vi
LIST OF FIGURES .....	vii
CHAPTER	
I. BACKGROUND OF THE STUDY .....	1
Statement of the Problem .....	7
Purpose of the Study .....	8
Definitions .....	9
Conceptual Framework .....	10
Theoretical Framework .....	11
Overview of the Methodology .....	12
Delimitations and Limitations .....	13
Significance of the Study .....	13
Organization of the Study .....	14
II. LITERATURE REVIEW .....	15
Summary of Literature Review .....	42
III. METHODOLOGY .....	43
Research Design .....	43
Research Site .....	44
Participants and Sampling Procedure .....	44
Instrumentation .....	44
Data Collection Procedures .....	45
Procedures for Data Analysis .....	45
Summary of Methodology .....	46
IV. FINDINGS .....	48
Demographics of Sample .....	48

Research Question 1 .....	48
Research Question 2 .....	54
Research Question 3 .....	57
Research Question 4 .....	59
Chapter Summary.....	61
 V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....	 62
Summary of Findings and Conclusions .....	62
Limitations of the Study.....	65
Implication and Recommendations for Future Research .....	65
Chapter Summary.....	66
 REFERENCES .....	 67
 APPENDIX	
A. APPROVAL LETTER TO CONDUCT RESEARCH BEVILL STATE COMMUNITY COLLEGE.....	72
B. IRB APPROVAL LETTER .....	74

## LIST OF TABLES

1	Descriptive Statistics for GPA Scores by Diploma Group .....	50
2	Descriptive Statistics for Credits Earned .....	53
3	Cross-Tabulation of Earned a Degree Versus Group.....	54
4	One-Way ANOVA to Compare GPA Scores .....	55
5	Mood's Median Test to Compare GPA Scores.....	56
6	One-way ANOVA to Compare Credits Earned .....	58
7	Mood's Median Test to Compare Credits Earned.....	59
8	Z Tests for Comparison of Proportions Who Earned a Degree Versus Group.....	60

## LIST OF FIGURES

1	Conceptual framework of this study .....	11
2	Histograms of GPA scores for students with a high school diploma, a GED, or an alternative diploma .....	51
3	Histograms of credits earned by students in the first semester with a high school diploma, a GED, or an alternative diploma. ....	52
4	Distribution of GPA residuals.....	55
5	Distribution of residuals for credits earned .....	59

## CHAPTER I

### BACKGROUND OF THE STUDY

The GED<sup>®</sup> (General Educational Development) Testing Service (2013) reported that about 95% of American colleges and universities accept legitimate GED<sup>®</sup> graduates in the same manner as high school graduates. Ezell (2009) also suggested that GED<sup>®</sup> graduates are not as well prepared for college as high school graduates. In this study, the researcher compared the success of community college graduates who entered college with a GED<sup>®</sup>, a *high school diploma*, or an *alternative diploma*. The researcher used a quantitative analysis method with existing data of students for three years, 2009–2012, within a community college system to answer four research questions to determine success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

Ezell (2009) suggested that the GED<sup>®</sup> does not adequately prepare students for college level academic courses. However, the GED<sup>®</sup> Testing Service (2013) described the GED<sup>®</sup> Test as a rigorous and proctored battery of five tests that take more than 7.5 hours to complete. The GED<sup>®</sup> Test (GED<sup>®</sup> Testing Service, 2013) is designed to measure the skills and knowledge equivalent to a high school course of study. The five content areas that comprise the test are mathematics, language arts–reading, language arts– writing (including essays), science, and social studies.

Students may also earn their high school equivalency in a home school, a private unaccredited school, or an on-line school whose certifications are often categorized as alternative diplomas. Levicoff (1995) suggested that if an alternative diploma grantor tells a student that he or she can take the test at home, the certification that it grants is probably not an accredited high school diploma or GED<sup>®</sup> certification. Therefore, as of July 2011, the U.S. Department of Education (DoE; 2013) and the Council for Higher Education Accreditation (CHEA; 2003) decided that they will not recognize any accreditation agency that has the word “online” in its name.

In this study, first, the researcher compared community college graduates who entered college with an earned GED<sup>®</sup>, an earned high school diploma, or an earned alternative diploma. The DoE (2013) suggested that, when students drop out of high school, they usually enter a GED<sup>®</sup> program, chose an alternative diploma, or continue to have less than a 12th-grade education for at least 5 years or more. The GED<sup>®</sup> Testing Service (2013) also concluded that a student who earns the GED<sup>®</sup> has earned the equivalency of a 12th-grade education. In addition, the GED<sup>®</sup> Testing Service (2013) stated,

A high school diploma remains the primary ticket to many entry-level jobs, and is also a prerequisite for promotions, occupational training, and postsecondary education. In an ideal society, everyone would graduate from high school.

Although that is not a reality today, GED<sup>®</sup> Testing Service offers the only nationally recognized opportunity to earn a high school-equivalency credential.

( p.12)

The GED<sup>®</sup> is a group of five subject tests that, when passed, certify that the test taker has high school equivalent academic skills. The American Council on Education (ACE; GED<sup>®</sup> Testing Service, 2013) that owns the GED<sup>®</sup> trademark,

...coined the term GED<sup>®</sup> to identify tests of general educational development that measure proficiency in science, mathematics, social studies, reading, and writing.

Passing the GED<sup>®</sup> test gives those who did not complete high school the opportunity to earn their high school equivalency credential. (p.13)

In addition, the GED<sup>®</sup> Testing Service is now a joint effort of the ACE and Pearson and is the only developer of the GED<sup>®</sup> Test. The GED<sup>®</sup> Testing Service (2013) stated, “The test can be taken by paper or on computer, but tests must be taken in person. Jurisdictions award a Certificate of High School Equivalency or similarly titled credential to takers” (p. 12). The GED<sup>®</sup> assessment has been established since the 1940s. According to the GED<sup>®</sup> Testing Service (2013), the history of the GED<sup>®</sup> is very rich and,

...to date, there have been four generations of the GED<sup>®</sup> test: the original GED<sup>®</sup> test released in 1942, the 1978 series, the 1988 series, and the current series released in 2002. While the academic content areas in which candidates are assessed— English language arts (reading/writing), social studies, science, and mathematics—have not changed , the priorities and assumptions by which proficiency in these areas is assessed have evolved. Since the GED<sup>®</sup> test assesses academic skills and knowledge typically developed in a four-year high school education program, it is of utmost importance to GED<sup>®</sup> Testing Service that the GED<sup>®</sup> test continues to evolve as secondary education evolves. (p. 12)

In this study, a high school diploma is a diploma earned by attending and graduating from an accredited K–12 institution with an advanced or standard high school degree. In this study, an alternative diploma is another option to the high school diploma or 12th-grade education that can be earned in a home school, an unaccredited private school, or an online school.

Ezell (2009) suggested that obtaining an alternative diploma might negatively affect students when they enter the workforce or continue to higher education, and that employers or postsecondary education officials might not recognize their diploma. Currently, in postsecondary educational institutions in Alabama, students who graduate from an unaccredited school or home school might be granted college admission with a score of 16 or above on the American College Testing (ACT) Test.

Therefore, second, the researcher compared the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Third, the researcher conducted this investigation by evaluating (a) the GPA at the end of the first semester, (b) the number of credits earned, and (c) the degree earned for the community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Fourth, the researcher determined whether a statistically significant difference exists in the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Fifth, the researcher determined whether a statistically significant difference exists in the number of credits earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Finally, the researcher examined whether a statistically significant difference

exists in the graduation rate for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The National Center for Education Statistics of the DoE (2005) stated,

Approximately 30 million adults have serious educational deficiencies which affect their ability to continue their education, benefit from occupational training programs, obtain and retain employment, or, in the case of limited English proficient individuals, succeed in their new home country; an additional 60 million have education deficiencies that could also prevent them from fulfilling their potential; thus, more than 90,000,000 adults (45% of the adult population) are in jeopardy of not fully participating in family, work, and community opportunities. (p. 2)

The newly revamped 2013 GED<sup>®</sup> Test arrived in January 2014 with major changes. These new changes might make it even harder for those who drop out of school to pass the GED<sup>®</sup> Test. Therefore, separate from the four research questions, the researcher also asks three related questions, the second of which is:

Will high school dropouts and diploma seekers instead turn to an alternative diploma grantor rather than the GED<sup>®</sup> certification?

Ezell and Bear (2005) said that state regulations of and policies for alternative diplomas on high school dropouts is an increasingly important problem in society, stating,

Rural America is becoming more difficult to define in today's global economy. Many rural areas simply die and others turn more toward urban means of living. Many American manufacturing industries have moved out of the once thriving

rural labor force and moved their business overseas. These industries leave behind large unemployment, abandoned buildings, depression, dwindling tax revenue, and a great loss in the rural community. Local government is faced with finding means to attract employment opportunities for community members and ways to sustain in unstable economic times. (p. 55)

In addition, Ezell and Bear (2005) reported that many dislocated workers are faced with the reality of leaving their hometowns and migrating to urban areas with greater job opportunities. However, they are not able to find greater job opportunities because they lack one crucial element that today's employers require: a high school diploma or its equivalency, which is the GED<sup>®</sup> certification.

The DoE (2013) said that it is becoming clear that even a high school diploma or GED<sup>®</sup> certification is not sufficient for some employment opportunities that are labor intensive, yet require some college education or beyond in today's competitive workforce. The U.S. Bureau of the Census (2013) reported that 55% of all adults in Alabama have no high school diploma or have only a high school diploma. In Alabama, students who successfully pass the nationally recognized GED<sup>®</sup> Test receive one tuition-free course at a community college of their choice, which assists students to continue their education. In addition, adult education instructors are trained to help GED<sup>®</sup> students with college entrance and financial aid opportunities for college.

Ezell and Bear (2005) also examined awareness of the reality of alternate diploma grantors, *diploma mills*, counterfeit diplomas, and found that what the GED<sup>®</sup> certification offers is of key importance. Through the legislation of federal, state, and local governments, educators can ensure that entities that try to establish themselves as

legitimate schools are constructed within strict guidelines. Stewart and Spille (1988) stated, “Naïve or unscrupulous individuals are acquiring credentials that they do not earn and do not deserve; credentials that do not represent educational accomplishment” (p. 7). In addition, Carnevale (2006) stated, “Many home schools and private schools fall under religious entities and therefore have limited guidelines for operation under state laws” (p. 14). Furthermore, Stewart and Spille (1988) argued, regarding the value of an accredited diploma, “Certainly, the value of a degree from legitimate American colleges and universities is being undermined, and the situation is a cause for concern on the part of anyone who cares about the future of American higher education” (p. 7).

### **Statement of the Problem**

The DoE (2013) suggested that high school dropouts and students who earn a GED<sup>®</sup> or alternative diploma would not be as successful in college courses as students who earn a traditional high school diploma. The DoE also suggested that obtaining an alternative diploma might negatively affect students when they enter the workforce or continue to higher education, and that employers or postsecondary educators might not recognize their diplomas.

The DoE (2013) suggested that the influence of the alternative diploma and the GED<sup>®</sup> certification on high school dropouts in rural America is crucial. The DoE also investigated whether high school dropouts in rural America are choosing the alternative diploma route versus the GED<sup>®</sup> certification route and whether the outcomes are much lower for them than for high school graduates in the areas of employment, higher education, migration, and socioeconomic status.

## **Purpose of the Study**

The researcher's purpose in this quantitative study was to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The researcher conducted a quantitative analysis of three years (2009–2012) of existing data on community college graduates within a community college system to answer four research questions to determine the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma and were enrolled at the target community college during the stated years:

1. What is the GPA at the end of the first semester, the number of credits earned, and the degree earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma?
2. Is the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?
3. Is the number of credits earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?
4. Is the graduation rate for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?

A second purpose of this quantitative study was to test Tinto's (1975, 1993, 1997) theory of conceptual schema for dropouts from college by comparing the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma and were enrolled at the target community college from 2009–2012.

### **Definitions**

The terms listed in this section are provided for clarification and to present a clear understanding of the use of terms in this study.

*Accreditation* is defined as the act of giving official authorization to or approval of, especially,

a : to provide with credentials; especially : to send (an envoy) with letters of authorization  
b : to recognize or vouch for as conforming with a standard  
c : to recognize (an educational institution) as maintaining standards that qualify the graduates for admission to higher or more specialized institutions or for professional practice  
recognize an educational institution as holding high standards in academia. (Merriam-Webster, 2011, p. 44)

An *alternative diploma grantor* is defined by Ezell and Bear (2005) as “Any private entity that offers an option for the high school diploma other than state accredited high schools or the nationally recognized GED<sup>®</sup>” (p. 77).

A *church private school* is defined by Ezell and Bear (2005) as an “educational institution that is primarily supported by a church or religious affiliation” (p. 79).

A *community college* is defined by Merriam-Webster (2011) as “a school that you go to after high school: a school that offers courses leading to an associate’s degree” (p.57).

A *diploma mill* is defined by Ezell and Bear (2005) as, “An entity that offers a diploma for a fee that has no accreditation or legitimacy” (p. 88).

*Dropout rate* is defined by Ezell and Bear (2005) as “the rate [at] which students quit or leave high school and do not return” (p. 90).

A *private school* is defined by Merriam-Webster (2011) as “a school that does not get money from the government and that is run by a group of private individuals” (p. 99).

### **Conceptual Framework**

The conceptual framework for this study includes independent and dependent variables related to the research questions. Using the research questions, the researcher compared the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The dependent and independent variables for the research study are illustrated in Figure 1, which is the conceptual framework of this study. The independent variable was type of degree: (a) a GED<sup>®</sup>, (b) a high school diploma, or (c) an alternative diploma; the dependent variables were (a) the GPA at the end of the first semester, (b) the number of credits earned during the first semester, and (c) whether the associate’s degree was earned.

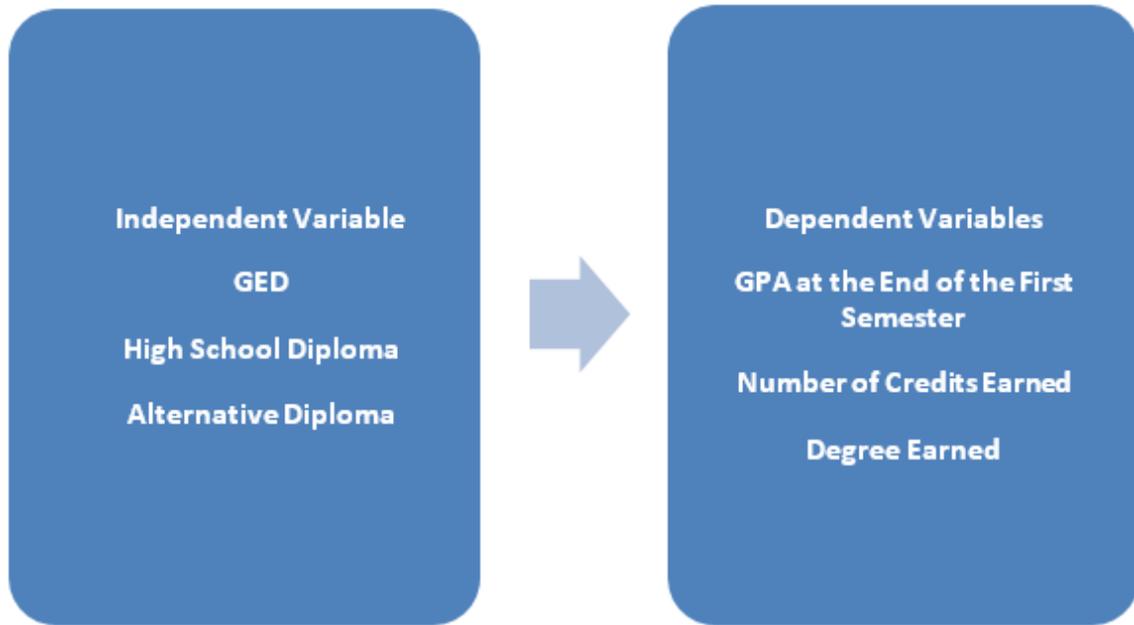


Figure 1. Conceptual framework of this study

### Theoretical Framework

The theoretical framework used for this study addresses points in Tinto's (1975, 1993, 1997) theory and conceptual schema for dropouts from college. Tinto (1975) demonstrated that students drop out of college because they do not integrate academically or socially in college. This observation holds true for high school dropouts as well. Tinto (1975) demonstrated that, if a student has a low academic score, he or she would be less academically integrated, which would influence his or her social integrations, which could eventually lead to dropping out of the academic setting.

Tinto (1975) expanded on the retention model by applying the exchange theory to Durkheim's (1966) theory of suicide. Tinto based the exchange theory on the understanding that humans avoid costly actions and seek rewarding statuses, relationships, interactions, and emotional states (1975, as cited in Nye 1979). Tinto

observed that students apply the exchange theory in determining their academic and social integration, which are interpreted as goals and levels of institutional commitment. If the perceived benefits of higher education outweigh the costs, the student remains in school; if other activities are perceived as having greater rewards and less cost, the student will drop out. Other issues are socioeconomic status and the individual attributes of race and gender. Tinto measured successful academic integration by grade performance and evaluated social integration by the development and frequency of positive interaction with peers and faculty and involvement in extracurricular activity. The stronger these commitments to the institution and the goal of completing, as well as the higher the levels of academic and social integration, the less likely the student would be to drop out.

### **Overview of the Methodology**

In this study, the researcher performed a quantitative analysis by examining three years of existing data from a community college system to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Through the quantitative analysis, the researcher answered four research questions:

1. What is the GPA at the end of the first semester, the number of credits earned, and the degree earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma?

2. Is the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?
3. Is the number of credits earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?
4. Is the graduation rate for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?

### **Delimitations and Limitations**

The purpose of this study was to determine a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The limitations of the study are external and internal influences such as student's economic status, the labor market, and access to financial aid. Personal identifiers were not used to determine the success of community college graduates in this study. Delimitations of the study were that only a three-year time period was studied and only one institution was observed.

### **Significance of the Study**

The study is significant because it will help leaders, community college administrators, adult education instructors, and community members to recognize these successes and to change policies for future endeavors to ensure that all students have an equal opportunity for success.

## **Organization of the Study**

This dissertation is organized into five chapters. In Chapter I, the background of the study and the introductory elements are presented, including the statement of the problem, the purpose of the study, the significance of the study, the research questions, the assumptions, the delimitations, and the definition of terms. Chapter II presents the related literature on the topic. In Chapter III, the procedures and methods used in the study are discussed, including the research design, the population and sampling procedure, and the data collection procedures. In Chapter IV, the results and statistical analysis are presented, including the outcomes, the demographics, and an examination of the four research questions. In Chapter V, the findings and implications are discussed, as are conclusions, limitations of the study, and recommendations for future research.

## CHAPTER II

### LITERATURE REVIEW

In this chapter, first, the literature addressing the comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma is summarized. Second, the researcher reviews the literature to answer the four research questions and to define important key terms on the topic.

Hull (2009) found that on-time graduates had the best outcomes; therefore, school districts should make on-time graduation for all students their first priority. However, the extra work that late graduates put into earning a diploma—and the effort that their high school teachers and administrators put into helping them—pays off not only in academic outcomes, but also in jobs, involvement in civic life, and commitment to healthy lifestyles. Hull also reported that late graduates are much more likely to go on to obtain a bachelor's or an associate's degree. Thus, a student who faces late graduation has three options: (a) to stay in school and earn late a regular high school diploma, (b) to leave school and earn no diploma, or (c) or to leave school and earn a GED<sup>®</sup>. Late graduates fare better compared to students who leave school and to those who earn a GED<sup>®</sup> (Hull, 2009).

The Institute for Education Sciences (IES; 2011) stated,

The General Educational Development (GED<sup>®</sup>) credential is often considered to be the equivalent of a high school diploma for students who do not graduate from high school. A GED<sup>®</sup> credential can expand opportunities in the labor market (Song & Hsu, 2008, p. 2). (p. 21)

IES (2011) went on to say,

GED<sup>®</sup> recipients do not enroll in postsecondary education at the same rate as do high school graduates. For instance, more than 64% of students who graduated from high school in 2003 were enrolled in a 2- or 4-year institution of higher education in 2003 (U.S. Bureau of Labor Statistics 2004). By comparison, a study of 2003 GED<sup>®</sup> recipients found only 31% of GED<sup>®</sup> recipients enrolled in a postsecondary institution within 5 years, and the majority of those enrolled for just one semester (Patterson, Song and Zhang 2009). Similarly, GED<sup>®</sup> recipients do not fare as well as high school graduates in the labor market, where GED<sup>®</sup> recipients have relatively lower future earnings (Heckman, Humphries, and Mader 2010). While GED<sup>®</sup> recipients may not realize outcomes equivalent to those of high school graduates, GED<sup>®</sup> recipients fare better on several outcomes—including future earnings, life satisfaction, levels of depression, and substance abuse—than do high school dropouts who do not obtain the credential (Ou 2008; Heckman, Humphries, & Mader 2010). (p. 2)

The DoE (2005) also stated,

Approximately 30 million adults have serious educational deficiencies which affect their ability to continue their education, benefit from occupational training

programs, obtain and retain employment, or, in the case of limited English proficient individuals, succeed in their new home country; an additional 60 million have education deficiencies that could also prevent them from fulfilling their potential; thus, more than 90,000,000 adults (45% of the adult population) are in jeopardy of not fully participating in family, work, and community opportunities. (p. 2)

The newly revamped 2013 GED<sup>®</sup> Test arrived in January 2014 with major changes. The new changes might make it even harder for those who drop out of school to pass the GED<sup>®</sup> Test.

Ezell and Bear (2005) found that state regulations and policies regarding alternative diplomas for high school dropouts were becoming an increasingly important problem in society.

Rural America is becoming more difficult to define in today's global economy. Many rural areas simply die and others turn more toward urban means of living. Many American manufacturing industries have moved out of the once thriving rural labor force and moved their business overseas. These industries leave behind large unemployment, abandoned buildings, depression, dwindling tax revenue, and a great loss in the rural community. Local government is faced with finding means to attract employment opportunities for community members and ways to sustain in unstable economic times. (p. 55)

Ezell and Bear (2005) said that many dislocated workers are faced with the reality of leaving their hometowns and migrating to urban areas with greater job opportunities. However, they are not able to find greater job opportunities because they lack one crucial

element that today's employers require: a high school diploma or its equivalency, which is the GED<sup>®</sup>.

The DoE (2005) said that it was becoming clear that even a high school diploma or GED<sup>®</sup> is not sufficient for some employment opportunities that are labor intensive, yet require some college or beyond in today's competitive workforce. The U.S. Bureau of the Census (2013) reported that 55% of all adults in Alabama had no high school diploma or only a high school diploma. In Alabama, those who successfully pass the nationally recognized GED<sup>®</sup> Test receive one tuition-free course at a community college of their choice that will assist them to continue their education even further. Adult education instructors are also trained to help GED<sup>®</sup> students with college entrance and financial aid opportunities for college.

Ezell and Bear (2005) examined awareness of the reality of alternate diploma grantors, diploma mills, counterfeit diplomas, and determined that what the GED<sup>®</sup> has to offer is of key importance. Through the legislation of federal, state, and local governments, one can ensure that entities that try to establish themselves as legitimate schools are constructed with strict guidelines. Stewart and Spille (1988) stated, "Naïve or unscrupulous individuals are acquiring credentials that they do not earn and do not deserve; credentials that do not represent educational accomplishment" (p. 7). In addition, Carnevale (2006) stated, "Many home schools and private schools fall under religious entities and therefore have limited guidelines for operation under state laws (p. 14). Furthermore, Stewart and Spille (1988) argued the value of an accredited diploma, saying, "Certainly, the value of a degree from legitimate American colleges and universities is

being undermined, and the situation is a cause for concern on the part of anyone who cares about the future of American higher education.” (p. 7).

Ezell (2009) suggested that passing the GED<sup>®</sup> does not adequately prepare students for college level academic courses. The GED<sup>®</sup> Test is a rigorous and proctored battery of five tests that takes more than 7.5 hours to complete. The GED<sup>®</sup> Testing Service (2013) designed the GED<sup>®</sup> Test to measure the skills and knowledge equivalent to a high school course of study. The five content areas that comprise the test are mathematics, language arts-reading, language arts-writing (including essay), science, and social studies.

Students may also earn their high school equivalency in a home school, a private unaccredited school, or an on-line school whose certifications are often categorized as alternative diplomas. If an alternative diploma grantor states the student can take the test home, it is probably not an accredited high school diploma or GED<sup>®</sup> certification. As of July 2011, the DoE (2013), and CHEA decided that they will not recognize any accreditation agency that has the word “online” in its name.

For this study, the researcher examined community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The DoE (2013) suggested that, when students drop out of school, they usually enter a GED<sup>®</sup> program, chose an alternative diploma, or continue to have less than a 12th-grade education for at least 5 years or more. The GED<sup>®</sup> Testing Service (2013) also concluded that a student who earns the GED<sup>®</sup> has earned the equivalency of a 12th-grade education. In addition, the GED<sup>®</sup> Testing Service (2013) stated,

A high school diploma remains the primary ticket to many entry-level jobs, and is also a prerequisite for promotions, occupational training, and postsecondary education. In an ideal society, everyone would graduate from high school.

Although that is not a reality today, GED<sup>®</sup> Testing Service offers (2013) the only nationally recognized opportunity to earn a high school-equivalency credential. (p. 12)

The GED<sup>®</sup> Test consists of five subject tests that, when passed, certify that the test taker has a high school equivalent in academic skills. The ACE (GED<sup>®</sup> Testing Service, 2013), which owns the GED<sup>®</sup> trademark,

...coined the term GED<sup>®</sup> to identify tests of general educational development that measure proficiency in science, mathematics, social studies, reading, and writing.

Passing the GED<sup>®</sup> test gives those who did not complete high school the opportunity to earn their high school equivalency credential. (p. 13)

In addition, the GED<sup>®</sup> Testing Service is now a joint effort of the ACE and Pearson, and is the only developer for the GED<sup>®</sup> Test. The GED<sup>®</sup> Testing Service (2013) stated, “The test can be taken by paper or on computer, but tests must be taken in person. Jurisdictions award a Certificate of high school Equivalency or similarly titled credential to persons who meet the passing score requirements.” The GED<sup>®</sup> Test has been established since the 1940s. The history of the GED<sup>®</sup> Test is very rich and

...to date, there have been four generations of the GED<sup>®</sup> test: the original GED<sup>®</sup> test released in 1942, the 1978 series, the 1988 series, and the current series released in 2002. While the academic content areas in which candidates are

assessed—English language arts (reading/writing), social studies, science, and mathematics—have not changed, the priorities and assumptions by which proficiency in these areas is assessed have evolved. Since the GED<sup>®</sup> test assesses academic skills and knowledge typically developed in a four-year high school education program, it is of utmost importance to GED<sup>®</sup> Testing Service that the GED<sup>®</sup> test continues to evolve as secondary education evolves. (GED<sup>®</sup> Testing Service, 2013, p.12)

In this study, a high school diploma is a diploma earned by attending and graduating from an accredited K–12 institution with an advanced or standard high school degree. In this study, an alternative diploma is another option to the high school equivalency or 12th-grade education that can be earned in a home school, unaccredited private school, or an online school.

The GED<sup>®</sup> Testing Service (2013) said that, on January 2, 2014, it would release the new GED<sup>®</sup> assessments that will ensure that the GED<sup>®</sup> Test is no longer an ending point for adults,

...but a springboard for more education, training, and better-paying jobs. The new assessment will continue to provide adults the opportunity to earn a high school credential, but it goes further by measuring career- and college-readiness skills that are the focus of today's curriculum and tomorrow's success. (p. 12)

The GED<sup>®</sup> Testing Service (2013) also advised of changes in the four content areas of literacy, mathematics, science, and social studies, which,

...will measure a foundational core of knowledge and skills that are essential for career and college readiness. A GED® test graduate must remain competitive with students who complete their high school credentials in a traditional manner.

Evidence suggests that test-takers who demonstrate fluency with the skills measured in the new assessment will be better prepared for what they plan to do with their lives. A graduate will no longer hold just a high school equivalency credential, but a roadmap for life's success. It's a stepping-stone toward a college classroom or a better career and a family sustaining wage. (p. 13)

Furthermore, the GED® Testing Service (2013) warned,

Those who eventually pursue postsecondary education, holding a GED® credential has no statistically significant impact on wage earning versus holding a traditional high school diploma. However, adults holding traditional high school diplomas may have about \$3,060 more annually in personal incomes than those who hold GED® credentials. Two other important messages conveyed through this study: (1) there is a sizable income disadvantage for adults who postpone completing their high school education after the age of 20; and (2) any postsecondary education will bring significant increases in incomes, as shown by the effect size of having postsecondary education versus that of holding a GED® credential or high school diploma. Therefore, the adult education community should encourage adult learners to complete a high school-level education as early as possible and inspire adult learners toward higher education (Song & Hsu, 2008, p. 8). (p. 2)

The impact of obtaining a GED® credential versus a high school diploma or no accreditation at all has been widely studied by educational economists. Cameron and

Heckman (1993, as cited in Song & Hsu, 2008) conducted one of the most influential studies, for,

Using a sample of males (ages 25 and 28) drawn from the National Longitudinal Survey of Youth (NLSY), Cameron and Heckman found that the GED<sup>®</sup> credential recipients earned lower hourly wages and worked fewer hours than do traditional high school graduates. In 1998, the U.S. DoE published a research synthesis by Boesel, Alsalam, and Smith on educational and labor market performance of GED<sup>®</sup> credential recipients. (p. 22)

Cameron and Heckman (1993, as cited in Song & Hsu, 2008) also greatly impacted today's research on GED topics,

The authors also summarized all major studies comparing labor market outcomes among GED<sup>®</sup> credential recipients, high school graduates, and dropouts from the 1940s up to the late 1990s. The authors found that GED<sup>®</sup> credential recipients earned higher hourly wages than uncredentialed dropouts but less than high school graduates, and that GED<sup>®</sup> credential recipients, in general, tended to work fewer hours than high school graduates and had a higher turnover rate. (p. 24)

Levicoff (1995) suggested that high school dropouts in rural America are choosing the alternative diploma route versus the GED<sup>®</sup> route, and that outcomes for students who chose the alternative diploma route fall behind those of traditional high school graduates, including areas of employment, higher education, migration, and socioeconomic status.

The DoE (2013) found that dropping out of high school is related to a number of negative outcomes. For example, the DoE (2013) demonstrated that the,

...median income of persons ages 18 through 67 who had not completed high school was roughly \$25,000 in 2009. By comparison, the median income of persons ages 18 through 67 who completed their education with at least a high school credential, including a General Educational Development (GED<sup>®</sup>) certificate, was approximately \$43,000. Over a person's lifetime, this translates into a loss of approximately \$630,000 in income for a person who did not complete high school compared to a person with at least a high school credential (Rouse 2007). Among adults age 25 and older, a lower percentage of dropouts are in the labor force than are adults who earned a high school credential. (p. 4)

Similarly, among adults in the labor force, a higher percentage of dropouts are unemployed relative to adults who earned a high school diploma. Dropouts also make up a higher percentage of the Nation's institutionalized population. In addition, the DoE (2013) found that,

...comparing those who drop out of high school with those who complete high school, the average high school dropout costs the economy approximately \$240,000 over his or her lifetime in terms of lower tax contributions, higher reliance on Medicaid and Medicare, higher rates of criminal activity, and higher reliance on welfare. (p. 4)

McKnight (1999) asserted,

As citizens have seen the professionalized service commodity invade their communities, they have grown doubtful of common capacity to care, and so it is that we have become a careless society, populated by impotent citizens and

ineffectual communities dependent on the counterfeit of care called human services (p. 2).

Ezell (2009) suggested that, to combat the influence of the alternative diploma in rural America, it is necessary that local, state, and federal governments work together to with the community to provide workforce development opportunities, higher education, a skilled labor force, and a large marketing campaign to recruit industry into their rural cities. McKnight (1999) stated, “Revolutions begin when people who are defined as problems achieve the power to redefine the problem” (p. 17).

Today, a parent’s right to choose a private education is reflected in the policies of all 50 states. According to *Pierce v. Society of Sisters of the Holy Names of Jesus and Mary* (1925),

In 1925 the Supreme Court recognized that “liberty,” protected by the Fourteenth Amendment, includes the right to choose a private education. Confronted with an Oregon statute mandating public school attendance, the Supreme Court ruled the statute unconstitutional. (p.44)

In addition, in *Pierce v. Society of Sisters of the Holy Names of Jesus and Mary* (1925) the court found that

The fundamental theory of liberty upon which all governments in this Union repose excludes any general power of the state to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the state; those who nurture him and direct his destiny have the right, coupled with the high duty, to recognize and prepare him for additional obligations. (p. 24)

Furthermore, in *Wisconsin v. Yoder* (1972) the court also found that

It is also well established that states have the power to regulate private schools.

Based on the “high responsibility for education of its citizens, [a State] may impose reasonable regulations for the control and duration of basic education.”

(See also *Board of Education of Century School District No.1 v. Allen*, 1968) (p. 66)

Finally, in *Kentucky State Board v. Rudasill* (1979) the court found that the state’s

interest in an informed and self-sufficient citizenry capable of participating in a

democratic society is generally cited to support the regulation of private schools.

However, the right to regulate is not without limitations. Eighty percent of America’s

private schools are religious institutions; therefore, any regulation of these schools must

conform to the First Amendment’s guarantee of the free exercise of religion. The principle

is generally reflected in most, if not all, of the state codes. For example, special

provisions are included for churches.

The DoE (2013, as cited in Ezell & Bear, 2005) also recognizes diploma mills, which are “organizations that award degrees without requiring their students to meet educational standards for such degrees” (p. 21). Ezell and Bear (2005) also noted that some alternative diploma grantors might be deemed diploma mills. Therefore, a diploma mill can be defined as an entity that claims to provide an accredited or nationally recognized high school diploma or GED<sup>®</sup> for a nominal fee with little or no work involved. Ezell and Bear (2005) stated, “A diploma mill is an organization that awards academic degrees and diplomas with substandard or no academic study and without recognition by official educational accrediting bodies” (p. 21). These diploma mills

provide a paper that states that it is a high school diploma or GED<sup>®</sup>. These “diplomas” are not accredited or accepted by most community colleges, but they can be used to obtain employment if employers are not aware of the diploma mill fraud. A person can visit the Web site of a diploma mill, pay a fee, and receive a paper stating his or her name and that he or she has graduated with a high school diploma or GED<sup>®</sup> from the named “school.” Ezell and Bear said that diploma mills are often disguised as Christian schools or entities; therefore, the laws mandating their accountability are vague.

Ezell (2007) also found that the accreditation agency is often part of the misleading foresight, stating: “In an attempt to filter out fake degrees produced by degree mills from entering the job market, government officials initiated the formation of accreditation standards and accrediting bodies” (p. 1). The Commission on Colleges of the Southern Association of Colleges and Schools in Decatur, Georgia, is the legitimate accreditation agency of southern community colleges. Ezell (2007) stated, “But as the accreditation system began to deny fraudulent degree mills legitimacy, criminals began to devise ways to protect their own investment and legitimize their schools through the formation of accreditation mills” (p. 1).

Ezell (2007) reported that diploma mills could even go across borders and into foreign countries, which makes investigation much harder. Along the same line, Gollin (2010) stated,

The problem of diploma mills is international in scope and demands our attention. Recall that St. Regis though based in the United States, established infrastructure in a number of foreign countries. Effective suppression of diploma mills will

necessarily include cross-border cooperation. We feel it is entirely feasible for national authorities to collaborate aggressively to eliminate this global criminal pestilence. (p. 32)

As a result of the St. Regis investigation, Gollin (2010) recommended that governments “clarify existing laws and draft new legislation to classify operation of diploma mills and related infrastructure as criminal violations, while appropriating the small, but necessary resources to enforce these laws” (p. 32).

Furthermore, the Southern Education Foundation (2008) warned, “These data make clear that Alabama’s problems in education constitute its major economic threat today. More than ever before, education has become Alabama’s primary obstacle for advancing income and economic growth. At the same time, education can become the state’s most effective tool for furthering economic development. While Alabama has successfully used state subsidies and tax breaks to attract new jobs into the state, those gains will expand only if the state improves education. For the long term, improving education is Alabama’s most important income-creating investment and its means to enhance and sustain economic growth over time.” (p. 34)

Ezell (2007) also suggested that alternative diploma grantors might contribute to community members migrating out of rural areas with their newfound education and into larger cities with more opportunities. Diploma mills have developed across the United States, especially in rural areas where poverty is high. Albrecht (2006) stated, “From the time of the initial settlement of the Americas by people of European descent, income levels have always been higher and poverty rates lower in metropolitan compared to

nonmetropolitan communities” (p. 1). Ezell (2007) determined that, once a rural person receives a high school diploma, he or she moves to an urban area to pursue employment or college opportunities.

Ezell (2007) also suggested that migration is already a large problem in rural areas, stating, “As the labor market tightens, more people are falsifying their education and experience to gain a competitive advantage” (p. 2). In addition, the Southern Education Foundation (2008) reported,

A few states in the South and nation have been fortunate enough to enlarge their human capital in recent decades by attracting an in-migration of college graduates who help supply an educated work force to meet growing loss of nearly 4,500 college-educated adults between the working ages of 22 and 64. Most who left were young workers. During the same period, the state saw a net increase of more than 15,000 adults of working age who had no high school diploma. (p. 33)

Albrecht (2006) learned that migration ends up leaving behind a void in the labor force, loss of tax revenue, and a deprived sense of community in rural areas. Albrecht stated, “As a consequence of these metro economic advantages, there has been a near steady migration stream from nonmetro to metro areas throughout American history” (p. 1). Albrecht asked, “With no employment opportunities at home what do we expect an individual to do?” (p. 25). Ezell (2007) reported, “The Society of Human Resource Managers estimate that in 2003, 53% of all job applications contained false information” (p. 2). Ezell said that many members residing in a rural community feel that the only choice they have is to migrate to areas where job opportunities are prosperous.

Goetz (1999) concluded,

When all of the industry is gone, all of the tax revenues diminished, and many of the educated society members have migrated to better employment opportunities what are we left with? We are left with poverty, low-skilled workers, higher crime rate, less revenue, closed businesses, empty buildings, declining schools, and the once thriving rural community has turned into a ghost town. (p. 22)

Albrecht (2006) added,

Nonmetro communities are much more dependent on agricultural and natural resource based jobs, are much more likely to be dependent on a single industry, and many of the jobs at the top of the employment structure are simply missing in nonmetro communities (Tigges and Tootle 1990). (p. 1)

Goetz further stated, “Migration is defined here as the movement of people across county (and state) lines within the United States for the purpose of establishing a new place of residence” (p. 1.1). Goetz determined that people decide to migrate for many reasons and that those who chose to leave the rural life for the city create a path for future generations to follow. In addition, Goetz reported,

Over the period March 1996 to March 1997, nearly one in six Americans moved, or 42.1 million people in one year. However, two-thirds of all movers stayed within the same county, while 34% moved across a county line—either within the same state (19%) or across state lines (15%). (p. 11)

Goetz (1999) also suggested that people in rural areas migrate to urban areas for job opportunities and better prosperity for their children. If no industry is left in the rural area, heads of families have no choice but to migrate to areas where they can make a good living for their families.

Grunkemeyer and Moss (1999) suggested that a large gap has begun between family history and embracing the rural life, stating,

Although the discourse surrounding sustainability has only come to the forefront of public awareness within the past few decades, the concept of preserving society for future generations has been voiced by humans throughout history. What culture has not been concerned with its continuation into the distant future and with the survival of future generations? (p. 2).

Grunkemeyer and Moss also suggested that the rural community is paying tax dollars to educate future generations who will in turn spend those education dollars by working and earning a living in an urban area. Community members must ensure that the younger generations have employment opportunities and a prosperous rural community in which to continue to live.

The U.S. Bureau of the Census (2006) reported that the rural community of Marion County, Alabama, has a 63.2% high school completion rate compared to the state average of 75.3%. Therefore, the high school dropout rate is at 36.8% compared to the state average of 24.7%. The poverty level in Marion County, Alabama, is 17.9% compared to the state average of 16.1%. Students who have attained a bachelor's degree or higher are a mere 8.0% compared to the state average of 19.0%. Therefore, Levicoff (1995) challenged,

Through this statistical data, we can see that there is a great need for adult education that will, in turn, lead to lower poverty levels, increased employment, and decreased migration. With the attainment of a legitimate high school diploma or GED<sup>®</sup>, rural community members can have the opportunity to further their

education to attain an associate or bachelor degree and find employment opportunities in their home town. (p. 14)

Offering an alternative, Levicoff (1995) rhetorically asked, “Are all alternative diplomas a diploma mill? The obvious answer is no” (p. 15). Levicoff (1995) also argued, “A non- accredited school is not necessarily a diploma mill or degree mill” (p. 55). Therefore, Levicoff emphasized that one must distinguish “legitimate unaccredited Christian programs” (p. 33) from diploma mills. To that point, Levicoff asserted, “In many rural areas, notable Christian schools have a high reputation of excellent standards in quality education for those who would like the private school option” (p. 22). Levicoff also noted, “Alabama has few regulations when it comes to private schools and most are exempted if they are deemed a church school” (p. 23). In the private school regulations in the Code of Alabama (State of Alabama, 1975), private schools are required to register and report their numbers, but church schools are exempted from this regulation.

Private schools to register and report; section not applicable to church schools. All private schools or institutions of any kind having a school in connection therewith, except church schools as defined in Section 16-28-1, shall register annually on or before October 10 with the Department of Education and shall report on uniform blanks furnished by the State Superintendent of Education, giving such statistics as relate to the number of pupils, the number of instructors, enrollment, attendance, course of study, length of term, cost of tuition, funds, value of property and the general condition of the school. (p. 55) Levicoff argued that this allows diploma mills to set up as church schools with little or no regulations.

According to Levicoff (1995), Alabama law gives parents who chose to home school two options. In the first option, the diploma mill is easily created by registering with a church school. The Code of Alabama (State of Alabama, 1975) provides that a church can sponsor a school and create subschools that are located within private homes. Levicoff (1995) noted that each family can teach its own children privately, but the children are publicly registered with a church school. The church has little or no input regarding what the parents teach, and the parents are free to design and implement curriculum of any kind. Families are also able to choose a church school with which to register that aligns best with their beliefs and educational views.

Levicoff (1995) noted that the second option through the Code of Alabama (State of Alabama, 1975) is a private tutor. Parents who do not wish to register with a church school have the option to have their children taught by a private tutor. According to the Code of Alabama (State of Alabama, 1975), the private tutor must be a state-certified teacher. A parent with a teacher certificate qualifies to teach his or her own children, or parents can hire him or her as a private tutor. The tutor must keep careful records and report to the state all of the subjects learned, the exact hours of school, and days of attendance. Parents employing a private tutor must enroll their children in some sort of physical education class. They must also submit any records that the Code of Alabama (State of Alabama, 1975) requires regarding the child's education. Levicoff argued that these rules are more difficult for diploma mills to circumvent, yet they help families who are serious about home schooling to choose a legitimate educational option.

Levicoff (1995) also noted that other laws influence educational choice in Alabama. Children in Alabama must attend school from age 7 until age 16. This means

that parents of kindergarten and early-elementary students do not need to register with a church school or hire a private tutor until the school year during which the student will turn 7 years old. According to state regulations, home school students are not required to take standardized tests by law. Alabama is known for its relaxed regulations on church schools, private schools, and home schools. The Alabama Education Code that specifically applies to private and church schools does not recognize homeschooling as a separate legal option. Homeschoolers in Alabama must educate their children according to the provisions set forth in this legislation; therefore, most parents find “covering” or “umbrella” schools that will oversee their homeschooling programs and answer to the state.

CERTAIN LAWS AND STATE BOARD RESOLUTIONS THAT PERTAIN TO  
PRIVATE SCHOOLS IN ALABAMA (Excerpts from Code of Alabama 1975 to 1982)

**16-1-11.** Private schools to register and report. All private schools or institutions of any kind having a school in connection therewith, except church schools as defined in Section 16-28-1, shall register annually on or before October 10 with the department of education and shall report on uniform blanks furnished by the state superintendent of education, giving such statistics as relate to the number of pupils, the number of instructors, enrollment, attendance, course of study, length of term, cost of tuition, funds, value of property and the general condition of the school. (school Code 1927, Section 599; Code 1940, T. 52, Section 547.)

**16-28-1.** Private school. (A) The term “private school” as used in this chapter, shall mean and only include such schools as hold a certificate issued by the state superintendent of education, showing that such school conforms to the following

requirements: (1) The instruction in such schools shall be by persons holding certificates issued by the state superintendent of education; (2) Instruction shall be offered in the several branches of study required to be taught in the public schools of this state; (3) The English language shall be used in giving instructions; (4) A register of attendance shall be kept which clearly indicates every absence of each child from such school for a half day or more during each school day of the school year; (B) The term church school, as used in this chapter, shall mean and only include such schools as offer instruction in grades K-12, or any combination thereof including the kindergarten, elementary, or secondary level and are operated as a ministry of a local church, group of churches, denomination, and/or association of churches of a nonprofit basis which do not receive any state or federal funding. (school Code 1927, Section 302; Code 1940, T. 52, Section 299.)

**16-28-6.** Children exempt from attending public school. The following children, when issued certificates of exemption by the county superintendent of education, where they reside in territory under the control and supervision of the county board of education, or the city superintendent of schools, where they reside in territory under the control and supervision of a city board of education, shall not be required to attend school, or to be instructed by a private tutor: Children whose physical or mental condition is such as to prevent or render inadvisable attendance at school or application to study. Before issuing such certificate of exemption, the superintendent shall require a certificate from the county health officer in counties which have a health unit, and from a regularly licensed, practicing physician in

counties which do not have a health unit, that such a child is physically or mentally incapacitated for school work;

(1) Children 16 years of age and upward or children who have completed the course of study of the public schools of the state through high school as now constituted;

(2) Where because of the distance children reside from school and the lack of public transportation such children would be compelled to walk over two miles to attend a public school;

(3) Where the children are legally and regularly employed under the provisions of the law relating to child labor and hold permits to work granted under the terms of said child labor law.

(a) Nothing in this section shall be construed so as to deny any right to any child granted under the provisions of sections 16-39-1 through 16-39-12. (school code 1927, Section 304; Code 1940, T. 52, Section 301, Acts 1947, No. 676, p. 517; Acts 1971, No. 2484, p. 3965.)

Section 10. Notwithstanding entitlement to the exemptions provided church school under Section 16-28-1, 16-1-11, 16-28-3, 16-28-7, 16-28-8, 16-28-15, 16-28-23 and 16-40-1 any church school is defined in Section 16-28-1 (B) shall certify to the local public school superintendent on forms supplied by the superintendent to the requesting church school that the exemptions specified herein are waived.

According to Ezell and Bear (2005), rural America is not the only entity having issues with diploma mills. In findings of the Committee on Governmental Affairs, it is

clear that some government employees might have used these bogus diplomas for advancement in employment positions. On Tuesday, May 11, 2004, the U.S. Senate Committee on Governmental Affairs met in Washington, D.C., to explore the problems that unaccredited, substandard colleges and universities posed to the federal government and to private-sector employers. Their findings included many aspects of the diploma mill problem that continue today and that are left to the states to regulate and govern.

Chairman Susan M. Collins (Congress of the United States, 2004) presented, Three years ago I became concerned by what appeared to be a proliferation of schools advertising degrees either for no work whatsoever or for only a nominal or token effort. At that time I served as Chairman of the Permanent Subcommittee on Investigations, and I asked the General Accounting Office to look into this problem.

The GAO queried a government-sponsored database that included approximately 450,000 resumes to determine how many individuals listed degrees from diploma mills. The results were disturbing. GAO found more than 1,200 resumes that included degrees from 14 different diploma mills. The GAO used a list of diploma mills compiled by the Oregon State Office of Degree Authorization which at that time included 43 schools. Now that list has grown to 137. The GAO also purchased two degrees in my name from a service called Degrees-R-Us. The degrees were for a Master's of Science and Medical Technology. Here is my nice Degree in Medical Technology and also a Bachelor's of Science in Biology from a fictitious school called Lexington University.

Degrees-R-Us also provided the GAO with an official-looking transcript in my name. It shows my grades for 4 years' worth of course work. I did not do that well in Spanish but I aced finite mathematics. And there was even a number provided that I could have prospective employers call to verify my so-called academic credentials. The GAO paid \$1,515 for the package. I would note that I have not taken a course in biology since my sophomore year in high school and yet here I have a degree in biology.

Degrees-R-Us is a fitting jumping off point for our current hearings. Degrees-R-Us is what most people probably think of when they hear the term diploma mill, because cranking out bogus diplomas is all that it does. It does not offer classes, it has no professors, and it does not require any work. It is essentially a printing press or a vending machine that takes in \$1,000 bills and pops out phony diplomas.

The General Accounting Office has defined diploma mills as businesses that sell bogus academic degrees based upon life or other experience, or substandard or negligible academic work. I would add that diploma mills are generally unaccredited schools, though people should not make the mistake of automatically assuming that all unaccredited schools are diploma mills because some of them are not. (p. 14)

Furthermore, Levicoff (1995) found that diploma mills are a big business in the United States. Levicoff also noted recent statistics on the profitability of the industry, a high school diploma offered at \$200 per student, times 300 students a year equals \$60,000

per year with little cost to the school. U.S. General Accounting Office (Congress of the United States, 2004) found,

Degrees-R-Us grossed only about \$150,000 in a 2-year period. In contrast, as the chart now displayed indicates that 1 in 5 unaccredited schools that we examined have taken in more than \$110 million. One diploma mill that we will hear more about today, Columbia State University, took in roughly \$18 million in an 18-month period. According to the FBI, approximately \$12 million of that amount was pure profit. (p. 12)

Ezell (2009) suggested that unaccredited college degrees, bogus high school diplomas, and counterfeit professional certificates top the list of current Internet scams. The diploma mill business as a whole has been booming over the last decade and with little legal, moral, or economic implications. Ezell also recognized that this very lucrative business also threatens the legitimacy of higher education, both traditional and online. Like any law of supply and demand, diploma mills are booming because they are in demand. Ezell also suggested that, in areas with higher high school dropout rates, bogus high school diplomas are often deemed the easy way out. Ezell also showed that unfortunate, naïve consumers often are scammed and have no idea the diploma was not real. Individuals who have intentionally bought bogus degrees and purposely set out to earn more income with their employers or obtain higher-level job titles are the most unethical of all.

The federal government has several agencies whose missions cover regulation of most of the common white-collar crimes. The Securities and Exchange Commission oversees the financial markets and takes a lead role in addressing fraud. The Federal

Bureau of Investigation lists white-collar crimes that include bank fraud, environmental crime, Medicare fraud, adoption frauds, mortgage and insurance frauds, and even jury duty frauds. The federal government has also made the regulation of diploma mills and fake degree businesses the responsibility of individual states. Of the 50 states, only a half-dozen have addressed the growing fraud of bogus degrees. Ezell (2009) showed that, to evade fraud allegations and fines, diploma mills are simply packing up and moving to a state where any kind of higher education regulation is given less attention. The DoE's (2013) comprehensive literature warns of diploma mills and businesses selling fake diplomas and degrees, but that is not nearly enough to combat the problem. Levicoff (1995) recognized a large supply and demand for fake diplomas. However, one might ask, "What drives consumer demand?" Ezell (2009) found that individuals are willing to pay \$200 dollars for a fake high school diploma or even a few thousand dollars to a fraudulent "university" in return for nearly instant bachelor's or master's degree, or even a doctoral degree, complete with official transcripts and degree verification services for possible employment opportunities or raises.

Ezell (2009) asked, "How do alternative diplomas influence migration patterns in rural America?" (p. 42). Stoneall (1983) reported that those who grew up in a rural area are now raising their children in the urban life, therefore, creating the idea that urban life is truly better. Goetz (1999) stated, "Migration behavior is often studied within the context of job searches and, in fact, for many people it is an integral element of upward mobility in pursuit of the American Dream" (p. 11). Briassoulis (2000) warned that the migration of young and family-oriented community members from rural to urban areas comes with many negative effects. Briassoulis (2000) stated, "These may include

negative environmental impacts on agricultural production in neighboring areas, increased demand for exurban space (caused by increases in urban land values), population and jobs migration” (p. 12). Albrecht (2006) stated,

The rural area begins to decline and can become a ghost town. There are no more community members to attend churches, buy groceries, support the local schools, or pay tax dollars. Further, nonmetro communities face unique obstacles in implementing programs to reduce poverty.” (p. 1)

Vargas, Schreiner, Tembo, and Marcouiller (1999) stated, “Households associated with labor out-migration take with them the value of their labor plus their capital and land rents from the initial distribution of resource ownership” (p. 35). Ezell (2009) warned that schools could even begin to shut down because of declining industry and declining community members.

Nevertheless, Hoover and Giarrantani (1999) suggested that migration from rural to urban areas has been common throughout the decades. Hoover and Giarrantani (1999) stated,

In this thumbnail survey of population growth, income levels, and industrialization, we gather that more recently settled regions have tended to show relatively fast growth for a considerable period, followed by a slowdown—suggesting a pattern of successive phases in a development sequence in which migration plays a prominent role. (p. 11)

Garrett and Leatherman (2000) suggested that those who do not migrate to larger cities are still sometimes forced to commute to them for employment opportunities. Garrett and Leatherman (2000) stated, “Given the open nature of the economy, labor market

behavior is an important determinant of local fiscal conditions. People readily commute across municipal boundaries between work and home.” (p. 6).

### **Summary of Literature Review**

The review of the literature presented in Chapter II included information related to comparing the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The literature review helped the researcher to address the comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The literature also helped the researcher to form the four research questions and to define important key terms in on the topic.

## CHAPTER III

### METHODOLOGY

In Chapter III, research methodology used to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma is presented. Existing data for 2009–2012 were used for this study from a single community college system with no personal identifiers associated. Research design, population, sampling procedure, instrumentation, validity of the instrument, reliability of the instrument, and data collection procedures are also discussed.

#### **Research Design**

For the research design for this study, the researcher used existing data in a correlational design for a quantitative analysis to make a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. A correlational design allows the determination of the extent of a relationship between two or more variables with statistical data. In this type of design, relationships between and among a number of facts are sought and interpreted. This type of research facilitates recognition of trends and patterns in data. Sometimes correlational research is considered a type of descriptive research, not as its own type of research because no variables are manipulated in the study. For this study, existing data from a single community college during 2009–2012 were used with no personal identifiers

included. Data collected on students enrolled from 2009–2012 included: (a) the GPA of each student for the first semester; (b) the number of credit hours taken during the first semester; (c) the degree or certificate attained; and (d) whether the student entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

### **Research Site**

For this study comparing the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma, the researcher used existing data provided by Bevill State Community College, a multi-campus institution. The four main campuses and the instructional site at the Pickens County Educational Center offer educational opportunities to more than 250,000 people in a seven-county area. Bevill State Community College's service area spans more than 4,600 square miles from the Birmingham city limits to the Mississippi state line.

### **Participants and Sampling Procedure**

In the research design for this study, the researcher used existing data for a quantitative analysis to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Existing data for 2009–2012 from the Bevill State Community College system were used for this study with no personal identifiers associated. The existing data included all college enrollment from 2009 to 2012, comprising 2,184 students.

### **Instrumentation**

Data analysis instrumentation was used to answer the four main research questions for this study. Descriptive statistics were performed utilizing existing data in order to

determine if a statistically significant difference occurred in the study. The independent variable for the study was the high school diploma earned (a) a GED®, (b) a high school diploma, or an alternative diploma; the dependent variables were (a) the GPA at the end of the first semester, (b) the number of credits earned at the end of the first semester and (c) whether or not the associate's degree was earned. All students entered the first semester for 2009-2012 were used in the study that also included full-time and part-time students. The GPA at the end of the first semester was reported on a 4.0 scale with a GPA of 2.0 being considered as good standing at Bevill State Community College.

### **Data Collection Procedures**

First, approval from Mississippi State University's Institutional Review Board for the Protection of Human Subjects (IRB) was established (see Appendix B). After obtaining IRB approval to conduct the study, a request was made to the President's Cabinet of Bevill State Community College in Jasper, Alabama, requesting to use existing college data for three years (2009–2012), without personal identifiers, to answer the four research questions. Upon receipt of an approval letter from the IRB (see Appendix A), the existing data were hand delivered by the Office of Institutional Effectiveness for the college. At that time, the researcher began data analysis to answer the research questions and to compare the success of community college graduates who entered college with a GED®, a high school diploma, or an alternative diploma.

### **Procedures for Data Analysis**

The data set included no personal identifiers and the study sample consisted of  $N=2183$  students enrolled in Bevill State Community College from 2009–2012, of which

$n = 1921$  (88.0%) were traditional high school diploma graduates,  $n = 216$  (9.9%) were GED<sup>®</sup> graduates, and  $n = 46$  (2.1%) were alternative diploma graduates. The archival data collected from the college student records consisted of: (a) the GPA score for each student at the end of the first semester; (b) the total number of credits earned by each student, and (c) the degree earned by each student.

For research question one, descriptive statistics were used. For research questions two and three, a one-way analysis of variance (ANOVA) was used. However, certain assumptions including normality and homogeneity, must be satisfied to have confidence in the ANOVA results. Therefore, diagnostic tests were performed that did not depend on the strict assumptions of ANOVA. The Kruskal-Wallis test is generally used when the data deviate from normality; however, like ANOVA, this test is also sensitive to violation of the assumption of equal variances. In the event that the homogeneity assumptions were violated, then the data were analyzed via Mood's Median test, which is comparable to a Chi-squared test of independence between the independent variable (high school degree type) and the dependent variable (GPA or semesters hours) collapsed to two categories (at or below median, above median). For research question four, because both the independent (high school degree group) and dependent (community college graduation status) variable are categorized, pairwise  $z$ -tests of graduation rates were used.

### **Summary of Methodology**

In Chapter III, the researcher presented a discussion of the quantitative study and correlational research design used, and the participants of the study were identified to make a comparison of the success of community college graduates who entered college

with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The chapter concluded with specifics on the data collection procedures that ensured confidentiality of the study.

## CHAPTER IV

### FINDINGS

This chapter presents results of the study as they pertain to the research questions. Analysis of the data is presented and detailed for each research question.

#### **Demographics of Sample**

The study sample consisted of  $N = 2183$  students enrolled in Beville State Community College from 2009–2012, of which  $n = 1921$  (88.0%) were traditional high school diploma graduates,  $n = 216$  (9.9%) were GED<sup>®</sup> graduates, and  $n = 46$  (2.1%) were alternative diploma graduates. The data elements collected from the college student records consisted of: (a) the GPA score for each student at the end of the first semester; (b) the total number of credits earned by each student; and (c) the degree earned by each student. In addition, no single high school had a total enrollment of more than 9%, making the enrollment of GED<sup>®</sup> graduates over the three year period, as large as any single high school student body.

#### **Research Question 1**

Descriptive statistics were used to address the Research Question 1:

1. What is the GPA at the end of the first semester, the number of credits earned, and the degree earned for community college graduates who

entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma?

Table 1 demonstrates descriptive statistics for GPA scores by diploma group. Figure 2 presents histograms of the GPA scores by the diploma groups for high school, GED<sup>®</sup>, or alternative diploma graduates at the end of the first semester. The distributions of the GPA scores deviated from normal, bell-shaped curves. The descriptive statistics, which encompassed the maximum possible GPA, ranged from 0.00 to 4.00, and are presented in Table 1. The dispersion was higher for the GED<sup>®</sup> graduates ( $SD = 1.37$ ) than for the high school and alternative diploma graduates ( $SD = 1.15$ ). In a normal distribution, the mean and the median coincide, but the median GPA scores ( $Mdn = 2.17$  to  $2.62$ ) were consistently higher than the mean scores ( $M = 2.06$  to  $2.52$ ) reflecting negatively skewed distributions (skewness =  $-0.162$  to  $-0.178$ ) with modes ( $3.0$  to  $4.0$ ) on the right hand sides; however the frequency distribution for the GED<sup>®</sup> graduates was bimodal, with another mode ( $0.0$  to  $0.5$ ) on the left hand side. About two thirds of the high school graduates ( $n = 612$  or  $66.5\%$ ); over half of the GED<sup>®</sup> graduates ( $n = 110$  or  $50.9\%$ ); and about two thirds of the alternative diploma graduates ( $n = 31$ ,  $67.4\%$ ) earned GPA scores between  $2.0$  and  $4.0$ . A GPA of  $2.0$  is required for academic “good standing” at Beville State Community College.

Table 1

*Descriptive Statistics for GPA Scores by Diploma Group*

<b>Group</b>	<b><i>n</i></b>	<b><i>Mdn</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b>Skewness</b>
High school graduates	1921	2.62	2.40	1.15	-0.606
GED <sup>®</sup> graduates	216	2.17	2.06	1.37	-0.162
Alternative diploma graduates	46	2.23	2.32	1.15	-0.708

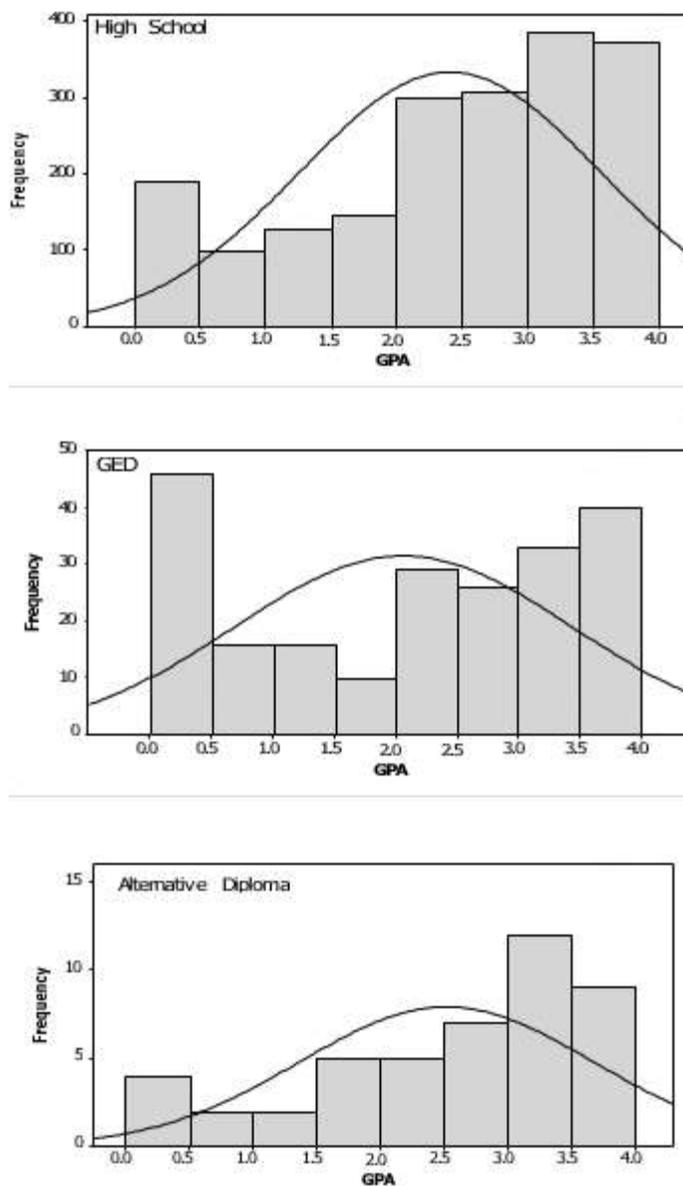


Figure 2. Histograms of GPA scores for students with a high school diploma, a GED, or an alternative diploma

Figure 3 presents histograms of the number of credits earned in first semester by a high school diploma, a GED<sup>®</sup>, or an alternative diploma graduates.

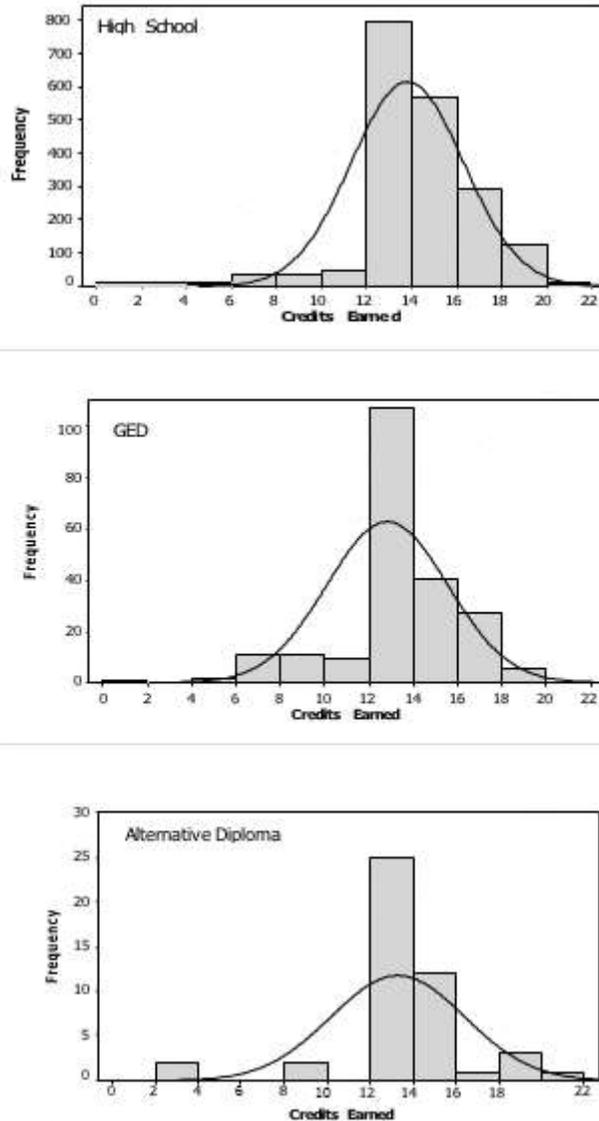


Figure 3. Histograms of credits earned by students in the first semester with a high school diploma, a GED, or an alternative diploma.

The distributions of the credits earned deviated from normal curves. The descriptive statistics are presented in Table 2. The credits earned encompassed a range from 1.0 to 22.0. The dispersions were higher for the alternative diploma graduates ( $SD = 3.12$ ) and GED<sup>®</sup> graduates ( $SD = 2.73$ ) than for the high school graduates ( $SD = 2.46$ ).

The median credits earned ( $Mdn = 12.98$  to  $13.65$ ) were different than the mean credits earned ( $M = 12.81$  to  $13.81$ ), reflecting negatively skewed distributions (skewness =  $-0.796$  to  $-1.009$ ). Most of the higher frequencies were clustered on the right hand sides of the histograms. Over 80% of the high school graduates ( $n = 776$ , 84.3%) and GED<sup>®</sup> graduates ( $n = 181$ , 83.8%) and over 90% of the alternative diploma graduates ( $n = 31$ , 91.3%) earned 11–22 credits.

Table 2

*Descriptive Statistics for Credits Earned*

<b>Group</b>	<b><i>n</i></b>	<b><i>Mdn</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b>Skewness</b>
High school graduates	1921	13.65	13.81	2.46	-.796
GED <sup>®</sup> graduates	216	12.98	12.81	2.73	-.989
Alternative diploma graduates	46	13.27	13.26	3.12	-1.009

Table 3 presents the cross-tabulation of the frequencies of high school, GED<sup>®</sup>, and alternative diploma graduates who did or did not earn a degree. The proportions of high school graduates ( $n = 532$ , 27.7%) and GED<sup>®</sup> graduates who earned a degree ( $n = 49$ , 22.7%) were higher than the proportion of alternative diploma graduates ( $n = 590$ , 27.0%).

Table 3

*Cross-Tabulation of Earned a Degree Versus Group*

Group	Frequency	Earned a Degree	
		No	Yes
High school graduates	Count	1389	532
	% within group	72.3%	27.7%
GED <sup>®</sup> graduates	Count	167	49
	% within group	77.3%	22.7%
Alternative diploma graduates	Count	37	9
	% within group	80.4%	19.6%

Note.  $N = 2183$

### Research Question 2

One-way ANOVA using the conventional  $\alpha = .05$  level of statistical significance was used to address the Research Question 2:

2. Is the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?

The null hypothesis was that the mean GPA score (the dependent variable) was equal in the three groups of students (the independent variable). The alternative hypothesis was that at least one group had a significantly different mean GPA score. The ANOVA Table, provided to reject the null hypothesis,  $F(2, 2180) = 8.934, p < .001$ ; however the effect size (partial eta-squared) of those earning a degree was very low indicating that  $< 1\%$  of the variance in the GPA scores was explained by the differences between high school, GED<sup>®</sup>, and alternative diploma graduates. Consequently, although statistically significant, the practical significance of the results is minimal.

Levene's test indicated that the variances of the GPA scores were not equal across the three groups,  $F(2, 2180) = 14.717, p < .001$ , and the frequency distribution of the GPA residuals (see Figure 4) was skewed, reflecting deviation from a normal curve.

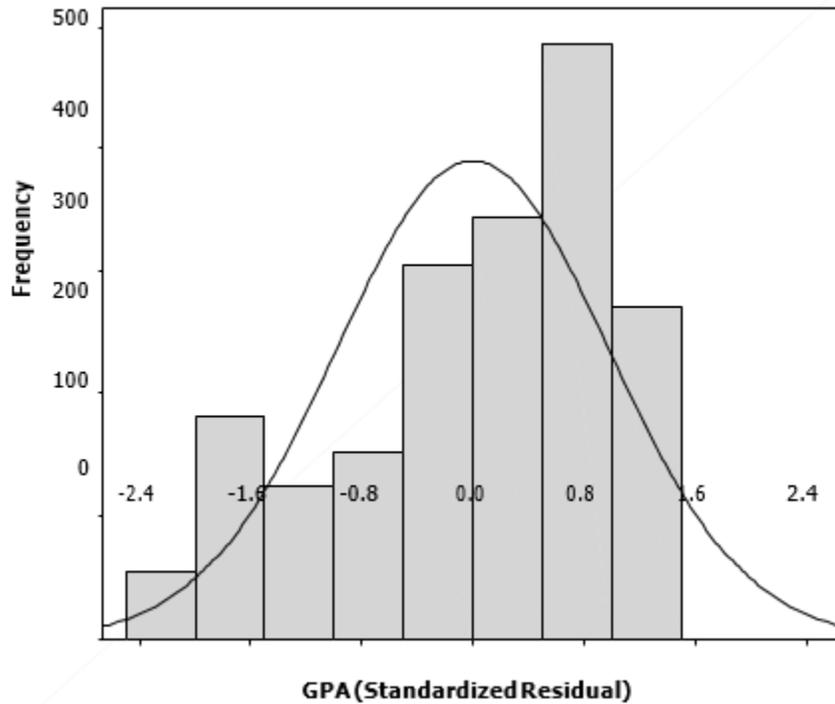


Figure 4. Distribution of GPA residuals.

Table 4

*One-Way ANOVA to Compare GPA Scores*

Source of variance	Type III SS	df	MS	F	p	Effect size
Group	24.493	2	12.247	8.934	<.001*	.008
Error	2988.389	2180	1.371			
Total	3012.882	2182				

Note: \*Significant at  $\alpha=.05$

Diagnostic checks were used to determine whether the data satisfied the assumptions of ANOVA. Both normality and homogeneity assumptions were violated; therefore, the results of ANOVA are possibly compromised, and could be meaningless. Consequently, an alternative nonparametric test was performed that did not depend on the strict assumptions of ANOVA. The Kruskal-Wallis test is generally used when the data deviate from normality; however, like ANOVA, this test is also sensitive to violation of the assumption of equal variances. Therefore, to compare the median scores of the three groups of students, Mood's Median test was conducted because the median is not biased by deviations from normality and inequality of variance. The null hypothesis was that the median GPA score was equal in the three groups of students. The alternative hypothesis was that at least one of the groups had a significantly different median score. The results are presented in Table 5. The frequencies of GPA scores above the overall median ( $Mdn = 2.61$ ) were significantly different at  $\alpha = .05$  ( $p < .001$ ) to the frequencies of GPA scores below the overall median across groups.

Table 5

*Mood's Median Test to Compare GPA Scores*

Group	GPA	
	> Median	≤ Median
High school graduates	955	966
GED® graduates	91	125
Alternative diploma graduates	26	20

*Note.* Chi-square = 5.502;  $p < .001$

The null hypothesis of Mood's Median test was rejected. There was evidence to indicate a statistically significant difference in the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

### **Research Question 3**

ANOVA was also used to address the Research Question 3:

3. Is the number of credits earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?

The null hypothesis was that the mean number of credits earned (the dependent variable) was equal in the three groups of students (the independent variable). The alternative hypothesis was that at least one of the groups of students had a significantly different number of credits earned. The ANOVA table, including the effect size is presented in Table 6. Evidence is provided to reject the null hypothesis and accept the alternative hypothesis;  $F(2, 2180) = 15.864, p < .001$  ) however the effect size was minimal, indicating that only 1.4 % of the variance in credits earned was explained by the differences between high school, GED<sup>®</sup>, and alternative diploma graduates. Consequently, the practical significance of these results is very limited.

Table 6

*One-way ANOVA to Compare Credits Earned*

Source of variance	Type III SS	df	MS	F	p	Effect size
Group	202.241	2	101.121	15.864	<.001*	.014
Error	13896.622	2180	6.375			

Note. Type III SS total = 14098.86; *df*total = 2182; \*Significant at  $\alpha = .05$ .

Diagnostic checks were made to determine whether the data satisfied the assumptions of ANOVA. The number of high school graduates ( $n = 1231$ ) was more than 26 times larger than the number of alternative diploma graduates ( $n = 46$ ). Although Levene's test indicated that the variances of the GPA scores were equal across the three groups,  $F(2, 2180) = 1.091$ ,  $p = .336$ , the frequency distribution of the residuals (see Figure 5) was skewed, reflecting deviation from a normal curve. Furthermore, there were four outliers on the extreme left hand tail of the distribution.

The assumptions were violated; therefore, the results of ANOVA are possibly compromised and could be meaningless. Therefore, to compare the median credits earned between the three groups of students, Mood's Median test was conducted. The null hypothesis was that the median number of credits earned was equal in the three groups of students. The alternative hypothesis was that at least one of the groups had a significantly different median number of credits earned. The results are presented in Table 7. The frequencies of credits earned above and below the overall median ( $Mdn = 13.00$ ) were significantly different at  $\alpha = .05$  ( $p < .001$ ) across groups.

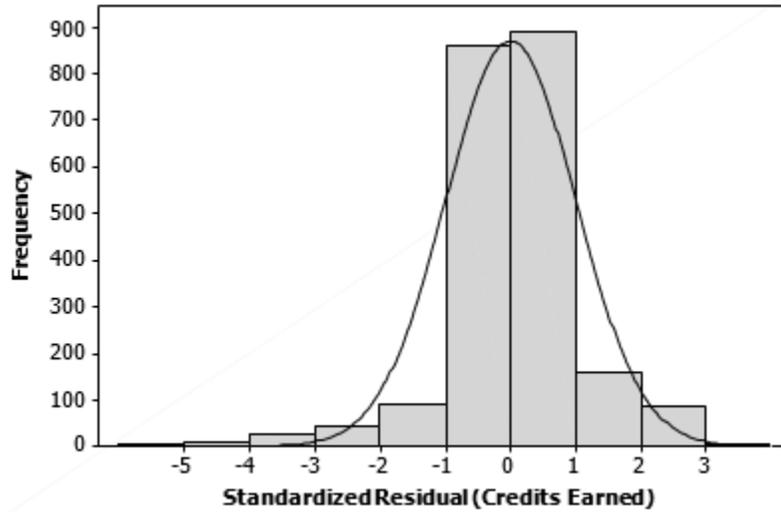


Figure 5. Distribution of residuals for credits earned

Table 7

*Mood's Median Test to Compare Credits Earned*

Group	GPA	
	> Median	≤ Median
High school graduates	990	931
GED <sup>®</sup> graduates	74	142
Alternative diploma graduates	17	29

Note. Chi-square = 26.15;  $p < .001$

The null hypothesis of Mood's Median test was rejected and the alternative hypothesis was accepted. Evidence indicated a statistically significant difference in the number of credits earned across the three groups of students.

#### Research Question 4

ANOVA was not justified to address the Research Question 4:

4. Is the graduation rate for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma statistically significantly different?

The null hypothesis was that there was no significant difference between the proportions of high school graduates, GED graduates, and alternative diploma graduates who earned a degree. The alternative hypothesis was that there was a significant difference between the proportions of high school graduates, GED graduates, and alternative diploma graduates who earned a degree. The results are presented in Table 8. The null hypothesis was not rejected at  $\alpha = .05$ , indicated by  $p > .05$  for the  $Z$  statistics. There was insufficient evidence to indicate that different proportions of students in each group earned a degree.

Table 8

*Z Tests for Comparison of Proportions Who Earned a Degree Versus Group*

Group	Frequencies		Proportion who earned a degree	$Z$	$p$
	Total	Earned a degree			
High school graduates vs. GED <sup>®</sup> graduates	1921 216	532 49	.277 .227	1.65	.098
Alternative diploma graduates vs. GED <sup>®</sup> graduates	46 216	9 49	.196 .227	0.48	.632
High school graduates vs. Alternative diploma graduates	1921 46	532 9	.277 .196	1.37	.171

## Chapter Summary

In Chapter IV, the researcher presented the results of the statistical analysis along with a discussion of the data. The four research questions were examined and analyzed. This researcher examined four research questions to make a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. For research question one it was found that  $n = 1921$  (88.0%) were traditional high school diploma graduates,  $n = 216$  (9.9%) were GED<sup>®</sup> graduates, and  $n = 46$  (2.1%) were alternative diploma graduates. High school graduates had the highest average GPA of 2.40, alternative diploma graduates had a GPA average of 2.32, and GED<sup>®</sup> graduates with the lowest GPA of 2.06. In addition, high school graduates had the highest credit hours earned of 13.81 on average, alternative diploma graduates were in second place with 13.26 credit hours, and GED<sup>®</sup> graduates were last with 12.81 credit hours. Finally, regarding degrees earned, high school graduates had the highest graduation rate of 27.7%, GED<sup>®</sup> graduates were second with 22.7%, and alternative diploma graduates were last with an average of 19.6%. For research question two it was found that there is a statistically significant difference in the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. For research question three it was found that there is a statistically significant difference in the number of credits earned for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. For research question four it was found that there is not a statistically significant difference in the degree earned for community college students who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter is a summation of the research study. The discussion begins with a summary of the findings of the study on the comparison of success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma, followed by conclusions drawn from the study's findings. The chapter also includes limitations, implications for practice, and recommendations for further research. The purpose of this study was to make a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The researcher examined the four research questions to make a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

#### **Summary of Findings and Conclusions**

The purpose of this study was to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. As Conclusion 1, the researcher determined that findings from this study show that GED<sup>®</sup> graduates have the least success as community college students with a lower GPA and credit hours attempted than high school diploma graduates, but they do have a statistically equivalent graduation rate of 22.7% compared to alternative diploma

graduates of 19.6%. In comparison, Ezell (2009) suggested that obtaining an alternative diploma might negatively affect students when they enter the workforce or continue to higher education, and that employers or postsecondary education officials might not recognize their diploma. As Conclusion 2, the researcher's analysis shows that high school graduates are more successful in community college studies with a higher GPA the first semester, and first semester credit hours earned, but a statistically equivalent graduation rate compared to GED<sup>®</sup> graduates or alternative diploma graduates.

The researcher examined four research questions to make a comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. The researcher determined important findings for the Research Question 1:

Using descriptive statistics from existing data for the 2009–2012 years from Bevill State Community College, the researcher determined that  $n = 1921$  (88.0%) of students enrolled were traditional high school diploma graduates,  $n = 216$  (9.9%) were GED<sup>®</sup> graduates, and  $n = 46$  (2.1%) were alternative diploma graduates. High school graduates had the highest average GPA of 2.40, alternative diploma graduates had a GPA average of 2.32, and GED<sup>®</sup> graduates with the lowest GPA of 2.06. In addition, high school graduates had the highest credit hours earned of 13.81 on average, alternative diploma graduates were in second place with 13.26 credit hours, and GED<sup>®</sup> graduates were last with 12.81 credit hours. Finally, regarding degrees earned, high school graduates had the highest graduation rate of 27.7%, GED<sup>®</sup> graduates were second with 22.7%, and alternative diploma graduates were last with an average of 19.6%.

For Research Question 2, the researcher determined that a statistically significant difference existed in the GPA at the end of the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. In comparison, the DoE (2013) suggested that high school dropouts and students who earn a GED<sup>®</sup> or alternative diploma would not be as successful in college courses as students who earn a traditional high school diploma. The DoE also suggested that obtaining an alternative diploma might negatively affect students when they enter the workforce or continue to higher education, and that employers or postsecondary educators might not recognize their diplomas.

For Research Question 3, the researcher determined that a statistically significant difference existed in the number of credits earned the first semester for community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Evidence indicated that a statistically significant difference existed in the number of credits earned across the three groups of students. The high school graduates earned the highest number of credits, followed by the alternative diploma graduates, and the GED<sup>®</sup> graduates earned the fewest credits. In comparison, Ezell (2009) suggested that GED<sup>®</sup> graduates are not as well prepared for college as high school graduates.

For Research Question 4, the researcher determined that, no statistically significant difference existed in the graduation rate for community college students who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. In comparison, Levicoff (1995) suggested that high school dropouts in rural America are choosing the alternative diploma route versus the GED<sup>®</sup> route, and that outcomes for students who

chose the alternative diploma route fall behind those of traditional high school graduates, including areas of employment, higher education, migration, and socioeconomic status.

Ezell (2009) suggested that GED<sup>®</sup> graduates are not as well prepared for college as high school graduates. Results from this study indicate that high school graduates are more successful in community college studies with a higher GPA, but not different in graduation rates than GED<sup>®</sup> graduates or alternative diploma graduates.

### **Limitations of the Study**

Limitations for this study include: only three years of data were analyzed, only one community college system was used, only utilized data for the GPA at the end of the first semester, program area and major was not considered in graduation rate, and there was no accounting for financial status or other possible confounding variables.

### **Implication and Recommendations for Future Research**

The purpose of this study was to compare the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. For future research, the researcher recommends that subsequent researchers extend the research to include students who transfer to 4-year institutions, extend the research term to 5 or 10 years, and continue further studies to determine whether current changes in the new GED<sup>®</sup> Testing Service will allow GED<sup>®</sup> graduates better success as community college students. In addition, future researchers might study as another outcome the job attainment of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma. Therefore, the researcher suggests the following questions for future research:

- Will high school dropouts and diploma seekers instead turn to an alternative diploma grantor rather than the GED<sup>®</sup> certification?
- Do traditional high school graduates have greater employment opportunities, continue their education, or have a higher socioeconomic status than those who choose an alternative diploma or GED<sup>®</sup>?

### **Chapter Summary**

In Chapter 5, the researcher summarized the research study findings and drew conclusions. Each of the research questions was examined in detail. Study findings were compared to other research studies. The implications of the research study were presented for institutions to place in practice. In addition, limitations of the study were acknowledged. The researcher concluded the chapter with recommendations for researchers interested in future research relating to the comparison of the success of community college graduates who entered college with a GED<sup>®</sup>, a high school diploma, or an alternative diploma.

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APPENDIX A

APPROVAL LETTER TO CONDUCT RESEARCH BEVILL STATE COMMUNITY  
COLLEGE



October 15, 2012

Ms. Danielle Miles

Dear Ms. Miles:

Bevill State's Institutional Review Committee reviewed your request to conduct research comparing the success of community college students with differing high school exit credentials at BSCC. The Committee unanimously agreed to grant your request. The specific dates and times of the data collection will be clarified in a discussion between the researcher and the Director of Adult Education, Ms. Nancy McDonald. Please review your research plans with Ms. McDonald prior to implementation.

Sincerely,

Kristi Barnett  
Institutional Research Coordinator  
Office of Grants, Planning, Research, and Institutional Effectiveness  
Bevill State Community College  
[kbarnett@bscc.edu](mailto:kbarnett@bscc.edu)  
205-387-0511 ext. 5703

APPENDIX B  
IRB APPROVAL LETTER

March 20, 2013

April Miles

HRPP Study #13-002: Comparison of the Success of Community College Graduates Who Entered College With a GED, a High School Diploma or an Alternative Diploma.

This email serves as official documentation that the above referenced project was reviewed and approved via administrative review on 3/20/2013 in accordance with 45 CFR 46.101(b)(4). Continuing review is not necessary for this project. However, in accordance with SOP 01-03 Administrative Review of Applications, a new application must be submitted if the study is ongoing after 5 years from the date of approval.

Additionally, any modification to the project must be reviewed and approved by the HRPP prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The HRPP reserves the right, at any time during the project period, to observe you and the additional researchers on this project. Please refer to your HRPP number (#13-002) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at [jroberts@research.msstate.edu](mailto:jroberts@research.msstate.edu) or call 662-325-2238.

Sincerely,

Jodi Roberts, Ph.D.  
IRB Officer

cc: James Davis (advisor)