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GED students versus traditional high school students: how do the GED graduates perform after the first semester of attendance at a rural community college?

Ericka Akins

GED STUDENTS VERSUS TRADITIONAL HIGH SCHOOL STUDENTS: HOW DO THE GED GRADUATES PERFORM AFTER THE FIRST SEMESTER OF ATTENDANCE AT A RURAL COMMUNITY COLLEGE?

By

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The purpose of this study was to determine if freshman students based on their age, ethnicity, and gender who enter a community college with a GED credential will have a higher cumulative grade point average (GPA) after their first semester than traditional high school graduates. Findings from this study will aid individuals in developing a more accurate perception of the academic abilities of GED graduates. The academic performance of GED graduates was compared with traditional high school graduates after their first semester at a rural community college in the Fall 2007 semester. Intact data from the students' academic records were used for this study (n=680). Graduates were compared on gender, race, and age. Data were analyzed with the t-test and a multiple linear regression. There was not a statistically significant difference in the mean GPA between GED graduates and traditional high school graduates. It was also found that there was a statistically significant difference between the ethnic groups, as

whites had higher mean GPAs than the nonwhite students. There was not a statistically significant difference between the mean GPAs among the male and female students. The age of the college students had no influence on GPAs.

DEDICATION

This is dedicated to my daughter, Jailyn who is my everything!

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I would like to express my heartfelt gratitude and appreciation to all of those who assisted me in this long, what I thought to be a never-ending process.

To my daughter, Jailyn: Thank you for being understanding and patient through this whole process. It was hardwork, but very well worth it. You are the greatest daughter in the world and I love you!!!

To my #1 fan and supporter, my grandma, Vergie: I love you!!! Thank you for all that you have ever done in my lifetime. Aren't you glad I didn't drop-out of school in the first grade when you told me to? I finally finished.

To my brother, Aloysius: You are a wonderful brother. Just remember that education is the key! I love you!!!

To my mother, Evelyn: Ma, what can I say? Thank you and I love you. I went all the way! This is just one more of your proud, hardworking, moments as a mother. You deserve it just as much as I do. We can share it!

You have been there for me through thick and thin. I am so happy to have my aunt and my best friend wrapped in the same package. I think we are truly connected at the hip. Thanks, Auntie Greta.

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CHAPTER I

INTRODUCTION

In the twenty-first century, more and more students are making an effort to further their education. Some of the students are coming straight from high school, whereas others have worked and raised a family before deciding to further their education. Whatever the reasons, the students want to better themselves by adding onto their education. When a student finishes high school, it is almost understood that he or she will be ready for either a community college or a four year university. Although, some students do not graduate from high school and then later decide to obtain their GED, they are supposed to have the same education as those with a high school diploma.

High school students are faced with many more requirements than they were ten years ago. With each year, more requirements are being added, which in turn is making the work harder and more demanding for some. The high school years are difficult years anyway and the students have a variety of reasons for dropping out (George & Schaeffer, 2002). The pressures of more work and more requirements can be overwhelming, especially for students who are faced with difficulties or barriers in other areas. The barriers or difficulties of high school often times cause some students to drop out. While some students drop out and never return, others eventually obtain a GED. According to Greene and Forster (2003), there are about a million young people annually who should

graduate from high school and for whatever reasons do not get that opportunity. This alone sets them up for a future of having less income and fewer opportunities.

Background of the Problem

According to Schwartz (1996), students drop out of school for many reasons. Among the reasons listed by Schwartz (1996) were: a) wanted to attend a different school, b) received bad grades or fell behind in their school work, c) had problems with the teachers and/or students which ended in suspension or expulsion, and d) were not comfortable in that particular atmosphere. Regardless of their reasons for leaving school, most drop outs understand that they need an education in order to become successful in this society. However, by dropping out of school and never returning, that decreases the chance of the students having a decent job. Brown (2000) reported that if the GED graduates return to school, there is a better chance that they will have a better job than those high school students who drop-out of school and never return. Brown (2000) also found that they tend to have better work ethics.

Rumberger and Lamb (2003) found that high school dropouts have problems adapting and adjusting to the work force. High school drop outs tend to have the biggest problem with the adjustments. This problem can be attributed to their not being as prepared as the high school graduates, which could serve as a disadvantage to the drop outs. Ellsworth, Person, Welborn, and Frost (1991) also found four reasons that tend to prevent adults from obtaining their education. Those reasons consist of the amount of responsibilities they have, how much time they have available, how comfortable they were with the institution that they will be attending, and their responsibilities in their home.

Knowles (1984) studied the adult learner and found different learning characteristics between the adult learner in comparison to the child and adolescent learner. He found that the adult learner can work independently, needs very little assistance from the teacher, has much to contribute to the classroom learning experience, finds a way to incorporate experience into their way of learning, and has a way of incorporating things that are needed for either their working or family life. According to Knowles, the adult learners have a way of learning material that is different from the way children and adolescents learn. They tend to want to learn things that can be used in their everyday roles. The adult learner is also motivated by things outside of themselves; however, their perception about themselves, the ability to be recognized, and wanting more out of life are more of an influence than any external force (Knowles, 1984). Therefore, the GED students need more than just the traditional classroom lecture. When most students enroll in the GED class, they are ready to learn and acquire their GED for different reasons.

Statement of the Problem

According to O'Keefe (1993), when GED graduates enter universities and community colleges, they are not as prepared as the traditional high school graduate. The expectations are lower for GED graduates. GED graduates have a more difficult time adjusting and adapting to community college than high school graduates. The skill level of students returning to school after being out for a long period of time seems to be very different from the recent high school graduates. O'Keefe continued that these areas of difficulty were found in study habits, completing tasks, and taking exams. However, the

nontraditional students' ability to learn had expanded due mainly in part to the things that they had experienced in life. Most high school graduates enter college straight out of high school, whereas some GED graduates may enter college years after receiving their GED. Therefore, it may have been years since the GED students had actually been in a traditional classroom setting. When preparing to take the GED, students do not receive the same amount of classroom instruction as the traditional high school graduates. Even though community colleges offer developmental courses, all of the students who need them, does not enroll in them. Perin (2003) found that only 41% out of those students enrolled in the community college will enroll in the developmental class. According to Perin (2003), of the entering community college freshman, an estimated 30-90% of those students will need some type of developmental or remedial course.

Purpose of the Study

The purpose of this study was to determine if freshman students based on their age, ethnicity, and gender who enter a community college with a GED credential would have a higher cumulative grade point average (GPA) after their first semester than traditional high school graduates. A higher cumulative GPA was measured by the overall cumulative points after the end of the students' first semester. Only first time entering freshmen was considered for this study.

This was the first study conducted at this community college in Mississippi that would inform faculty members and instructors on how the GED students perform academically in comparison to the traditional high school graduates who enroll at this community college after their first semester. It is often perceived by some members of

society that by receiving or having a high school diploma, traditional high school graduates are smarter than those with a GED and that traditional high school graduates tend to outperform those students who have received a GED.

Research Questions

1. Is there a statistically significant difference between the GPA mean scores of the GED holders and THS graduates?
2. Is there a statistically significant difference in ethnicity between THS graduates and GED holders as measured by the GPA mean scores?
3. Is there a statistically significant difference between gender of the THS graduates and GED holders as measured by the GPA mean scores?
4. How do graduate status, gender, race, and age influence mean GPA scores?

Significance of the Study

This study will provide community college instructors, as well as community college administrators and academic advisors, with the knowledge of how GED graduates perform after their first semester at the community college as compared to the traditional high school graduates. This will also allow the community college staff to restructure their developmental math and English classes to target those students who are in more need of additional help. Since there are no adult education programs at the local university, the results of this research will also be helpful for the university teaching staff and administrators as well. The results will provide findings to university and community college personnel in regards to how traditional high school graduates perform during the

first semester of college as compared to GED graduates and also offer information that will help in restructuring the schools' developmental courses.

This study will provide the community college with information about the performance of GED graduates and traditional high school graduates. It will also assist in clearing up misconceptions about the performance of GED graduates, as GED graduates are perceived as poor performing students.

This study will also provide updated statistics in comparison with those in previous research. The information gathered will come from the American Council on Education, data collected from the community college, and the GED website.

Definition of Terms

1. *GPA*- the students' overall grade point average at the end of completing one semester.
2. *GED credential*- certificate obtained by those students who have taken the GED and successfully passed all portions.
3. *High school graduate*- a student who completed 12 years of school grades K-12 and received the diploma.
4. *Community college*- a two year college that offers different degree and vocational programs.
5. *Ethnicity*- race of the students participating in the study.
6. *Freshman student*- any student entering college for the first time.
7. *GED recipients*- are dropouts from high school who later decided to seek a credential (Greene & Forster, 2003).

8. Graduate Status- the status in which the student entered the community college, either as a traditional high school student or as a GED graduate.
9. *Traditional high school (THS) students*- students who graduated from high school with a high school diploma.
10. *Transfer student*- a student who has attended another educational institution beyond high school.
11. *Drop-outs*- students who stopped going to school before completing their high school requirements to get a diploma.

Limitations

The limitations of this study are: (a) the students used in this study are only first time students (freshmen); (b) there is only one community college being tested for this study and, therefore, the results will not be generalizable; (c) the information obtained will come from the files of the students and therefore the students will not be able to provide any additional information, and d) the number of females to males at the college is slighter higher than the number of males at the college.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The American community college got its start in the early twentieth century. The most important need for the establishment was for the workers who needed to be trained in the emerging industries (Cohen & Brawer, 2003). The community colleges proved to be beneficial in two ways: they provided a lower cost alternative to private colleges and they provided opportunities/assistance to those who could not otherwise get into a four year institution.

The American Council on Education (ACE, 2008a) reported that the General Educational Development (GED) credential was not created as a way to help dropouts acquire the equivalent of a high school diploma as many people believe. It was established during World War II as a way of helping veterans become eligible for postsecondary education without having to return to high school to earn a diploma. There have been four generations of GED tests with the fifth being introduced in 2012. The first GED test was introduced in 1942, followed by the 1978 series, the 1988 series, and the 2002 series, which is the one being used today. The content areas are English/language arts, social studies, science, and mathematics. During the 1950s, however, the focus of GED was enlarged and the option was afforded to anyone who had not graduated from

high school. In 1999, more than one-half million people received GEDs; over 700,000 took the exam (Tyler, Murnane, & Willett, 2000).

Toby and Armor (1992) found that if students will come and voluntarily sign up for class, they are motivated students. Many of the students who drop out of school need another chance. According to Toby and Armor (1992):

> Motivated students learn more than unmotivated students and present far fewer disciplinary problems to their teachers (p. 89)…. GED programs have the built-in advantage of targeting people who, though they have dropped out of high school before graduating, have come to realize that they need more education and decide to return to school. (p. 90)

Murnane and Tyler (2000) found that if students remain in high school, they will do much better in the labor market than if they dropped out of school. Murnane and Tyler suggested that obtaining a GED improves labor market outcomes by 15 percent. They also found that by obtaining the GED, employers would know that dropouts are serious about trying to improve themselves, as well as their life. In other words, the rewards for having a GED are great. A GED would give the people opportunities needed to obtain jobs and acquire work experience. State and government programs are being created to assist drop-outs with going back to school and getting their GED with the goal of improving their earnings (Murnane & Tyler).

According to Boesel (1998), holders of the GED diplomas are less likely to complete their college programs than high school graduates. Boesel also found that GED recipients are half as likely as high school graduates to earn an associate's degree and that it is very unlikely that a GED recipient will earn a bachelor's degree (about 2%). Holding

a GED diploma increases a dropout's chances of getting a full-time job by about 5%, but high school graduates enjoy higher employment rates than do recipients of the GED diploma. Averaged across half dozen controlled studies, the wages of holders of GED diplomas are about 8% higher than those of other dropouts and 12% lower than those of high school graduates.

According to Boesel (1998), the GED diploma tends to affect wages in different ways. If the students receive additional training and education on the job and off, there should be a noticeable change in their wages. Boesel (1998) found that the amount of money GED recipients earn is based solely on whether or not they further their education or receive additional training. However, out of all the people who receive their GED, 40% to 50% of those will not try to further their education or seek additional training. Even if they enroll in a community college or university, they will not remain there for any length of time (Boesel, 1998). Boesel also stated:

> While the GED process (beginning with the decision to take the test and ending with the GED credential) certifies basic cognitive skills, it usually does not generate them. Nor does it generate or certify noncognitive human capital, such as good work habits, perseverance, and the ability to function well in organizations. (p. 68)

By going through the GED process, the student leaves with skills on a certain cognitive level (Boesel, 1998) which is not equivalent to that of the high school graduate (Rumberger, 2001). However, Rumberger (2001) found that if students graduated from high school, they would leave with all of the skills they need and had acquired by being

involved in high school. Students learn these skills from their high school experiences and by being an active participant.

Hopkins (1997) found that since 2000, there has been a 12% increase in youth that are both jobless and out-of-school, which translates into a nearly 600,000 increase in this population. One-half million of the 9.5 million students (5.7 percent) enrolled in school left without completing a high school program. Students of low-income families were at a greater risk of dropping out of school than those who come from high-income families. Students between the ages of 15-17 years of age made up nearly 40% of the 1995 dropouts (Hopkins, 1997).

Millions of young people are expected to graduate annually. When this does not occur, the students tend to limit themselves to the amount of income they will earn, as well as other opportunities (Greene & Forster, 2003).

History of the GED Test

The General Education Development (GED) Test was put into place in 1942 by the military as a way to assist the returning veterans who were returning home from World War II. It was put into place to help them finish what they had started which was their high school diploma, as well as helping them become acclimated back into the world they were all so unfamiliar with, the civilian world (ACE, 2008a). Since that time, the GED programs have grown and expanded their testing facilities to not only the military men and women that they continue to serve, but also to others who want to further their education. New York was the first state to start the GED program, while

California was the last state to start the GED program. New York State put the program into effect in 1947; whereas, California started their program in 1973 (ACE, 2006).

Since the original release of the GED in 1942, there have been three additional generations of GED Tests: the 1978 series, the 1988 series, and the current series that was released in 2002. The fifth series of the GED test will be introduced in 2012. According to the ACE (2006), the academic content areas of the GED Test, which include, English language arts (reading/writing), social studies, science, and mathematics have not changed. Whereas these content areas have not changed, the subject matter in which the students are tested has changed. The tests have catered to each of the eras in which they were created. The GED Test has continued to evolve due to the evolution of high school education; it was reported that this evolution is necessary to remain consistent with secondary education since the GED Test was developed to assess academic skills and knowledge typically developed in a four-year program of high school education.

GED Curriculum

The GED tests are designed to measure the students' outcomes that they would normally have gotten if they would have completed their high school diploma. In the 2002 Series GED Tests, there are five multiple choice tests and one timed essay test. Each part of the test with the exception of the language arts, writing part II consists of 40-50 multiple choice questions and each section have a time limit ranging from 45 minutes to 90 minutes. These tests were designed by adult and secondary school educators. Test specialist and external content specialist evaluate each test question thoroughly in order to ensure fairness. The tests are also tested in the field before the final test is put together.

The test areas consist of: language arts, writing (Part I & II); social studies; science; language arts, reading; and mathematics. The language arts, writing (I & II) include grammar questions, as well as writing the essay and students are graded on a scale from 1 to 4. The social studies test questions include history, geography, economics, civics, and government. The science test component consists of physical science, life science, earth and space science. The mathematics test includes problem-solving, analytical, reasoning skills, interpreting word problems and graphic formats (charts, tables, graphs, diagrams). In order to receive a GED credential, the test-takers must make an average score of 450. According to ACE (2006), GED test passers are defined as, "Completers who have earned an average score of 450 or greater on the five individual content area tests…and have, in addition, earned individual content area test scores of 410 or greater…" (p. 3). Different locations may set their scores higher, but they cannot set them lower.

GED Population

The GED population is comprised of varied ages, races, genders, locations, and circumstances. According to the 2006 GED Testing Program Statistical Report, in 2006, there were over 39 million adults in the United States who did not have a high school diploma (ACE, 2006). Mississippi accounted for 537,920 of these adults without a high school diploma, whereas the neighboring states, Alabama accounted for 797,910 and Louisiana was trailing behind with 786,880. With California having a much larger population than most of the southern states, the total amount of their adults without a high school diploma was 5,500,200 (ACE), this can be attributed to California having a much larger population.

In 2004, more than 71% of the test takers in the United States passed the GED, even after the American Council on Education made the mathematics, writing, and reading portions more demanding (Pluviose, 2006). However, in 2000 the GED passage rate was 69.3% with a slight increase in 2001 to 69.6 percent. In 2002, when the GED program underwent some major changes, the numbers dropped to 50 percent. Since then, the number of test takers increased between the years 2002-2003 and then saw another increase of 1.3 percent in 2003-2004 (Pluviose, 2006).

Age

Enrolling in college is not limited to 18 year old students who are recent high school graduates anymore. According to Cohen and Brawer (2003), there are more nontraditional students attending school now and it's not just the typical eighteen- to twenty-one-year-old students.

The average years of age for adults enrolled in the GED nationwide is 24.9. In Mississippi, the average age for adults pursuing their GED is 23.1, with the youngest age being 16 years. Alabama had an average age for those pursuing their GED in 2006 of 22.8. California had a higher age average than any other state, with 26.4. That means that in California, there are more nontraditional age people going back to school to obtain their GED (ACE, 2006).

According to Kaufman et al. (2000), in 1990 approximately 214,000 people between the ages of 18-24 years received a GED. The number of GED recipients increased in 1999 by 20% (268,000). Murnane and Tyler (2000) found that the number of

Americans who had received the GED credential more than doubled from 1971 from 231,000 to a half million Americans in 1998.

George and Schaefer (2002) found that 10,177 adults (50% male and 50% female) took the GED test in 2002. They also found a fluctuation in the ages of the test takers with 75% between the ages of 40 and 50, 22% between the ages of 51 and 60, and 3% between the ages of 61 and 70. A slightly higher number of 40- to 70- year-old African-Americans took the GED.

Fisher (2005) examined the relationship between performance of students who were admitted to college on the basis of the GED credential and their age at the time in which they entered college. Her results showed that the older the student at the time of their enrollment, the higher their GPA.

Ethnicity

In 2006, out of the 10,791 GED candidates in Mississippi, 43.1% were African-American; 53.6% were White; 1.3% were Hispanic; and 0.5% were Asian. In Alabama, 65.1% of the GED candidates were white; 31.1% were African-American; 2.0% were Hispanic; and 0.6% were Asian. Since California is more diverse than many other states, their numbers were different from the Southern states. Of the candidates tested, 46.9% of the candidates were Hispanic; 12.6% were African-American; and 31.2 were White (ACE, 2006).

When Fisher (2005) examined the performance of the GED students who enrolled in college based on their GED credential and scores, she found that ethnicity displayed a difference in their school performance. The three ethnic groups represented in Fisher's

research were Black, White, and Hispanic. Since there was a small sample of Hispanic students, their population was excluded from the sample. It was found that the mean GPA of black students in this study was 1.502, whereas the mean GPA of white students in the study was 2.047. The white students' who attended college based on the GED credential and GED test scores had a higher GPA than the Black students.

At a community college in Florida, Fisher (1999) found that African-American students with GEDs had higher first semester GPAs than the African-American students with traditional high school diplomas.

Two year institutions are one of the primary sources of preparation programs for students who are obtaining a GED, and comprise a large proportion of the 3,400 testing centers throughout the nation. More than 500,000 people- 78 percent of them under age of 29- took the test in 2001 (Manzo, McMahon, & Raffaele, 2002). Rachel and Bingham (2004) stated:

> It is likely that many GED teachers have long sense regarded much adult education theory- focusing on voluntary, motivated, and mature learners- with a good degree of skeptism, applicable perhaps to 30- or 40-year-olds, but often not applicable to teenagers or even the 20-somethings. (p. 41)

Reasons for obtaining a GED

With the job market changing, as well as the requirements for obtaining a job, it is almost impossible for people in the job market to find and secure employment without some type of education. Among the reasons for trying to obtain a GED, the two listed most frequently in a study conducted by George-Ezzelle and Schaefer (2002) found that

the two reasons listed most frequently for trying to obtain a GED were; 1) to either move up in their current job or to find a better position; and 2) for their own personal growth. More parents now are returning to school to become a person their children can be proud of.

In a 2006 report by ACE, the following reasons for obtaining a GED were grouped into the following categories; educational, military, employment, personal, and some unknown reasons. Among the educational reasons given for obtaining a GED were to gain admissions into four-year colleges, two-year colleges, technical or trade programs, skills certification, and job training. Among the military reasons given were entrance into the military and to pursue a military career. The employment reasons listed by the GED candidates were; to get a first job, keep current job, get a better job, and required by the employer. The social reasons given by the candidates for wanting to obtain a GED included; early release, court order, and public assistance requirement. Personal reasons listed were to become a positive role model and personal satisfaction.

The findings in the ACE report (2006) also revealed that 67% of the Mississippi candidates listed educational reasons as their main reason for obtaining a GED, 51.5% stated that employment reasons were the determining factor, and 17.4 stated that personal reasons were the main reason for them deciding to obtain their GED.

The results George-Ezzelle and colleagues (2006) found for students not completing high school: "was absent too many times," "did not like school," "was bored,' "wasn't happy in school," and "poor study habits" (p. 13).

Many companies offer GED programs to their employees in order to give them a head start on life. So many jobs are requiring that the employees have some kind of on-

the- job training or training that requires them to have certain skills in order to operate machinery. Whatever the reason, certain jobs are offering ways to improve keep their employees on their job as well as offer them training in order to improve their skill level. The American Council on Education found that many businesses and companies contribute to or make the GED or some parts of the education available to employees during work or after work hours.

According to the American Council on Education (2008b), Barber Foods which is a company founded in Portland, Maine in 1955 employs workers from all over the world and who speak many different languages. Many of the workers from other countries are from underprivileged locations (i.e. Vietnam) and sometimes a high school diploma or GED is hard to attain. In order to promote education in the workplace, Barber in 1992, teamed up with the University of Southern Maine to provide GED at the work-site. This was Barber's way to assist their employees or help their employees to earn their GED while they are on the job. This is something that will benefit the employees as well as the employers. Barber states that their reasons for investing in the education are for retention and promotion. They want to keep the employees employed and they want to prepare them for promotion. Out of the workers who participated in the program, it was found that over a seven year period 53% of them are still with the company. Once the employees complete the program, they strongly encourage them to enroll in one of their on-site college programs offered through a local community college and university.

Marriott Hotels in Baltimore were among the other franchises who believe in assisting with the education of their employees. Marriott International, the biggest lodging company in the world, currently employs about 145,000 people. They have

partnered with Sylvan Learning Center to bring GED classes to the worksite in order to make it more accessible to the employees. Leaving work and going to another location is a hassle, especially for the employees who live in the city. Their first GED class began in 2002 with only 16 students enrolled. Now, there is a waiting list for the employees. The program manager believes that by investing in the employee and helping them achieve an education, they are more likely to stay with the company (ACE, 2008c).

Coca-Cola Enterprises which is housed in Atlanta, Georgia are also among the list of employers who are involved in assisting their employees obtain their GED. Coca-Cola, which is the world's largest non-alcoholic beverage bottling company, employs over 72,000 all over the world. Coca-Cola took a different step on their approach to education. Instead of the company bringing the GED classes into the workplace, they are offering reimbursements to their employees for GED tests and classes. If the employee receives their GED, and goes on to college, Coca-cola will also reimburse their expenses (ACE, 2008d).

Virginia Department of Transportation (VDOT) also believes in promoting education. VDOT, which is the third largest state-maintained highway system in the country, wanted to help their employees help themselves. Their turnaround started in 1994 when VDOT partnered with Virginia Department of Education in order to offer their employees an opportunity to obtain their GED while they were on the job. These employees also got paid for being off work and working toward their GED. In 2003, there was an estimated 50 employees enrolled in classes. The goal of the VDOT is to encourage their employees, because this will build their self-esteem and increase their

work productivity. Getting their GED will give these employees a greater opportunity at being promoted (ACE, 2008e).

Walt Disney World Resorts is one of the hottest tourist locations in the world. The Orlando, Florida location has an estimated 54,000 employees. Since Walt Disney World is culturally diverse, it offers more than just the standard GED instruction classes. It caters to all of their employees or cast members by not only offering the GED classes, but also by allowing the GED Examiners to go to Disney world and administer the tests at the facility. The GED credential was obtained by 78% of the cast members during the 2002-2003 school year (ACE, 2008f).

United Auto Workers and Daimler-Chrysler teamed together to help provide an education for their employers. Whereas, most of the above mentioned agencies focused on job productivity and retention, Daimler-Chrysler was more concerned with their employers being able to assist their children with homework outside of the workforce. With the management staff wanting to assist in this effort, they opened a 60,000 square foot family training center which includes a computer lab. Not only does the center offer GED classes to the employees, it offers classes to the families of the employees and the community, as well. With the program getting off the ground in 1995, an estimated 25 employees have graduated and about 100 of their children and grandchildren have also graduated. It has been shown that employees who obtained their GED performs better on the job and feel better about themselves (ACE, 2008g).

Community College

The American community college started in the early twentieth century. One of the reasons for needing community colleges was the need for workers in the expanding industrial world in which society was becoming accustomed to. The increase of industries brought about a need for skilled, well-trained operators, which is exactly what community colleges provided (Cohen & Brawer, 2003).

According to Cohen and Brawer (2003), two generic names have been applied to two-year colleges over the years, junior colleges and community colleges. They also provided the following definitions:

> During the 1950s and 1960s, the term junior college was applied more often to lower-division branches of private universities and to two year colleges supported by churches or organized independently, while community college came gradually to be used for the comprehensive, publicly supported institutions. By the 1970s, the term community college was usually applied to both types. (p. 4)

Community colleges enrolled at least one-half of all undergraduates in the United States (Kim, 2002). Kim continued by saying that students attend community colleges for various educational reasons including furthering their education, whether it is academically, vocationally or technically. Kim (2002) further mentioned that the African-American, Hispanics, and Native-Americans make up about one-half of the student population at community colleges.

Perin (2003) found that although education higher than that of the high school diploma or certificate is needed for career development, between 30-90 percent of

freshmen who enter the community college needs remedial or developmental reading, mathematics, or writing courses. She revealed only 41% of those who need the classes actually enroll in them. Perin (2003) also found that remedial courses would help low scorers, but remedial education may not be mandatory because many community colleges do not require students to take developmental courses.

Fisher (2005) found that there was a difference between the GPAs of GED students who enter a four year university and the student who enters a two-year community college. The mean GPA of students attending a four-year university was 1.622, while the mean GPA of students attending a two-year community college was 2.089.

Success Rate for GED Population

According to Manzo, McMahon, and Raffaele (2002), only about 1 in 10 GED recipients completes one or more years of college. The researchers continued that the GED test takers who have plans of furthering their education, many of them go to community colleges for their first college experience.

Results from a study conducted by George-Ezzelle and Hsu (2007), showed that as a whole, GED test candidates scored better than the high school graduating seniors. The researchers stated that "75 % of the GED Test candidates vs. 69% of seniors earned an average score of 550 or lower on the test battery. Similarly, only 8% of the GED test candidates vs. 18% of seniors earned a battery average score of 410 or lower" (p. 20). Overall, the GED Tests candidates answered 6 to 10 percent more of the items correctly than the seniors. The high school seniors did answer correctly a greater percentage (4%)

and outperformed the GED Test takers only on the math items. The results showed that those candidates who passed the GED test exceeded the performance standards of the lower 40 percent of graduating high school seniors.

Rumberger and Lamb (2003) found that even if the students drop out of high school and decide to finish their education whether it is by obtaining a GED or going back to get a high school diploma, they still do not perform any better than the high school students who graduated. The researchers also found that even if the dropouts are on the same mental level as the high school students, they would still be lacking in the other areas (perseverance) that would in turn lead to them having a productive life. That would be one of the skills needed in order to have and lead a productive life after high school.

Boesel (1998) found that once GED students and high school graduates are in college, the GED recipients tend to have grades that compare with the high school students. Vocational and technical programs showed that there was no difference in their classroom performance as well.

Based on research by Kroll (1993), "GED students can succeed in America's community college. However, earning a GED does not predict success in community college, but neither does a traditional high school diploma" (p. 27).

GED versus High School Diploma

In the matter of comparing GED to traditional high school diplomas, the question is not about success, but whether or not the graduate can succeed once they enroll in college. Students have various reasons for enrolling in a community college. Among

these reasons were to obtain a certain skill, to earn a diploma, or for vocational fulfillment.

According to Kroll (1993), "many people go to community college to learn a specific skill and when that skill has been acquired, those students have personally been successful" (p. 8). Kroll also found that a GPA is not a great indicator of how successful a person will be in college. All things must be taken into consideration when trying to determine the success of a student.

Ayers (1980) conducted a study of 50 randomly selected adults who had attained their high school diploma through Surry Community College GED program in 1978. Even though many of the students had chosen different paths in life, the nine participants who had enrolled in college had a mean GPA of 2.92, whereas, the high school students at the same school had a mean GPA of 2.75. The GED students who continued on to college had a higher GPA than their counterparts.

Vanderloo (2003), found that even though the data collection consisted of more traditional high school diplomas (27,425) than GEDs (2,220), the GED diploma graduates had a higher GPA overall than the traditional high school diploma graduates. Vanderloo (2003) conducted research on how well GED graduates performed in community colleges in comparison to the traditional high school graduates. She examined the difference between GED diploma graduates and traditional high school student diploma graduates based on their GPA at participating Mississippi Community Colleges in the Fall of 1997. Vanderloo found that students with the GED diploma had a higher GPA than the traditional high school graduates, however, students who were admitted into the community college with a college transcript, meaning that they had been enrolled

in college before, had an even higher GPA than the other participants. Overall, traditional high school students had a mean GPA of 2.74, whereas the students with a GED diploma had a mean GPA of 2.80. Students who had attended college previously and entered college based on a college transcript had a mean GPA of a 3.03.

Vanderloo also examined the difference between mean GPAs among the community colleges in Mississippi based on students with GED diplomas and students with traditional high school diplomas. She found that at the following community colleges, students with GED diplomas had higher mean GPAs than students with traditional high school diplomas: Itawamba (GED 2.95; THS 2.84), Holmes (GED 3.03; THS 2.57), East MS (GED 2.96; THS 2.66), Hinds (GED 2.81; THS 2.80), MS Gulf Coast (GED 2.81; THS 2.80), Copiah-Lincoln (GED 2.80; THS 2.62), MS Delta (GED 2.56; THS 2.39), and Coahoma (GED 2.47; THS 2.42). However, the students with traditional high school diplomas at Northwest (THS 2.75; GED 2.47) and East Central (THS 2.82; GED 2.79), had higher mean GPAs than the GED graduates. She also found that students with a GED diploma who are enrolled in college for the first time had a higher mean GPA (2.72) than traditional high school students (2.59) who had enrolled in college for the first time. GED students at Northeast Community College students had the same mean GPA (2.74) as those with traditional high school diplomas.

George-Ezzelle and Hsu (2007) compared the performance of those who had taken the GED test to traditional high school graduating seniors. This report was based on U.S. citizens broken up into three groups: seniors who had graduated from high school in 2001 norm group, (b) GED test candidates who took one or more tests in 2002-2004, and (c) GED test candidates who passed the tests in 2002-2004. The purpose of this report

was to provide other people with information about how important the GED certificate is. It also compared the high school senior grade performance to the performance of the GED test takers. In this study, the GED students scored better than the high school seniors overall. When the scores of the two groups were compared, the majority of the GED test takers averaged 550 or lower on the GED in comparison to the 69 percent of the seniors who took the same test.

Fisher (2005) examined the relationship between performance, as measured by second semester cumulative GPA, significant difference between the males and females based on their cumulative GPAs, of students admitted to college on the basis of a GED credential and their GED Test Score. She found that there was a relationship between the GPAs of students who was admitted to college based on their GED credential and their GED test score at a university in Tennessee. She examined the relationship between the performance of students who entered college based on their GED credentials, scores, and gender. She found that there was a statistically significant difference between males and females. The mean GPA of the female students was 2.136, whereas the mean GPA of the male students was 1.586. Fisher also found a strong positive correlation (r = .896) between the test scores of the GED students, their ages when they entered college, and their credit hour ratios. As all of the previous variables increased, so did the GPAs of the students.

Fisher's (1999) study compared performance of GED graduates to the performance of high school graduates based on their GPAs as well as on other factors. The research group consisted of students who were enrolled for the first time in the Fall of 1992 at a multicultural community college in South Florida. Fisher found that the

females who had attained their GEDs had higher English grades and higher first semester and cumulative GPAs than their counterparts.

Baldwin (1995) examined the value of a GED test and presented the findings at the 1994 Congressional hearings. According to Baldwin, the academic skills, as well as grade point averages of high school and GED graduates were comparable. In post-secondary experiences (college), she found that GED graduates performed as well as traditional high school graduates.

McElroy (1990) conducted a study at Kankakee Community College during the enrollment of the 1990 school year. The sample consisted of 2,326 students. Of those students 1,825 students received a high school diploma, whereas, 126 students received a GED. The remaining 375 did not have a high school diploma or GED. The students were placed in subpopulation groups and 50 students from each group were randomly selected. The data for McElroy's study were obtained from the students' transcripts. The grade point averages for traditional high school graduates ranged from 1.17 to 4.00, whereas the GED graduates ranged from 1.37 to 4.00. According to the data analysis, there was a significant difference between the GED and THS graduates. The traditional high school graduates had a lower average (2.76) than the GED graduates (2.93). In a review of the literature in a study conducted by McElroy, when comparing the GPAs of GED graduates and high school graduates, there was either no significant difference between the two groups or the high school graduates had higher GPAs.

CHAPTER III

METHODOLOGY

The information obtained during this study was used in order to determine which group of students had the higher GPA after completing their first semester at the local community college. The review of the literature provided conflicting evidence that GED graduates performed just as well, if not better than the traditional high school graduates after their first semester of community college.

Research Design

Correlational research involved data collection that was used in order to determine if a relationship existed between two or more variables (Wallen & Fraenkel, 2001). There are two main purposes of correlational research. According to Wallen and Fraenkel (2001), the major purpose of correlational research was to provide an understanding to others about what actually happens as a result of identifying the relationship between the variables. A second purpose of the correlational research was prediction. A prediction can be made if it is found that a relationship exists between the variables. Simply stated, correlational research will be either used to explain important humans behaviors or predict what the likely outcomes will be (Wallen & Fraenkel, 2001).

This research study was a correlational study. It examined the relationship between traditional high school students and GED graduates who completed their first

semester of community college. This study also examined the students' data based on race, gender, age, and college entrance certificate (high school diploma or GED), and compare the cumulative GPAs of the traditional high school students and the cumulative GPAs of GED graduates after their first semester at the community college.

The *t*-test for independent means is a parametric test of significance used to determine whether there is a significant difference between the means of two independent samples (Wallen & Fraenkel, 2001). The *t*-test for independent means was used to answer research questions 1, 2, and 3. In research question #1, a *t*-test was used to determine if there was statistically significant differences in GPA mean scores between GED holders and THS graduates. In research question #2, a *t*-test was used to determine if there was statistically significant differences between the two ethnic groups of GED holders and THS graduates as measured by the GPA mean scores. In research question #3, a *t*-test was used to determine if there were statistically significant differences in the gender of the THS graduates and GED holders as measured by the GPA mean scores.

Multiple regression analysis, according to Hair et. al (2006), is a statistical technique that can be used to analyze the relationship between a single dependent variable or criterion variable and several independent variables or predictor variables. In research question #4, there was one dependent variable (grade point averages) and several independent or predictor variables (graduate status, gender, race, and age).

For research question #4, a multiple linear regression was used to determine if there was a relationship between the age, ethnicity, gender, and graduate status of the students and their grade point average.

Population and Sample

There were no actual participants for this study. All of the information obtained came from the raw scores in the students' school records. There were no identifiers in this research study.

The background information about the participants in this study was from first semester students admitted to the local community college. The participants had completed either a GED or a high school diploma. Transfer students scores were not used in this study.

Data Collection

Intact data were collected from a rural community college in Mississippi with the approval of the Institutional Review Board (See Appendix A) and the President and the Vice-President (See Appendix B) of the community college. The students' records were used to obtain the following information: age, gender, race/ethnicity, graduate status (THS or GED), and grade point average (See Appendix C). All information obtained was coded and there were no identifiers.

The information for one participant was dismissed due to incomplete fields. One of their categories did not contain the information needed to be included in this study.

Analysis

The research questions for this study served as the conceptual framework. Research Question #1: Is there a statistically significant difference between the GPA mean scores of the GED holders and THS graduates?

Procedure: An independent *t*-test was utilized to determine if a statistically significant difference existed between GED graduates compared to traditional high school graduates. The independent variable was the graduate status. Level 1 was the GED graduate and Level 2 was traditional high school graduate. The dependent variable was the community college GPA mean scores following the fall semester of the freshman year.

Research Question #2: Is there a statistically significant difference between ethnicity and the GED holders and THS graduates as measured by the GPA mean scores? Procedure: An independent *t*-test was utilized to determine if a statistically significant difference existed between the ethnicity of the students who earned a GED and traditional high school graduates. The independent variable was the ethnicity. Level 1 was the White/Caucasian students, and Level 2 was the nonwhite students. The dependent variable was the community college GPA mean scores following the fall semester of the freshman year.

Research Question #3: Is there a statistically significant difference between gender of the THS graduates and GED holders as measured by the GPA mean scores? Procedure: An independent *t*-test was utilized to determine if a statistically significant difference existed between the genders of the students who earned a GED and traditional high school graduates. The independent variable was gender. Level 1 was the female and Level 2 was the male. The dependent variable was the community college GPA mean scores following the fall semester of the freshman year.

Research Question #4: How do graduate status, gender, race, and age influence mean GPA scores?

Procedure: A multiple linear regression was used to determine if there was a relationship between demographic variables and students' grade point averages. The independent or predictor variables were graduate status, gender, race, and age. The dependent variable was the grade point average. Since this research question was used to analyze the relationship between one dependent (criterion) variable and several independent (predictor) variables (Hair et al., 2006), multiple regression analysis was the statistical technique used. According to Hair et al. (2006):

> Multiple regression analysis uses the independent variables whose values are known to predict the single dependent value selected by the researcher. Each dependent variable is weighted by the regression analysis procedure to ensure maximal prediction from the set of independent variables. The set of weighted independent variables form the regression variate, a linear combination of the independent variable that best predicts the dependent variable. (p. 176)

The correlation coefficient, which was reported as Pearson's R^2 was produced by running all of the independent variables simultaneously, known as simultaneous solution. The purpose of the simultaneous solution is to predict any changes in the dependent variable based upon all of the independent variables entered. The role of the correlation coefficient is the concept of association (Hair et al., 2006) which is represented by the correlation coefficient *r*. If there are changes in one variable that is associated with changes in another variable, then it is said that the two variables are correlated (Hair et al., 2006). The correlation coefficients which range from -1 to +1 will indicate the strength of the relationship.

The ANOVA determined if the multiple linear regression model was the best fit for the analysis. A statistically significant *F* indicates a better than chance level when the predictor variables are simultaneously entered into the model (Hair et. al., 2006). The significance level will be set at an alpha level of .05 *a priori*. The Statistical Package for Social Sciences 15.0® (SPSS, 2007), was used to run the *t*-tests, descriptives, and multiple linear regression.

CHAPTER IV

RESULTS

The purpose of this study was to determine whether or not there was a statistically significant difference between the dependent variable (GPA mean scores) and the independent variables (graduate status, gender, race/ethnicity, and age) of students attending a community college after their first fall semester in attendance. The results of this study lends clarity to perceptions that instructors, administrators, and staff members, as well as members of society had about GED students and traditional high school students.

This chapter provides results found in the research study. The first section gives a description of each independent variable, including frequencies, means, and percentages. The second section answers each of the research questions. The final section includes a discussion of the results. The independent variables in this research study consist of graduate status, gender, race/ethnicity, and age.

GED versus Traditional High School Students

In this study, as with Vanderloo (2003), there were a larger number of high school graduates than those students who received the GED. GED graduates made up 7.8% (n=53) and traditional high school graduates made up 92.2% (n=627).

Race/Ethnicity

Race/ethnicity was broken down into two categories (white and nonwhite). The difference between the *n* of race/ethnic groups was not as large as with the number of GED students and THS. Nonwhite consisted of black, Hispanic, and any other race/ethnic group. Non-white students made up 54.9% (n=373) of the participants and white students made up 45.1% (n=307). One set of data were eliminated due to missing information in the race/ethnicity field.

Age

The age of the GED students and THS students ranged from 17-48+. The students were grouped due to the large sample size. The total number of participants was 680 with a mean age of 21.8. The age group for 17-27 made up 89.1% (n = 606) of the participants; 28-37 year olds made up 6.5% (n = 44); 38-47 year olds made up 3.4% (n = 23); and the 48+ age group made up 1% (n = 7) of the total participants.

Grade Point Average

The grade point averages were grouped so that the numerical grade would be representative of the letter grade. The grade point averages ranged from 0.00-4.00. The mean grade point average was 2.326. Of the students in this sample, 12.9% (88) had grade point averages ranging from 0 to .99, while 4.7% (32) had a 4.00 grade point average. The largest percent (32.9% or 224) had a GPA ranging from 2.00-2.99 (see Figure 1).

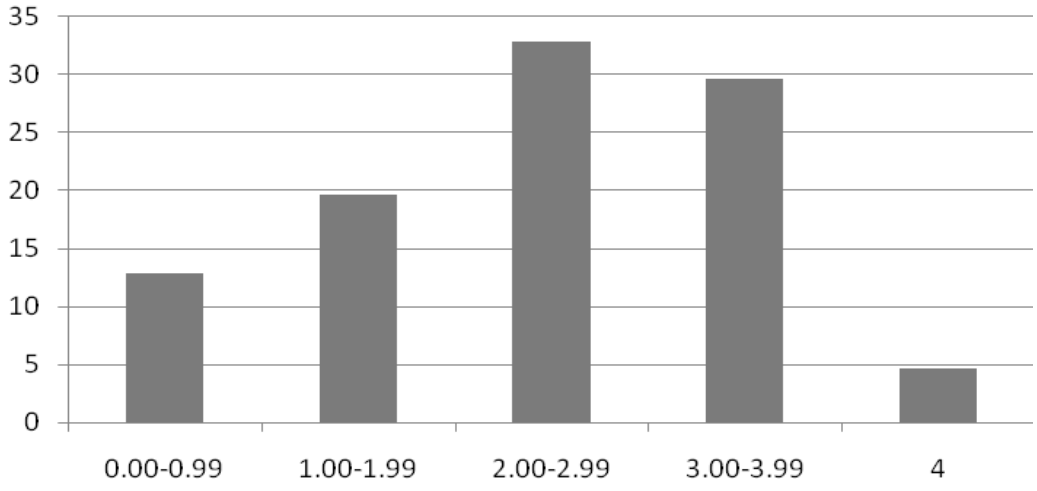

Figure 1 Percentages of Grade Point Averages of Community College First Semester Freshmen

Research questions 1, 2, and 3 were answered using the data analysis results from the independent *t*-test, whereas, research question 4 was analyzed using the multiple linear regression model. The grade point averages for the community college first semester freshmen students were examined using the fall semester data.

1. Is there a statistically significant difference between the GPA mean scores of the GED holders and THS graduates?

There was no statistically significant difference in the mean GPA between GED holders ($M = 2.297$, $SD = 1.04$) and THS graduates ($M = 2.328$, $SD = 1.09$). The significance level in the Levene's Test for Equality of variances indicated the independent-*t* was greater than .05 and there was no violation of the assumption of homogeneity. Therefore the *t*- statistic was valid (see Table 1).

Table 1

t-test Comparing the Mean Score GPA to Graduate Status

Graduate Status	*N*	Mean	*SD*	*t*	*df*	Sig.
GED	53	2.297	1.04	-.200	678	.842
THS	627	2.328	1.09			

2. Is there a statistically significant difference in ethnicity of the THS graduates and GED holders as measured by the GPA mean scores?

There was a statistically significant difference in mean GPA scores between nonwhite ($M = 2.09$, $SD = 1.10$) and white students ($M = 2.61$, $SD = 1.00$). The white students had a higher mean GPA than the nonwhite students. Significance level was less than .05 (see Table 2).

Table 2

t-test Comparing the Mean Score GPA to Race/Ethnicity

Race/Ethnicity	*N*	Mean	*SD*	*t*	*df*	Sig.
Nonwhite	373	2.09	1.10	-6.364	678	.000
White	307	2.61	1.00			

3. Is there a statistically significant difference between the gender of THS graduates and GED holders as measured by the GPA mean scores?

There was not a statistically significant difference between the mean GPA scores between the males and females. The mean GPA for males was 2.239, (*SD* = 1.05) and the mean for females was 2.397, (*SD* = 1.11). Significance level was greater than .05 and there was no violation of the assumption of homogeneity. Therefore the *t*-statistic was valid (see Table 3).

Table 3

t-test Comparing the Mean Score GPA to Gender

Gender	***N***	**Mean**	***SD***	***t***	***df***	**Sig.**
Male	309	2.239	1.05	-1.886	678	.060
Female	371	2.397	1.11			

4. How do graduate status, gender, race, and age influence mean GPA scores?

The *t*-tests indicated if any of the *Beta* coefficients of the predictors of GPA were statistically significant. As shown in Table 4, the variables gender and race were statistically significant predictors of the GPA. Race and gender had a higher impact on GPA than age and graduate status. The white ethnic group had a higher influence on GPA than the nonwhite ethnic group. Females also had a higher influence on GPA than the males, as shown by having a higher GPA. However, the predictor variables, age and graduate status, were not statistically significant. The results of the ANOVA yielded a

significance of p=.000 which indicated a good model fit for the multiple linear regression.

Table 4

Summary of Multiple Linear Regression Model Analysis for the Predictors of GPA

Predictor Variable	ß	*t*	*p*
Constant		9.455	.000
Age	.073	1.868	.062
Gender	-.092	-2.443	.015
Race	-.260	-6.885	.000
Graduate Status	.030	.779	.436
R-squared value		.071	
Adjusted R-square		.066	
R Square Change		.071	

Using intact data, the analysis answered the four research questions dealing with graduate status, race, gender, age, and grade point average. There was no difference in the mean GPA between the GED holders, THS graduates, and gender as analyzed by using the *t*-test. The multiple linear regression showed that race and gender impacted the GPA means scores, however, graduate status and age did not have any impact.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

The purpose of this research study was to determine whether or not there was a statistically significant difference between the dependent variable (GPA mean scores) and the independent variables (graduate status, gender, race/ethnicity, and age) of students attending a community college after their first fall semester in attendance. The sample consisted of intact data from 680 students who either entered the community college with a GED or a high school diploma.

There were four research questions addressed in this study. The data used for this study were analyzed using SPSS 15.0. Research questions #1, #2, and #3 were analyzed using a *t*-test for independent means to determine if there were statistically significant differences between the means of the independent and dependent variables. Research question #4 was analyzed using multiple linear regression to determine if there was a relationship between the age, ethnicity, gender, and graduate status of the students and their grade point average.

The review of the literature supported the fact that traditional high school students outperform and have higher grade point averages than GED graduates. However, the analysis for this study showed there was a slight difference between traditional high school students' grade point averages and GED graduates' grade point averages.

In 2001, more than one million adults worldwide took one or more of the five GED tests. This was the largest number since the program first came into existence (Smith, 2003). The GED was originally developed for the war veterans. Since then, the GED has been opened to anyone who needs and wants to finish their high school diploma requirements either for job purposes or for their own personal benefit. Many GED students coming back to college after being out of school for a while tend to have some adjustment issues. However, most of all of students (GED and THS) are concerned with the grade performance.

Previous research supported the fact that GED students' GPAs were significantly higher than THS (Fisher, 2005; Vanderloo, 2003). However, according to this study, GPA indicated a tilt toward the opposite direction. The total number of the participants for this research study was n=680. In comparison to previous literature, this was only a small portion of the previous sample sizes. With the economy spiraling downward, more people are going back to school to obtain a degree or to obtain job skills training due to some type of major life transition (George & Schaefer, 2002). Many people are choosing community colleges to meet their academic needs as well as vocational needs or job skills training. The student can go to the community college for academics, as well as vocational training. According to the Mississippi 2008 Legislative Accountability Report (MACJC, 2008), 8,831 individuals were admitted to community colleges with a GED. More students are continuing to obtain their GED as well as furthering their education by enrolling in community colleges and universities.

Previous research shows that females had higher GPA mean scores than males (Fisher, 2005). However, in this study, it was found that there was not a statistically significant difference between the males and females.

College is not just for traditional high school graduates, there are more nontraditional students returning to the classroom. All across the United States, students of all ages are enrolling in college. George and Schaeffer (2002) found that there were more 40-50 year olds who took the GED than any other age group. Analysis of age as a factor, in this study showed the 17-28 year olds' GPA was higher than the other age groups which contradicts what Fisher (2005) found. Fisher found that the older the student, the higher their GPA.

Community college and universities in today's society consist of a very diverse population. In this study, the sample consisted of whites and nonwhites. It was found that there was a statistically significant difference between the two ethnic groups. White students had higher mean GPAs than nonwhite students. It was concluded in Fisher's (2005) research, that white students had higher mean GPAs than black students. Fisher (1999) found that after their first semester at the community college, African-American students with a GED had higher GPAs than African-Americans with a traditional high school diploma. Findings in this research study did support the findings of Fisher (2005).

In light of the declining economy, it is anticipated that more people will be returning to school, with community college being the first stop. The requirements for community colleges tend to be a little less strenuous than those of four year institutions. Some four year institutions can be overwhelming, especially for those who have not been in school in a long time. Some community colleges offer GED programs for those who

may have dropped out of high school and after losing their job decided to go back to school. They also offer a variety of developmental courses to those who may have been out of school for an extended period of time. With some area agencies closing, as part of severance packages, companies are offering employees who will be out of work, the opportunity to go back to school and learn a vocational/technical trade or to obtain a degree.

Traditional high school students tend to find themselves going to the community college for many reasons. Some of those reasons are the same ones GED graduates would have: smaller school, smaller classes, and the need to further their education for more money. Mississippi is continuing to improve the state by training individual workers, conducting workforce training classes, offering and issuing Career Readiness Certificates with a guarantee of basic employability skills, and serving companies and businesses (MACJC, 2008), all with the assistance of the community colleges.

Whether students have earned a GED or high school diploma, success is not determined by that. Kroll (1993) stated that earning "neither a GED nor a high school diploma is a predictor for determining success in a community college". Any student, regardless of race, age, gender, and graduate status can be successful at a community college.

Conclusions

The research questions answered in this study were:

1. Is there a statistically significant difference between the GPA mean scores of GED holders and THS graduates? Based upon the analysis of the data, there was

very little difference between the mean GPA of the GED holders and the THS graduates; however, it was not statistically significant.

2. Is there a statistically significant difference in ethnicity between GED holders and THS graduates as measured by the GPA mean scores? Based upon the analysis of the data, there was a statistically significant difference in the mean GPA scores between nonwhite and white students. The white students had a higher GPA than the nonwhite students.
3. Is there a statistically significant difference between gender of the GED holders and THS graduates as measured by the GPA mean scores? Based upon the analysis of the data, there was not a statistically significant difference between the males and the females GPA mean scores.
4. How do graduate status, gender, race, and age influence mean GPA scores? Based upon the analysis of the data using the multiple linear regression, it showed that race and gender had a higher influence on GPA than age and graduate status. The white ethnic group had a higher influence on GPA than the nonwhite group. The females had a higher influence on GPA than the males. There was not a statistically significant difference between age and graduate status. The graduate status and age had very little influence on the GPA.

As previously stated, this study examined the grade point averages of the students who entered the community college with a GED certificate or high school diploma after completion of their first semester. This study also examined gender, ethnicity, and age.

Recommendations

At the time of this research study, data were only collected from one site, whereas, the participating community college in this research study has five additional sites. The students' graduate status had very little to do with their grade point average at the end of the semester that was examined.

The following recommendations are made:

1. It is recommended that perhaps data for the other sites could be included in future research. The additional sites are smaller, however, it would still include every incoming, first semester freshman and would perhaps have more students who have GEDs.
2. Also, to update some of the literature, the researcher recommends that with many of the industries closing, that future research would include more community colleges. Future research could also include within the community college different majors and programs (vocational and technical), as well as more than one semester of data collection.
3. Other recommendations would include a study examining the relationship between grade point averages and race.
4. A longitudinal study would provide more information by tracking students through-out their two year program at the community college. It could look at how well the students perform from start to finish, taking into account all external variables.
5. The socioeconomic status of the students could be incorporated into further research and used to predict the success rate of the students.

6. A qualitative research study would be helpful to find out more about the student and their background.
7. Based on this study, the researcher would not recommend any changes in restructuring the college's developmental courses.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Mississippi State University

August 5, 2008

Ericka Akins
50 Choctaw Road
Starkville, MS 39759

RE: IRB Study #08-049: GED students versus traditional high school students: How do the GED graduates perform after the first semester of attendance at a rural community college?

Dear Ms. Akins:

The procedural modification submitted for the above referenced project was reviewed and approved via administrative reviewon 8/5/2008. The requested change in the title of the project is reflected above. IRB approval for this project was originally granted on 2/21/2008 in accordance with 45 CFR 46.101(b)(4). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at http://www.orc.msstate.edu/human/aahrpp.php.

Please refer to your IRB number (#08-049) 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 Christine Williams at cwilliams@research.msstate.edu or call 662-325-5220.

Sincerely,

[for use with electronic submissions]

Christine Williams
IRB Compliance Administrator

cc: Dr. Ed Davis

Office for Regulatory Compliance
P. O. Box 6223 • 70 Morgan Avenue • Mailstop 9563 • Mississippi State, MS 39762 • (662) 325-3294 • FAX (662) 325-8776

APPENDIX B

EAST MISSISSIPPI COMMUNITY COLLEGE APPROVAL LETTER

EAST MISSISSIPPI
COMMUNITY COLLEGE

Main Campus
P.O. Box 158
Scooba, MS 39358
(662) 476-8442

Golden Triangle
P.O. Box 100
Mayhew, MS 39753
(662) 243-1900

CAFB Extension Center
81 Fifth Street, Room A
CAFB, MS 39710
(662) 434-2660

14 February 2008

Institutional Review Board for the Protection of Human Subjects
Office of Regulatory Compliance
Mississippi State University
8A Morgan Street
PO Box 6223
Mississippi State, MS 39762

Dear IRB Members and Compliance Staff:

On behalf of Dr. Rick Young, President of East Mississippi Community College, I am providing authorization and support for research to be conducted by Ms. Ericka Akins, using institutional data, within the parameters outlined in the pre-proposal for her forthcoming study, *GED students versus traditional high school students: How do the GED graduates perform after the first semester of community college*. This research, while meeting the requirements for her dissertation, may well be of considerable interest for the college in matters of retention and future advising of first time freshmen at EMCC. Data provided to Ms. Akins by the College will have no identifiers (names, student numbers, etc.) listed in the student records. The following data will be provided: age, race, gender, ACT scores, grade point averages, and whether the entering students possessed a GED or high school diploma. Under the direction of Dr. Ed Davis, I trust that Ms. Akins will conduct the study will integrity and produce original scholarship which will be of value to others. If there are any further questions which need to be answered, I will certainly be glad to respond.

Sincerely,

Dr. Stephen M. Vacik
Vice-President, Academics
East Mississippi Community College

APPENDIX C

INSTITUTIONAL REVIEW BOARD PROCEDURAL MODIFICATION FORM

Mailstop 9563 (Christine)

Procedural Modification/Addendum Request Form

RECEIVED
JUL 30 2008

Please note: This form may NOT be used for personnel changes or time extensions. Please complete a Personnel Modification form for personnel changes or a Continuing Review Request form for time extension requests.

IRB Study# 08-049

Principal Researcher/Investigator: ERICKA AKINS

Study Title: GED students versus traditional high school students: How do the GED graduates perform after the first semester of community college?

1. **Summarize / Itemize requested changes and justification for each.** Title change
GED students versus traditional high school students: How do the GED graduates perform after the first semester of attendance at a rural community college?
2. **Do changes require a REVISED CONSENT statement or procedure?**
   - ☐ **YES** - *If yes, attach a revised consent form with the changes tracked, and a clean copy for the IRB approval stamp.*
   - ☑ **NO**
3. **Do changes require revisions to the assessment of risk of harm to the subjects?**
   - ☐ **YES** - *If yes, explain.*
   - ☑ **NO**
4. **Do changes require revisions to the methods of ensuring anonymity or confidentiality?**
   - ☐ **YES** - *If yes, explain.*
   - ☑ **NO**

Principal Investigator — Date: 7/30/08

Research Advisor (if applicable) — Date: 7/20/08

MSU IRB — approved
☑ Adm
☐ Exp
☐ FBR
8/5/08

Version 06-24-08

1342 ✓