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# The Impact of Educational Backgrounds on Academic Success at a Private Work College in the Midwest

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by

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Dr. Sherry DeVore, Dissertation Chair — April 12, 2016 (Date)

Dr. Kathy Grover, Committee Member — April 12, 2016 (Date)

Dr. Terry Reid, Committee Member — April 12, 2016 (Date)

**Declaration of Originality**

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

Full Legal Name: Abbey Nicole Vogt

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**Abstract**

More families in the United States are beginning to choose private or homeschool education for children instead of a public school education (Hanna, 2011); therefore, college administrators must begin to evaluate each student's educational background in order to help all students achieve academic success at the college level. The purpose of this study was to determine differences in multi-year college academic performance among public, private, and homeschool graduates who attended a private work college in the Midwest. The variables analyzed consisted of students' final high school GPAs and ACT test scores, college cumulative GPAs and work point average (WPA) scores, as well as college graduation rates. Each educational background was examined independently, while also analyzing the varied educational backgrounds against one another and as groups. The results of the homeschool and private school students were not significantly different in all variables tested. The homeschool students maintained a slightly higher average overall; however, both homeschool and private school students' scores were consistently higher than students who attended public schools using an equality of variance, ANOVA, and post-hoc analyses for high school cumulative GPA, ACT composite score, college cumulative GPA, and WPA variables. Both homeschool and private school students had a comparable college completion rate; however, public school students had a lower graduation rate. A chi square test of independence was used to determine whether a significant relationship existed between the educational background of students and college graduation. The analyses showed the graduation rate was dependent upon the educational background. Not only did public school students average the lowest percentage in all variables, but they were below the overall average of each variable tested.

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## Chapter One: Introduction

High school seniors across the nation aspire to graduate and transition into the next phase of life as a college student (Fay, Barnett, Trimble, Pheatt, 2014; Wolniak, Neishi, Rude, & Gebhardt, 2012). The transition into college can be a challenging endeavor and one which will be influenced by the student's previous educational background (Wang, Cullen, Yao, & Li, 2013; Wolniak et al., 2012). Parents want their children to have opportunities to obtain a quality education. Students' educational backgrounds strongly influence the success of transition into the structured, yet independent, environment of college (Cleary, Walter, & Jackson, 2011). Instead of sending children to traditional public schools, parents have the options of homeschool or private school. As a result, the different academic outcomes of each system could result in differing levels of success in college.

With regard to the varied K-12 educational backgrounds of incoming college students, little is known about the success rates and academic outcomes each group attains while in higher education (Jones & Gloeckner, 2004; Ray, 2015). Jones and Gloeckner (2004) explained, "Much of the existing research on academic performance centers on K-12, homeschool students, and many of these studies show that homeschool children outperform their public school peers on several national standardized exams" (p. 17). The National Home Education Research Institute (NHERI) found, "The average homeschooler consistently scores higher on standardized achievement tests compared to average public school students" (Aasen, 2010, p. 12), as well as scoring comparably to or above private school students on the Preliminary Scholastic Aptitude Test (PSAT), Scholastic Aptitude Test (SAT), and American College Test (ACT) (Ray, 2010).

However, the lack of research to help colleges address the varied K-12 educational backgrounds is leading to "a big college completion problem, as more than thirty-one million adults have earned college credit within the last twenty years, but left without any post-secondary credential" (Fishman, 2014, p. 24).

College degrees are a necessity as citizens are "moving into a world in which anyone who aspires to a middle-class income . . . needs some kind of post-secondary credential" (Fishman, 2014, p. 24). Earning a college degree is a significant achievement for students, which may ease the transition into adulthood through interactions, interests, and formation of personal identity (Brock, 2010). When college administrators begin researching which educational setting, public, private, or homeschool, leads to academic success and positive transition at the college level, then college administrators will be able to identify and help students more effectively.

**Background of the Study**

As the President of the United States and United States congressional members pass new legislation to increase college graduation rates, college administrators must consider implementing different programs to help students succeed and graduate with a college degree (Kuh, Kinzie, Schuh, & Whitt, 2010; Taylor, 2013). A post-secondary degree allows students greater opportunity for job prospects leading to financial independence (Brock, 2010; Harden, 2013). Cruz and Haycock (2012) reported, "College-educated adults earn more and are less likely to be unemployed than those without degrees" (p. 49). Brock (2010) agreed, "College graduates have substantially better prospects in the labor market than peers who stop their formal education after high school" (p. 110).

Researchers at Georgetown University found, “Over half of the added jobs since the recession of 2007 have gone to those who have a bachelor’s degree or better. By 2020, almost 57 percent of all jobs will require at least a post-secondary certificate” (Fishman, 2014, p. 24). A college education provides more than just a better job outlook. Brock (2010) explained, “A college education would provide benefits such as deep friendships, excellent health, and a positive effect on civic engagement, which can lead to becoming an engaged community member and citizen” (p. 110).

In order to acquire entrance into multiple colleges, a student must maintain good academic standing in the form of high grade point average (GPA) and ACT scores (Conger, 2015; Sparkman, Maulding, & Roberts, 2012; Sun, Gorry, Israelsen, 2015). Brock (2010) explained the importance of a college degree, stating, “Few decisions matter more to a young person’s future than the decision to attend college and earn a degree” (p. 110). Adelman’s (1999) research showed the best predictor for academic success is a tough and intensive high school curriculum including courses that stress reading at grade level and math beyond basic algebra.

According to the U.S. Department of Education’s National Center for Educational Statistics (NCES) (2015a), “Some 3.1 million students graduated from U.S. public schools in the 2011-12 school year” (p. 1). However, “Students are entering college without the basic content knowledge, skills, or habits of mind they need to succeed” (Venezia & Jaeger, 2013, p. 117). Choy (2001) agreed by stating:

> Taking appropriate courses in high school is an important step in preparing for college. Lack of academic preparation is not necessarily a barrier to entry into a

> less than-4-year institution, but it may be associated with students' success once there. (p. 24)

Curriculum is important in a student's academic success; therefore, parents have educational options and are foregoing a traditional public school education for a homeschool education (Hanna, 2011; Lovett, 2014). Walker (2010) suggested, "The foundation of the student's method of schooling will determine which method best prepares a student for college" (p. 5). Jones and Gloeckner (2004), as well as Hanna (2011), found during the past three decades, the number of families choosing to homeschool their children has grown throughout the United States. According to the recent estimates from the U.S. Department of Education's NCES (2015b), "The home school K-12 population has grown from 1 million students in 2002 to 1.7 million students in 2012" (p. 1).

With more families in the United States choosing private or homeschool education for children instead of a public school education (Ice & Hoover-Dempsey, 2011; Wyatt, 2014), college administrators must begin to evaluate each educational curriculum in order to help all students achieve academic success at the college level. However, at a work college, mandatory work adds another variable influencing the outcome of academic success, and therefore, is addressed within this study. Mangan (2013) suggested colleges should "push students to maintain 15 credit-hour schedules throughout college, yet skeptics dismiss this as unrealistic for those who work or are less academically prepared" (p. A3). Tuttle, McKinney, and Rago (2005) found "working to be beneficial to student success through the development of time-management and prioritizing skills, as well as interpersonal skills" (p. 8).

Federal work colleges are unique in that students must work on campus in order to pay tuition (The Work Colleges Consortium, 2011b). The work colleges "are federally defined and follow specific guidelines and regulations. Each college has a work program structure that parallels that of an academic program including a Dean of Work and consequences for non-performance" (The Work Colleges Consortium, 2014, para. 3). According to the Work Colleges Consortium (2014):

> Work Colleges evolved from a practical solution—allowing students to work and assist with the college's institutional functions and operations. Today, that means everything from technology to accounting and finance, faculty research to kitchen operations, and farm chores to the President's office. Work College students do it all. (p. 1)

The federal work college is for "students who wanted an education but could not afford one, and colleges with modest budgets that wanted to provide an education" (Work Colleges Consortium, 2014, p. 1). Students must work eight to 15 hours per week to pay for part or all of their tuition (Work Colleges Consortium, 2014). Through the integration of work, learning, and service, students who attend work colleges learn important professional skills while earning degrees (The Work Colleges Consortium, 2011a).

**Theoretical Framework**

Due to the gap in the current literature concerning how different educational backgrounds affect the academic success of students attending a work college, Tinto's (1993) student departure theory was studied. Tinto (1993), known for his student departure theory, suggested to assure student success, colleges must first have a commitment to students. Milem and Berger (1997) explained, "Tinto asserted that the

process of becoming integrated into the academic and social systems of a college occurs when students successfully navigate the stages of separation, transition, and incorporation" (p. 388). In order to ensure student success within these stages, college administrators must first identify and evaluate the backgrounds of their student body (Tinto, 1993). This identification by college administrators will better assist students with a successful transition and the ability to achieve academic success within higher education (Tinto, 1993).

Previous studies focused on academic success in college as it pertains to student engagement (Quaye & Harper, 2015; Svanum & Bigatti, 2009), student behaviors (Reyes, Brackett, Rivers, White, & Salovey, 2012; Strayhorn, 2011), institutional conditions (Tinto, 2010, 2012), and pre-college experiences (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2011). There are numerous theories, articles, and research on the importance of retention (Soria, Fransen, & Nackerud, 2013), student engagement (Kuh, 2003), persistence (Vuong, Brown-Welty, & Tracz, 2010), working while in college (Lang, 2012; Mounsey, Vandehey, & Diekhoff, 2013), and college debt (Avery & Turner, 2012; Dwyer, Hodson, & McCloud, 2013). Research has been conducted on the academic success of public versus private school students (Lara, Mizala, & Repetto, 2011) as well as public versus homeschooled students (Kunzman & Gaither, 2013). However, no research was found on the topic of academic success at a work college related to students' high school backgrounds.

In their study, York, Gibson, and Rankin (2015) synthesized Kuh et al.'s (2006) definition of student success as "academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and

competencies, persistence, attainment of educational outcomes, and post-college performance" (p. 4). Due to pressures from the government (Advisory Committee on Student Financial Assistance, 2012) and society to increase student academic standards, colleges have started paying closer attention to the factors important to student academic success (Cheng & Alcantara, 2004). Voigt and Hundrieser (2008) noted, "Students persisting to completion of their educational goals is a key gauge of student success, and therefore institutional success" (p. 1).

In a national study, Snyder (2013) discussed how Rudner "administered academic achievement tests to 20,760 primary and secondary homeschooled students. The results showed the homeschooled students' achievement test scores were significantly higher than those of their public and private-school counterparts" (p. 289). However, there is no research on the academic success of public, private, or homeschooled students at a work college. This study will fill a research gap in the literature concerning the academic success of students who are from different educational backgrounds and attend a work college in the United States.

**Statement of the Problem**

With students' varied K-12 educational backgrounds, college administrators must establish methods to help students transition and become successful while in higher education. A study by Grantmakers for Education (2012) showed, "Inadequate academic preparation at the K-12 level leaves scores of students ill-equipped for college…as one-third of all first-year college students take at least one remedial course" (p. 2). The homeschooled college student does not have a wide array of institutional experiences from primary and secondary schooling to draw from while coping with the stresses of a

college environment (Drenovsky & Cohen, 2012). Nevertheless, it is possible the homeschooled college student has sufficient preparation for succeeding in college from the home environment (Drenovsky & Cohen, 2012). Without the institutional experiences of schooling, Aasen (2010) found:

> Almost 75 percent of homeschoolers age 18-24 years old attended college, completing a bachelor's, master's, doctoral, or professional degree while more than 50 percent of their public school peers dropped out of high school, stopped schooling after high school, or completed only a vocational degree. (p. 13)

There is a growing disconnect between a positive college transition and the success rates of students from varied K-12 educational backgrounds (Grantmakers for Education, 2012). Instead of using resources to help students succeed, colleges have instead been using a variety of resources to recruit students (Grantmakers for Education, 2012); however, colleges also lack reliable data and tracking to measure the success of those students (Sander, 2014). The faculty, administrators, and college trustees are often unaware of the percentage of students who graduate or need to ensure graduation success (Grantmakers for Education, 2012). The problem is that "most postsecondary institutions lack the capacity and the sense of urgency for using data-driven practices to engage students more effectively…to support college completion" (Grantmakers for Education, 2012, p. 2).

With only seven work colleges throughout the United States, a lack of knowledge and research surround these institutions. Therefore, any research completed using data from a work college will support the efforts of these institutions to increase the academic success of students. Alongside a lack of available research on the academic success of

students from varied K-12 backgrounds, colleges must gather data on incoming freshman students, as well as continue to acquire academic data for consecutive years. This research will help determine how to better address the different K-12 educational backgrounds students bring with them into a work college, as well as begin valuable research on a work college.

**Purpose of the Study**

The purpose of this study was to determine differences in multi-year college academic performance among public, private, and homeschool graduates at a private work college. The data analyzed consisted of students' final high school GPAs and ACT test scores, college cumulative GPAs and work point average (WPA) scores, as well as college graduation rates of each group. Faculty, administrators, and trustees will be able to review the data and become better equipped to assist new students entering college from varied educational backgrounds. The assistance provided by faculty, administrators, and trustees will allow for greater opportunity and academic success among students from different educational backgrounds at a private work college.

**Research questions and hypotheses.** The following research questions and hypotheses guided this study:

1. What is the significant difference, if any, between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores?

*$H1_0$.* There is no significant difference between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores.

*$H1_a$*. There is a significant difference between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores.

2. What is the significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college?

*$H2_0$*. There is no significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college.

*$H2_a$*. There is a significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college.

3. What is the significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college?

*$H3_0$*. There is no significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college.

*$H3_a$*. There is a significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college.

4. What is the difference between students' educational backgrounds and graduation rates at a private work college?

*$H4_0$*. There is no significant difference between students' educational backgrounds and graduation rates at a private work college.

*$H4_a$*. There is a significant difference between students' educational backgrounds and graduation rates at a private work college.

**Definitions of Key Terms**

**American College Testing (ACT) program**. The ACT is "a curriculum- and standards-based educational and career planning tool that assesses students' academic

readiness for college, which consists of English, reading, mathematics, and science tests" (ACT, Inc., 2015, para. 1).

**Grade-point average (GPA)**. A student's GPA is "the average grade earned by a student, figured by dividing the grade points earned by the number of credits attempted" (*American Heritage Dictionary*, 2011, para. 1).

**Homeschool**. Homeschool includes instruction and learning, at least some of which is through planned activity, taking place primarily at home in a family setting with a parent acting as teacher (Berger, 1997).

**Private school**. A private school is established, conducted, and primarily supported by a nongovernmental agency (*Merriam-Webster's Online Dictionary*, 2015).

**Retention**. Retention is to keep students in higher education (Sternberg, 2013).

**Success**. For the purposes of this study, success "is persistence and educational attainment, or achieving the desired degree or educational credential" ("Major Theoretical Perspectives," 2007, p. 13).

**Work college**. A work college is an eligible institution that:

(1) is a public or private nonprofit, four-year, degree-granting institution with a commitment to community service;

(2) has operated a comprehensive work-learning-service program for at least two years;

(3) requires resident students, including at least one-half of all students who are enrolled on a full-time basis, to participate in a comprehensive work-learning-service program for at least five hours each week, or at least 80 hours during each

> period of enrollment, except summer school, unless the student is engaged in an institutionally organized or approved study abroad or externship program; and (4) provides students participating in the comprehensive work-learning-service program with the opportunity to contribute to their education and to the welfare of the community as a whole. (Electronic Code of Federal Regulations, 2016, p. 675)

**Work point average (WPA).** A student's WPA is an average of a work point grade, which is based on meeting the outcomes and expectations by a work supervisor in the form of responsibility, reliability, teamwork, motivation, communication skills, and quality of work performed (College of the Ozarks, 2015).

## Limitations and Assumptions

Due to the small number of work colleges throughout the United States, care has been taken to limit identifiers. The student population used in this study attended a single institution; therefore, the results of this analysis should not be considered inferential to the general population of undergraduate students in the United States. However, these results should be considered a starting point to better understand the academic success and transition of students who are educated in a public, private, or homeschool setting at a private work college.

## Summary

The data obtained from this study will assist faculty, administrators, and college trustees to ascertain the importance of different educational backgrounds on students' academic success at a private work college. The differentiation of students who graduated from a public, private, or homeschool and subsequently attended a private work college in the Midwest were studied. Success was determined by evaluating the

students' GPAs and ACT scores on their final high school transcripts, as well as tracking the students' cumulative GPAs and WPAs throughout four years at a work college. Graduation rates were also evaluated while the students attended four years at a private college in the Midwest.

In Chapter Two, a review of the history of education in the United States is examined. Public, homeschool, and higher education is assessed, including the history of vocational education. The theories of Astin (1993), Bean (1982), Pascarella and Terenzini (1991, 2005), Spady (1971), and Tinto (1993) describing college student departure are analyzed. A summary of the chapter is presented.

In Chapter Three, the research design, sample demographics, and sample size are discussed. Instrumentation and data collection are detailed. An analysis of data is presented in Chapter Four, along with the descriptive statistics and analysis of data for each research question. The conclusions and recommendations for the study are presented in Chapter Five, as well as a summary of findings and the conclusion of the case study. Implications and recommendations for further study in academic success of students with different educational backgrounds are discussed.

## Chapter Two: Review of Literature

The review of literature is organized to provide a historical understanding of education in the United States. The history of public, private, and homeschool education is examined. The foundation of universities and colleges throughout the United States is discussed, while focusing on the history of the work college and the work component. Vincent Tinto's (1993) student departure theory is analyzed more thoroughly.

### History of Education in the United States

Prior to colonial days, faith in education was deemed important during the early history of the United States (Good, 1960). Hartford (1964) stated, "Many of the Founding Fathers saw clearly the need for a better educated citizenry able to handle the affairs and concerns of government and citizenship" (p. 87). Good (1960) explained, "The founders of the United States realized that the liberties of the citizen are jeopardized if he does not early acquire the understanding of those rights and the intelligence to maintain them" (p. 86). The founders also understood "that unless the rule of the people leads to prosperity, happiness, and justice, that unless they rule wisely they will lose the chance to rule at all" (Good, 1960, p. 87).

The educational thinkers of the American Revolution believed "education was a means of preserving liberty, securing unity, promoting good citizenship, and developing the resources of the land and people" (Good, 1960, p. 82). Good (1960) noted Founding Father Thomas Jefferson devoted a great amount of attention to education in the new colonies. Good (1960) explained, "Jefferson held that education while not the only need was in his words: 'essentially necessary' in a republic. Education was useful for increasing production, saving labor, preserving health, and the improvement of agriculture" (p. 91). The importance of education was evident from the period of the

American Revolutionary War through the establishment of the U.S. Constitution (Hartford, 1964).

Good (1960) acknowledged that two months prior to the end of the Revolutionary War, "the states were beginning to sense the necessity of education for citizenship and public service," with half of the new states adding educational provisions within state constitutions (p. 88). Good (1960) discussed the educational thinkers of the American Revolution and stated, "Education would help maintain the union of the states, a united people, and a republican government" (p. 82). As the young nation evolved, "The new state constitutions contained the earliest official statements on education. Educational provisions in the new state constitutions are evidence that the states were beginning to sense the necessity of education for citizenship and public service" (Good, 1960, p. 88).

Educational provisions in the new state constitutions were evidence the states began viewing education as important (Good, 1960). Hartford (1964) described, "A long struggle for a full, free system of schools began throughout the various states with some early state constitutions providing for education" (p. 87). Hartford (1964) noted John Adams believed, "The whole people must take upon themselves the education of the people and must be willing to bear the expense of it" (p. 87). Good (1960) described John Adams' thoughts in *Defence of the Constitutions of the American States*. As cited in Good (1960), Adams:

> Spoke particularly of education, declaring that under a free government it is more indispensable and must be more general than under any other. All the people of every rank and class must be educated in a republic; and schools must be

> conveniently located and maintained at public expense. If nations ever become wise no human being will be allowed to grow up in ignorance. (pp. 92-93)

Hartford (1964) found, "Education had earlier become a concern of the new state governments. [Thomas] Jefferson advocated a comprehensive program of education for the state of Virginia as early as 1779" (p. 87).

Another founding father, "James Madison strongly advocated popular education so that citizens would be informed and able to vote intelligently, while all of the presidents of the United States have expressed strong interest in education" (Hartford, 1964, p. 87). Still other founding fathers understood the importance of education; Good (1960) acknowledged, "George Washington urged Congress to aid in the promotion of science and literature; to establish a national military school; and to consider the proposal to create a national university" (p. 92). George Washington believed education was so vital to the success of the new country, he "stated his fundamental view in both his first message to Congress and his Farewell Address to the nation as he said, 'Promote, then, as an object of primary importance, institutions for the general diffusion of knowledge…public opinion should be enlightened'" (Good, 1960, p. 92).

With a new government and a changing culture, the fundamental education of citizens became important to the Founding Fathers. Good (1960) conveyed the Founding Fathers' fear that with a lack of fundamental and higher education, citizens of the new nation would not obtain an understanding of the basic liberties written in the United States Constitution and that those liberties would then become endangered. By adopting the Constitution of 1787, "The people established a federal republic and a government of limited powers not including any power over education" (Good, 1960, p. 4).

> Karier (1991) emphasized the U.S. Constitution when he stated:
>
> Education is a function of the states by virtue of the fact that the word *education* does not appear in the US Constitution and the Tenth Amendment explicitly states: 'The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people. (p. 365)

Karier (1991) also described, "The reserved power of the states in the field of education does not, however, prohibit the federal government from aiding education. The federal government has aided education from the Northwest Land Ordinance of 1785" (p. 365) to the most recent "reauthorization of the Elementary and Secondary Education Act that President Obama signed on December 2015" (U.S. Department of Education, n.d., p. 1). Hartford (1964) believed, "The dominant purposes or functions of education have differed and have been changed in the course of our national history. Every citizen should have a clear understanding of the great faith which the American people have demonstrated in education" (pp. 86-87).

**Education in Colonial America**

The historical development of the American educational system began in Colonial America as education throughout the colonies was the story of the efforts of people who sought to recreate European educational institutions and processes in North America (Gutek, 1986). Education in Colonial America dates back to the sixteenth century with "private schools opened up by Catholic missionaries in Florida and Louisiana" (Net Industries, 2016, p. 1). Gutek (1986) explained as Englishmen, the British colonists "shared a general orientation to Protestantism that shaped their views of life and

education" (p. 2). From the first settlement at Jamestown, the family and church provided education in America; American education extended via England and began transforming the new culture (Good, 1960). Colonists shared a common language and culture upon arrival, while the different "regions they settled gave rise to varying conceptions of society and education" (Gutek, 1986, p. 3).

The American institution of education was not cultivated overnight. With the immigration of colonists from different backgrounds and countries, they brought a variety of different religions, languages, cultural backgrounds, and values into the colonial societies (Hartford, 1964). Good (1960) discussed how the American colonies began the development of local governments and various types of schools including:

> Colonial schools which prepared children to become clerks and tradesmen or scholars, thus drawing a line between common school education or, if a little more advanced, a classical education in Latin school… ready to prepare future ministers, lawyers, and doctors. (p. 37)

Good (1960) identified:

> Colonists tried to copy the European educational system, and found that European farmers lived close to one another in farming villages where students could easily walk to school; while in the colonies, farmers lived within miles of the nearest neighbor, schools were not very accessible, were primitive, and even deficient in poor areas. (p. 20)

Fundamental education in Colonial America in the 1600s was not important due to the challenge of living in the new country; therefore, children began working right out of infancy (Good, 1960). Within the colonies "many schools were not permanent…school

terms were short…attendance was irregular and there was no established curriculum in the common schools" (Good, 1960, p. 37). Schools would only open when teachers were traveling through and acquired a small payment for teaching (Good, 1960).

Hartford (1964) stated a great deal of "attention has been given to the development of schools in our early history. This should not obscure the fact that other strong educative agencies were at work in the total task of preparing the young for adulthood in society" (p. 86). Hartford (1964) assessed:

> Much of the education of anyone takes place in the home; in colonial days this was truer than for present times. Children learned to work, received religious instruction, played together, and were prepared for most of life's responsibilities in the home and family circle. (p. 86)

Berger (1997) and Good (1960) explained homeschooling has been around since the early days of Colonial America, due to no availability of a public school system. Snyder (2013) clarified, "The concept of homeschooling is not a new idea to American education, with the first colonists homeschooling their children out of necessity" (p. 290).

Cogan (2010) found, "Prior to the advent of compulsory education in the 1700's, homeschooling was the primary form of education of the masses as the concept of hiring a teacher or tutor was available only to the elite" (p. 19). Education was a privilege "except for orphan and pauper children who were apprenticed and compelled to acquire a trade. The rudimentary schools were for the common people, while the Latin schools and colleges formed a separate scholastic world" (Good, 1960, p. 6). The history of American education "begins with the study of educational developments in the New

England colonies, the Middle Atlantic colonies, and the Southern colonies" (Gutek, 1986, p. 1).

**Education in the New England Colonies**

Hartford (1964) noted, "Schools came early in New England. Records show that some form of school existed in different towns shortly after the first settlement" (p. 81). Some of the first schools in the New England Colonies were "the famous dame schools" (Hartford, 1964, p. 81). Good (1960) described, "The dame school was held in the narrow and perhaps untidy quarters of a kitchen or bedroom. The teacher, a housewife or widow, collected a small fee for teaching very young children 'letters, syllables, spelling, and reading'" (p. 37). Once a child learned reading and writing, the child would then be "removed from the dame school, to a district, a neighborhood, or parochial school" (Good, 1960, p. 38). In 1635, the opening of the Boston Latin Grammar School for boys was the beginning of education in the New England colonies, "while in 1636 the first college, Harvard, was established for the purpose of providing an educated ministry to replace learned clergymen who came from the English universities" (Hartford, 1964, p. 81).

As more children began to experience education, the colony of Massachusetts Bay "enacted legislation requiring parents to provide for their children to be taught to read in 1642" (Hartford, 1964, p. 81). Then in 1647, "The Old Deluder Satan Act required reading and writing in all schools, towns of fifty or more families to maintain an elementary school and towns of one hundred or more families to provide both elementary and secondary schools" (Hartford, 1964, p. 81). By the beginning of the eighteenth century nearly all of the New England colonies provided for schools (Hartford, 1964).

According to Hartford (1964), “It is true that here the idea of public school and that of local self-government seemed to grow up together” (p. 82).

**Education in the Middle Atlantic Colonies**

With the arrival of the Dutch colonists from New Amsterdam, the middle colonies began to gain an interest in education as early as 1638 (Hartford, 1964). The middle colonies were made up of a “strong Protestant population that wanted language and religious instruction for their children” (Hartford, 1964, p. 82). Within the Middle Atlantic Colonies, Hartford (1964) described:

> Control of the first school was shared by the church and the local government; later, other elementary schools and some Latin grammar schools were established and after the English took control of the colony in 1664, the schools were largely controlled by the church with the funds collected for their support by consent of the government. (p. 82)

Hartford (1964) acknowledged other schools were sponsored by charitable organizations and even by private patrons. As the population of “New York grew rapidly, many faiths, nationalities, and languages were soon represented” (Hartford, 1964, p. 82). This brought the “establishment of parochial schools and set the stage for the development of a varied pattern of education, in matters of control, support, and sponsorship” (Hartford, 1964, p. 82).

Educational patterns on other “middle colonies tended to be diversified in the hands of sectarian, charitable, and private interests” (Hartford, 1964, p. 82). Hartford (1964) discussed a 1683 law which “required parents to provide for instruction in reading, writing, and a trade for each of their children” (p. 82). In the middle colonies the

"large religious groups set up their own parochial schools…where the support was derived through fees from prosperous parents, gifts, assessments, public subscription, and charity" (Hartford, 1964, p. 82).

**Education in the Southern Colonies**

The first American colonies were settled in the South (Hartford, 1964). Hartford (1964) discussed that within the Southern colonies:

> Education was at the elementary level and the responsibility of the parents except for the tutorial instruction for the children of the wealthy. The privileged class of land owners employed tutors for their children and were able to send them back to England to complete their education. (p. 83)

As the Southern colony of Virginia developed economically, great extremes of wealth and social position emerged (Hartford, 1964). Gutek (1986) explained the upper education track of "the Latin grammar schools and colleges, which were designed for the sons of the privileged social classes who were destined for leadership positions in the church, state, or courts" (p. 2). After studying Greek and Latin, "Boys of the upper classes entered a college preparatory school that prepared them for entry into either the prestigious colleges of England or the colonial colleges" (Gutek, 1986, p. 2). William and Mary was the first college to open in the South and was established in 1693, while some parochial schools were developed and controlled by the church (Hartford, 1964).

**The Academy**

From 1787 until 1915 America progressed and expanded westward (Good, 1960; Hartford, 1964). The Industrial Revolution prompted the age of experimentation and led to the educational experiments of the academy, manual labor schools, and free public

education (Good, 1960). As the colonial period came to an end, "an indigenous secondary school, the academy appeared. Benjamin Franklin was instrumental in the establishment of the first academy in Philadelphia in 1751" (Hartford, 1964, p. 83). McConaghy, Silberman, and Kalashnikova (2004) described Benjamin Franklin's Academy located in Philadelphia in 1751 as a school "which provided different educational opportunities for society's working class with a curriculum stressing practical skills that would serve students irrespective of career ambitions" (p. 1). According to Hartford (1964), "The academy would expand over the next hundred years from the colonies to the states of the Union" (p. 83). The expansion of the academy led to a broader curriculum and "tended to do more for the education of girls than had been provided through the Latin grammar school" (Hartford, 1964, p. 83). Hartford (1964) described how "patterns of the control and support for the academy varied in the different sections of the country" (p. 83).

The American academy bridged education between the Latin schools and the public high schools (Good, 1960). The academy became the dominant educational system used "from the American Revolution until after the United States Civil War" (Good, 1960, p. 111). Good (1960) acknowledged:

> The American academy was a transitional institution, in general a private school. It gave opportunity to that middle class of pupils who could afford the time and cost of some schooling above the elementary but who were not preparing for college. (p. 111)

Good (1960) also explained the American academy "had a common characteristic in which they served students whom the public school system failed to satisfy" (p. 112).

During the academy movement of the nineteenth century, Karier (1991) addressed:

> The academy was a privately controlled, multipurpose educational institution supported in part by public funds. For half a century, the academy served Americans in a diversified and flexible manner. It is accurate to consider the academy, at least until the mid-nineteenth century, as an alternative to, rather than a preparation for, college. (p. 70)

The academy became a semi-public middle school institution for those students who desired and could finance more education but were not planning on attending college (Good, 1960). As the century progressed, academies transitioned into an assortment of boarding schools, modified Latin schools, and finally public high schools (Good, 1960).

Karier (1991) acknowledged, "Both the colleges and academies accepted students from the age of fourteen and fifteen, but they served different functions," (p. 70) with the colleges offering more modern educational alternatives to the academies' classical courses. The educational shift continued, and by the last part of the nineteenth century colleges increased their age limit to be accepted to 17 or 18 (Karier, 1991). Academies maintained their requirement, thus becoming like the high school, a "true secondary school, serving as a link between the elementary school and the college" (Karier, 1991, p. 70). Karier (1991) described how the academy was suited "to a rural society, [and] the high school to an urban society; therefore, in the last half of the nineteenth century when America moved to the cities, the public high school replaced the academy as the leading secondary institution" (pp. 70-71).

**Common Schools**

Berger (1997) found, "The common school movement began around the 1830's, but children often attended only 3 months out of the year for 3 or 4 years" (p. 205). The common school movement "established the concept of state-supported and publicly controlled popular education in the United States. The common school movement originated in the states in the northeast; yet was reshaped by the westward-moving frontier" (Gutek, 1986, p. 106). The motives for providing common schools varied, and yet, a large number of elementary children gained an elementary education (Gutek, 1986), thus the "foundation for the American public school system was established" (Gutek, 1986, p. 106). Karier (1991) conveyed, "If the common school was to be truly common and usher in a harmonious society, all classes, creeds, and sects must be represented" (p. 61).

Horace Mann's common school was a "public institution that would be attended by children of varying class backgrounds and religions, supported by public funds, administered by public elected officials, and responsible to the community" (Gutek, 1986, p. 97). Gutek (1986) discussed how Horace Mann's concept of the common school "was based upon his philosophy that American education should prepare children to be responsible citizens in a republican society" (p. 96). Karier (1991) described the curricula Mann's public school teachers would teach, such as "reading, writing, spelling, arithmetic, English grammar, geography, and Bible reading, along with history" (p. 61). The control of the school was important as "the district school was controlled by an elected board, and the neighborhood school by a committee or trustee informally selected. Parochial schools were connected with a church" (Good, 1960, p. 38). While the private school was a threat to Mann's ideal of the public school, Mann did not

distress; he believed "through free competition the public school would so excel in quality of education that parents would prefer to send their youngsters to the public school" (Karier, 1991, p. 61).

During the nineteenth century the public education systems could be characterized by their geographic location (Karier, 1991). In the South, "the educational commitment took the form of private colleges, private academies, and private tutors, with the state only responsible for pauper schools…until well after the Civil War" (Karier, 1991, p. 43). In New England "the tradition of public responsibility and control of education did not usually extend beyond the elementary school, though public funds were generally used to support certain Latin grammar schools, private academies, and colleges" (Karier, 1991, p. 44). Within the middle states of New York and Pennsylvania, education was characterized with a mixture of public and private traditions (Karier, 1991). With the addition of the Western states, education took a different direction largely "influenced by the Ordinance of 1785, which provided federal land grants for public schools, and by the regional origins of the first settlers" (Karier, 1991, p. 44).

Berger (1997) acknowledged, "By 1890, 86% of children aged 5-14 attended public schools" (p. 205). For parents, "schooling children at home was discouraged after public schools offered education for the children of the nation" (Berger, 1997, p. 205). According to Berger (1997), "Each state had requirements for education although the age that a child must start school and the date they quit attending school varied according to the state's regulations" (p. 205). As the United States Civil War spread across the nation, "New England, the Middle States, and most of the newer Western states had moved to establish state systems of elementary schools which were publicly controlled and

supported…the major development of both institutions occurring after the United States Civil War" (Karier, 1991, p. 44).

**Public Education**

Hartford (1964) suggested, "The story of American public schools is a story of dreams and ideas, of battles and struggles, of setbacks and losses, but of achievements and victories as well" (p. 80). Hartford (1964) concluded the primary concern of the American people:

> Was to design a universal, free, public school that would promote free institutions and free citizenship. For the first one hundred years of the Republic, the need for creating the common bonds and loyalties of a free community was paramount. (p. 79)

According to Karier (1991), "[The] nineteenth century was a century of transformation of American educational thought and practice. During this period the structural characteristics of American education took concrete form . . . with a free public elementary school and secondary school system" (p. 43).

According to Good (1960), "The movement for public education began in the private schools, where the spirit of the pioneer penetrated…people demanded a wider educational opportunity than the private, tuition-supported schools could provide" (p. 107). Therefore, "the public schools had to overcome not only public apathy but . . . fears of churchmen and the wealthy, the charge of socialism, the resistance of the private school interests and the school tax" (Good, 1960, p. 9). Good (1960) explained:

> The movement for the improvement of public education developed slowly before 1830 but more rapidly thereafter, as New York established the first American

> state superintendency of common schools in 1812; while Pennsylvania, Ohio, Massachusetts, Michigan, and Kentucky followed the example set by New York. (p. 134)

By the middle of the nineteenth century, the public school movement was becoming more common (Good, 1960).

Good (1960) acknowledged:

> The workingmen, frontiersmen, professional men, as well as men with political insight demanded a closer approach to equality of educational opportunity. The citizens were resolved to create a common school for rich and poor and they understood that only the states could provide universal, free education. (p. 135)

Public education in the United States developed as Addis (2003) described:

> When the nineteenth-century Northerners realized they needed a workforce literate in words and numbers to operate a modern commercial and agricultural economy. Farmers and businessmen advocated education, and Protestants needed a mechanism to control the behavior of lower-class whites and immigrants. (p. 142)

Karier (1991) proposed, "The high school is a city institution. It evolved most frequently as the outgrowth of a common school and was started in response to local pressure, so that students might stay on for higher studies" (p. 44).

Good (1960) outlined the three ways early high schools arose: "By establishment according to a definite plan; by the transformation of an academy into a public high school; and by the gradual development of advanced work in an elementary school until a separate organization was formed" (p. 237). However, according to Good (1960), the

biggest change in the American high school came "when it was transformed into a higher common school whose chief task was not the preparation of selected young people for college studies, but the preparation of young people for 'the real business of living'" (p. 233). Good (1960) discussed how the American high school began as a:

> School for boys but soon admitted girls. It began as a specialized school and has become a comprehensive school. It began as a terminal school similar to the realist academy…and should now, in the opinion of some, become a universal school for all American youth. (p. 233)

Good (1960) also described:

> [The] new era which opened about 1890 was concerned with the change of the high school and even the college into continuations of the elementary school, by adopting its social views and educational outlook. The three were being closely integrated into a single system, with the curricula being adapted to prepare for the work of the world and the ordinary business of living in it. (p. 345)

Both the American high school and the new college "developed a vocational purpose. The development of schools which joined science and practice marked a new educational epoch" (Good, 1960, p. 287). Good (1960) explained how the new colleges and American high schools were closely connected as the high schools:

> Proposed to enroll "all American youth," it attempted to provide a program of courses that would serve every large interest group, while the new college was similar in that it combined many of the functions of the old college and the technical school; and prospered because it succeeded in opening new doors to youth. (p. 286)

The public school was not the only form of education available to students, as homeschool education was another form of education parents had acknowledged as important (Kunzman, 2012).

**Homeschool Education**

Education is found in all areas of life, not just between the hours of 8:00 a.m. to 3:00 p.m. (Hanna, 2011; Kunzman, 2012). Citizens have found "the whole of life provides educational opportunities, and oftentimes in more authentic and powerful contexts than what traditional schooling has to offer" (Kunzman, 2012, p. 75). Berger (1997) defined homeschooling as "instruction and learning, at least some of which is through planned activity, taking place primarily at home in a family setting with a parent acting as teacher" (p. 205). Parents have long recognized "child rearing as the responsibility and privilege [they have], and upon which the state cannot intrude" (Kunzman, 2012, p. 76).

Cogan (2010) explained, "Currently, homeschooling is legal in all 50 states and is considered to be one of the fastest growing segments of K-12 education in the United States" (p. 19). From the time the United States Founding Fathers discussed the importance of education to the beginning of academies and common schools, homeschooling children took a backseat as the growth of the United States society began yearning for a public education for all youth (Kunzman, 2012). Therefore, the United States Supreme Court began to act on the rights of parents who wanted to educate their children at home (Kunzman, 2012; Wagner, 2014).

Kunzman (2012) explained what the "law says about the distinction between traditional and home schooling," while "two high court decisions have shaped the legal

terrain for almost a century: *Meyer v. Nebraska*, decided in 1923, and *Pierce v. Society of Sisters*, decided in 1925" (p. 77). Kunzman (2012) noted in the *Meyer v. Nebraska* decision, the Supreme Court:

> Identified the fundamental rights of parents to establish a home and bring up children . . . of which the state cannot enter; yet the state can prescribe a curriculum for public schools, but implies that a similar prescriptiveness for non-public school curricula is beyond the state's authority. (p. 77)

Only two years following the ruling in *Meyer v. Nebraska*, the Supreme Court heard the *Pierce v. Society of Sisters* case and cited *Meyer v. Nebraska* when concluding, "The state does not have the power to standardize its children by forcing them to accept instruction from public teachers only" (Kunzman, 2012, p. 77). In 1972, the Supreme Court heard the case of *Wisconsin v. Yoder*, "which legalized homeschooling for families who maintained that their religious beliefs could best be preserved if their children were educated at home" (Drenovsky & Cohen, 2012, p. 3).

Since the 1970s, "The option for a homeschool education has increased" (Drenovsky & Cohen, 2012, para. 1). Many parents have decided to homeschool their children and shape education without concern for government control (Kunzman, 2012). Most homeschool "parents have a variety of reasons for homeschooling, and those reasons frequently overlap and change. The three most important are concern for the environment of schools, dissatisfaction with academic instruction at schools, and religion/morality" (Aasen, 2010, p. 12).

The idea "that homeschooling is superior to traditional methods of education can be traced back to a small number of highly touted reports funded by the Home School

Legal Defence Association" (Martin-Chang, Gould, & Meuse, 2011, p. 195). Cai, Reeve, and Robinson (2002) identified, "Homeschooled children, on average, show academic outcomes that equal or surpass those of their conventionally school peers" (p. 372).

According to Aasen (2010), homeschool has a diverse curriculum:

> At one end is the school in a box, which differs from a school only by the setting; the curriculum, sequence, and methodologies would fit into any standard classroom. While on the other end, is unschooling in which, although tools for learning and opportunities for exploration are provided, the course of learning is determined by the child's interests and is incorporated into daily life rather than following any pre-set scope and sequence. (p. 12)

As parents homeschool, many commence with the school-in-a-box approach, while transitioning into a mix of both methodologies (Aasen, 2010). Aasen (2010) explained, "Homeschoolers create co-ops ranging from two or three families to ones that resemble small private schools" (p. 12). This allows for a varied range of activities and field trips, providing for a mix of experiences (Aasen, 2010).

Cogan (2010) believed, "Every homeschooler has huge dreams because of the freedom to imagine without the discouragement of official red tape and negative peer pressure" (p. 20). Aasen (2010) then described:

> [H]omeschoolers as good college student material, both academically and socially. Homeschoolers are generally active in a wide variety of activities that bring them into contact with other children and adults, of all ages, from a variety of backgrounds; therefore, homeschool students become independent learners as their education focuses on the student as learner and parent as teacher. [Due to

> the nature of their education] homeschoolers are able to learn on their own and adapt well to changing situations, which helps them in the world of work and makes them valuable to employers. (p. 13)

This adaptation then allows "homeschool graduates to be more likely to take an active political role, vote, and contribute to political causes than are their peers in public education" (Aasen, 2010, p. 14).

**Higher Education**

As the educational system in the United States expanded, there was only one type of higher educational institution, which was the college (Good, 1960). Adams and Stephens (1970) further noted:

> The collegiate atmosphere for student jobs in higher education during the seventeenth century came about due to sheer necessity. Institutions of higher learning geared their curricula primarily to the preparation of ministers, teachers, and lawyers . . . while students who desired a college education could not afford academic expenses. (p. 18)

The lack of finances did not mean lack of opportunity. In a 30-year period from 1717 to 1747, there were only 1,400 graduates; however, within the next 30 years more than twice that number graduated (Webb, 2006). During this same period, Adams and Stephens (1970) discussed the first student work program initiated by Harvard, while also examining colonial college students' work experience with the intention of continuing to finance higher education courses. Webb (2006) stated:

> Until 1747, there were only three colleges in the colonies – Harvard, Yale, and William and Mary. Then, the Great Awakening of religious fervor that swept the

> colonies in the mid-18th century brought with it an increased sectarianism that resulted in every religious sect wanting to establish its own college. (p. 91)

Webb (2006) continued, "Princeton, Rutgers, Brown, King's College (Columbia), the College of Pennsylvania to Dartmouth, every religious sect had its own institution of higher learning" (p. 91). The nine chartered degree-granting colleges scattered throughout the colonies (Trow, 1988), according to Brown and Mayhew (1965), were "created, in part, to produce educated ministers and lawyers" (p. 3). Good (1960) explained how colonial colleges were small and the teaching was formal, and noted "the old college was a simple establishment with no departments, deans...and small budgets" (p. 469).

Brown and Mayhew (1965) contended, "Higher education generally adopted forms, substance, and processes consistent with the prevailing educational demands of the society" (p. 74). In the early nineteenth century, Brown and Mayhew (1965) discussed how Joseph Neef and William MacClure established the manual labor educational movement. Neef then assisted famous Swiss educator John Heinrich Pestalozzi in the "aim to educate the whole child…through the hands, heart, and head" (Brown & Mayhew, 1965, p. 26). Brown and Mayhew (1965) explained how Neef's institutions allowed low-income and orphaned boys the opportunity to earn an education through manual work (p. 26). Brown and Mayhew (1965) explained, "By 1862, American society covered a continent, of which the soil was cultivated and across which transportation was provided" (p. 26). Therefore, vocational institutions were introduced to fulfill needs throughout the industrial and agricultural classes (Brown & Mayhew, 1965; DeVane, 1965; Good, 1960).

Education was for the wealthy until the idea of manual and vocational education was founded (Brown & Mayhew, 1965; DeVane, 1965). Working class youth "began entering high schools to learn skilled trades and many parents saw this type of education as a shortcut to skilled jobs in factories and agricultural enterprises" (U.S. Department of Education, n.d., p. 1). Work colleges were one such group of vocational institutions. The first work college began educating students in the mid-nineteenth century (The Work Colleges Consortium, 2014). The Work Colleges Consortium (2014) explained the history of the work college:

> The Work-Learning-Service approach helped students learn a critical balance of study, community service and managed work expectations. Most work positions are limited to 8-15 hours per week; the nature of the jobs is in line with each campus' overall mission and operational needs. Administrative and campus support like food services or landscaping positions are typical entry level posts. Most Member Colleges include performance reviews, such as a Work Point Average [WPA], whereby students gain feedback and the opportunity to advance and tailor work positions to meet career goals… Member Colleges' work programs have had a rich history and proven track record of providing promising students with a means to earn a college degree. Work Colleges have been educating and helping hard-working students pay for tuition, some for over 100 years. Designed to enhance the collegiate experience and reduce student debt, Work Programs also excel at cultivating career-ready qualities like responsibility and work ethic. (p. 2)

The cooperative work-study idea developed at the University of Cincinnati in 1906 was one such concept (Brown & Mayhew, 1965, p. 76). At a work college, "the coordination of academic work with off-campus work experience…helped students develop strong motivations to succeed, assume greater responsibility in academia and work, and broadened awareness of others" (Brown & Mayhew, 1965, p. 76). Furthermore, Brown and Mayhew (1965) found, "Cincinnati's cooperative work-study provided financial resources for students who might not be able to attend college" (p. 76).

According to Good (1960), as "colleges were established by the religious denominations, efforts were made during the [U.S. Civil] war and afterward to change some of the older colleges into state institutions" (p. 82). DeVane (1965) described:

> American scholars returning from their training in German universities during the latter part of the nineteenth century, brought with them the continental idea of a university – which was essentially that the primary function of the university was the discovery and advancement of knowledge. (p. 34)

As new innovations in education were being created, "American colleges were paralyzed by the inadequacies of the old curriculum as well as the inundation of a new and different student body, leaving the colleges with neither the resources nor the will to do anything new and daring" (DeVane, 1965, p. 34). Good (1960) noted, "A new state university movement led to the creation of twenty or more such institutions before the Civil War" (p. 82). As colleges specialized after the Civil War, "The state universities at last came to life and the land-grant colleges were established. The federal government began to make grants of land to the states for state universities and for elementary schools" (Good, 1960, p. 82).

Prior to 1890, the idea of governmental intervention into academic institutions was unsuccessful in Congress due to a societal impression of a powerful centralized government (Brubacher & Rudy, 1958). As America's society was transforming from agricultural to industry, government intervention in academia also transformed (Brown & Mayhew, 1965; Brubacher & Rudy, 1958). With land being the government's primary form of wealth, President Lincoln's signing of the First Morrill Act of 1862 granted each state's senators and house members 30,000 acres of public land to be used in the support of higher education institutions (Brown & Mayhew, 1965; Brubacher & Rudy, 1958; Good, 1960).

According to DeVane (1965), the passage of the Second Morrill Act of 1890 "extended government appropriations and loans to the states for the teaching of engineering, agriculture, and the sciences" (p. 123). With the passage of these two bills, 68 land-grant colleges were created throughout the states (DeVane, 1965). Federal assistance continued during the next 50 years for "agricultural research [Hatch Act, 1887], university extension [Smith-Lever Act, 1914], and vocational education [Smith-Hughes Act, 1917]" (Brubacher & Rudy, 1958, p. 225).

The new state university system began to broaden curricula by increasing science instruction, modern languages, American history, economics, and political science (Good, 1960). College libraries were enlarged, and students were given access to the collections (Good, 1960). Through this expansion, the number of college departments multiplied, and specialists began teaching classes (Good, 1960). As the college system continued its growth in the late 1800s, the standards of professional education were raised

with pre-professional courses, electives, and course-credit systems becoming an integral part of the college system (Good, 1960). Good (1960) explained:

> As the universities developed, they added new colleges to the college of arts; colleges of business, engineering, and others; each was organized into departments and these into areas. As a whole an administrative staff was acquired and universities undertook to teach, investigate, advise, and furnish practical services to private individuals, corporations, and to local, state, and national governments. (p. 469)

The expansion of research "led to the organization of graduate schools, which helped to prepare university teachers and research workers. Students began attending in increasing numbers from both the public and private school systems" (Good, 1960, p. 471).

At the beginning of the twentieth century, the American society adapted the idea of the German university system to fit the purpose of a new American higher education system (DeVane, 1965). This adaptation led to "an American institution of immense variety, with the common element of service to their region or the country, training the professionals the country demanded" (DeVane, 1965, p. 35). DeVane (1965) concluded:

> The new American university system responded eagerly to the needs of the people as the old college had not done since the eighteenth century and was not yet capable of doing again. The new necessities were those of a rising, wealthy, complex society on the way to becoming highly industrialized, egalitarian and pragmatic in its thinking, intensely progressive, and beginning to assume an imperial position among the nations. (p. 35)

DeVane (1965) noted during the twentieth century, the nation had a tendency "beginning in the East but spreading widely through the country, for the colleges to assume again the duty of educating the student as a whole person—morally, culturally, and socially, as well as intellectually" (p. 59).

In 1919, American involvement in World War I led the United States government to "become concerned over the sharp drop in college enrollment" (Brubacher & Rudy, 1958, p. 222), "shortage of teachers" (Good, 1960, p. 507), [and] "loss of educated civilians such as scientists and doctors" (Brubacher & Rudy, 1958, p. 222). Good (1960) acknowledged the "United States education system was put on hold as the men left to fight in the war and the teachers, a majority of whom were women, left the classroom for better pay within the factories" (p. 506). In World War I, "food shortages began as the size of the military increased; therefore, primary schools began shortening school years as children began working within agricultural institutions to assist in the shortages" (Good, 1960, p. 505). According to Brubacher and Rudy (1958), as well as Good (1960), colleges set up a Student Army Training Corps to prevent the destruction of colleges as well as to begin a cadet officer training institution where students were called to fight when needed by the War Department.

During World War I, the federal government paid for any use of facilities for military training and thus helped the survival of colleges and universities during the "financial difficulties caused by the loss of student fees" (Good, 1960, p. 507). The federal government's involvement with colleges and universities during this period was the beginning of a partnership (Brubacher & Rudy, 1958). This partnership continued

when the lack of enrollment and rising costs of college increased with the United States involvement in World War II (Brubacher & Rudy, 1958; Good, 1960).

World War I and II had an effect upon the state of secondary education. Upon returning from World War I, students entered into a higher institution but lacked the proper education to fulfill basic admission requirements (Good, 1960). The weaknesses found in secondary education led to governmental intervention in the form of a Victory Corps for high schools (Good, 1960). During World War II, this corps "promoted the active participation of youth in community war work and prepared them for induction into the military upon graduation" (Good, 1960, p. 507).

As World War II ended, the federal government no longer needed to continue the specialized programs in colleges and universities as Good (1960) noted:

> The colleges already in a critical state were hardly in condition to survive a further cut in income . . . so Congress passed the GI bill . . . to help the veterans make up the losses from their interrupted education. (p. 509)

With partnerships in secondary and higher education, Brubacher and Rudy (1958) explained, "The federal government was tending to expand its investment in various university projects and training programs as compared with what had been true twenty-five years before" (p. 223).

With the passage of the GI bill, "Thousands of veterans began attending higher education institutions. In the 1950's, some higher education institutions expanded student work operations to aid the increasing numbers of qualified high school graduates" (Adams & Stephens, 1970, p. 35). Brock (2010) acknowledged, "After 1950, the trend to obtain a college diploma increased, as the demand for highly skilled labor increased" (p.

111). The turning point for attaining a degree in higher education came about in the late 1960s (Brock, 2010). There were four major changes Brock (2010) examined from President Lyndon Johnson's "passage of the Higher Education Act of 1965, the federal government's increased spending on college construction, the civil rights movement and programs launched to fund education and job training, as well as the maturity of the baby boom generation and entrance in college" (p. 111).

Hartford (1964) described how the "European scholar, Dennis W. Brogan, termed the faith in education as '…the national religion of America.' This is a democracy and people have more chance to achieve their potentialities and aspirations" (p. 79). The American educational institution "has continued to grow to meet the varied needs and conditions in the different states" (Hartford, 1964, p. 80). Good (1960) explained how "diversity among institutions became one of the characteristics of American higher education" (p. 496). With its differences, "American education has developed remarkable common features and strengths. 'Alike but different,' alike in essentials, but flexible and varied as necessary to fit needs and conditions which differ" (Hartford, 1964, p. 80).

**Theoretical Framework**

Numerous studies have been completed on the various social, academic, and relational reasons students leave college; however, a lack of research has been completed on how students' educational backgrounds impact academic success while attending a private work college with a mandatory work component. It is mandatory for the students who attend the work college to work 15 hours a week, including two 40-hour work weeks within the academic year, in order to pay for their tuition (The Work Colleges

Consortium, 2011a). This study addressed the mandatory work component by analyzing the students' Work Point Averages (WPAs) along with the other academic variables of high school GPAs and ACT scores, college GPAs, and college graduation rates.

In the article entitled "Major Theoretical Perspectives on Student Success in College" (2007), it was noted there is "no one theoretical perspective which can adequately account for all the factors that influence student success in college" (p. 17). Therefore, over the past 46 years, researchers (Astin, 1993; Bean, 1982; Pascarella & Terenzini, 1991, 2005; Spady, 1971; Tinto, 1993) have theorized the reasons behind college student departure to include trouble with social integration, academic integration, student involvement in activities, and relationships with faculty and peers (Forsman, Linder, Moll, Fraser, & Andersson, 2012). In the past 46 years, colleges and universities across the United States have changed demographically, causing administrators and faculty to ascertain the challenges and find ways to aid student retention and thus, academic success (Forsman et al., 2012).

Spady (1971) was one of the first to research how the interaction between the student and the institution allows the student the opportunity to assimilate into both the academic and social systems of the institution. Spady (1971) analyzed rewards in the academic and social setting and determined that if any rewards are insufficient, students will drop out. Hu (2010) mentioned, "Astin's theory of involvement suggested that the more students are involved, the more they would gain from college" (p. 98) and thus, the more apt students are to graduate.

Bean's model of student attrition indicated external factors of economy, motivation, values, and social experiences are the complex reasons students leave college

(Forsman et al., 2012). Bean's findings were described in his model to "support the role that organizational, personal, and environmental variables play in forming attitudes and intents; while also suggesting the importance that variables of family approval and the college environment play in a student's decision to drop out or persist" (Harvey-Smith, 2002, p. 2). Harvey-Smith (2002) found both Bean and Tinto's findings "provide the most comprehensive framework on [student] departure decisions. Although, Tinto's model of academic and social integration is seen as the foundation for much of the current research in retention" (p. 3). If a researcher "developed a theoretical model of dropout from college that explained the process of interaction that leads to various forms of dropout behavior, one must build into the model, sets of individual characteristics and dispositions relevant to educational dropout" (Harvey-Smith, 2002, p. 3).

Pascarella and Terenzini (1991) validated Tinto's model and believed it to be useful in determining the persistence rate of students. Therefore, after evaluating Tinto's theory of student departure, it was found to be the best model to use with this study. Bolle-Brummond and Wessel (2012) stated:

> Tinto's model of student departure consisted of three stages: separation from past communities, transition between high school and college, and incorporation into the college community. The model suggested that pre-entry attributes, such as an individual's family background, talents, and prior education influence a student's degree commitment and can play a role in academic success. (pp. 224-225)

Each of Tinto's three stages could be found in either an academic or social track (Bolle-Brummond & Wessel, 2012).

In regard to the academic track, Bolle-Brummond and Wessel (2012) stated, "Intellectual development was a reflection of the student's intellectual integration into the academic system, often measured in terms of grade performance" (pp. 224-225). The article entitled "Major Theoretical Perspectives on Student Success in College" (2007) went further:

> Academic and social integration are presented as complementary but independent processes by which students adjust to college life. Academic integration represents both satisfactory compliance with explicit norms such as earning passing grades and the normative academic values of the institution. Academic integration reflects satisfaction with academic progress and choice of major. Increased levels of academic and social integration are presumed to lead to greater commitment to the institution and to the goal of graduation. Although some disagree about how best to operationalize various components of the Tinto (1993) model, most agree that for students to succeed in college, they must learn to negotiate foreign environments and interact effectively with strangers. (p. 14)

Burrus et al. (2013) researched Tinto's student departure theory and found both positive and negative encounters:

> Positive interactions and involvement in academic and social settings provide students with the means to understand and assimilate to institutional norms, which lead to a heightened commitment to completing college and to the institution itself. Conversely, negative experiences and factors that limit campus involvement weaken intentions and commitments and increase the likelihood of departure. (p. 5)

Simply put, "Other things being equal, the higher the degree of integration of the individual into the college, the greater will be his/her commitment to the specific institution and the goal of college completion" (Tinto, 1993, p. 96). This study focused only on the academic track of Tinto's (1993) model of student departure as outlined in Figure 1.

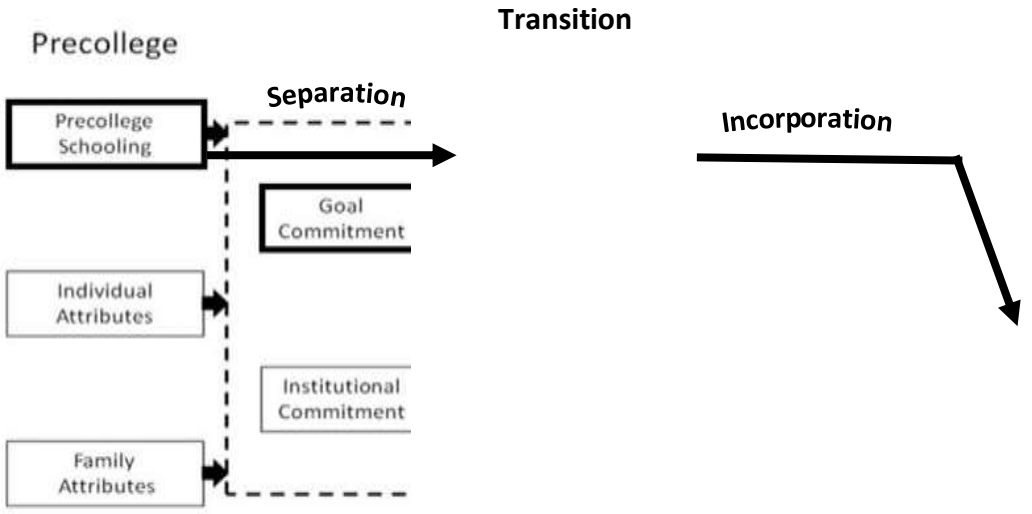



*Figure 1.* Tinto's model of student departure adapted to outline the [upper] academic track to coincide with this case study. Adapted from *Putting and keeping students on track: Toward a comprehensive model of college persistence and goal attainment*, by J. Burrus, D. Elliott, M. Brenneman, R. Markle, G. Moore, A. Betancourt, … R. Roberts, 2013. Copyright 2013 by the Educational Testing Service.

As seen in Figure 1, the students' precollege characteristics include the educational background including the cumulative GPAs and ACT scores students earned while in high school. These precollege scores can be included in Tinto's separation phase (Tinto, 1993). The student characteristic found in the transition phase is called grade performance and includes the students' college GPAs and WPAs that were evaluated within this study (Tinto, 1993). The final part of this study included the students' characteristic of persistence, which is located in Tinto's incorporation phase and includes the graduation rates of the groups analyzed (Tinto, 1993).

For the context of this study, separation involves students' withdrawal from the norms of family, friends, and communities (Milem & Berger, 1997). Tinto (1993) described separation:

> [I]ndividuals who come from families, communities, and schools whose norms and behaviors are very different from those of the communities of the college into which entry is made face especially difficult problems in seeking to achieve competent membership in the communities of the college . . . they may not have acquired the social and intellectual skills appropriate for success. (p. 97)

Transition includes a "period of passage between the old and new before the full adoption of new norms and patterns of behavior and after the onset of separation from old ones" (Tinto, 1993, p. 96). In order to gain success in transition, students must learn to persist in college life (Tinto, 1993). Student persistence will lead to incorporation, which requires the student to "become fully integrated into the college community" (Tinto, 1993, p. 98).

**Work Colleges**

Research on the impact of educational backgrounds on academic success at a private work college has not been found; thus, information on the history of the seven work colleges and the work program is necessary. Work colleges have evolved over the past 150 years and "all were found through humble means: Students who wanted an education but could not afford one, and colleges with modest budgets that wanted to provide an education" (Work Colleges Consortium, 2011b).

The United States Federal Regulation Code (2016) describes the purpose of the work colleges as promoting comprehensive work-learning-service as an integral and stated part of the college's educational program. The work component of the work colleges require participation of all students and allow for objectives and evaluation of work performance (WPA), consequences of failure for non-performance, as well as a financial plan (U.S. Federal Code, 2016). The work component allows students the opportunity to lower college debt and become active participants in community service (Work Colleges Consortium, 2016). The work colleges have been "called revolutionary and ahead of their time, [yet] work colleges have been educating and helping hard-working students pay for tuition for over 150 years" (Work Colleges Consortium, 2014).

A student at a work college will have a distinct experience than students chosen to participate in the federal work study program available at many state colleges and universities throughout the United States. From the eligibility requirements, to evaluation, participation, learning, and financial compensation (Appendix A), the differences are vast, depicting the uniqueness of the federal work college program (Work Colleges Consortium, 2011b). The work colleges are a small, yet rare group amid all colleges and universities within the United States, as well as unique among each other.

The Work Colleges Consortium (2011a), summarized the similarities found within the work colleges into two fundamental beliefs. The fundamental beliefs state, "First, that a college experience should educate the whole person; the emotional, physical, and spiritual being. Second, earning a college degree should not require a lifetime of debt" (p. 2). Through a work-service-learning program, students who attend a work college must participate in a mandatory work program where students learn to balance academics, [community] service, and work, while earning part or all of their tuition (Work Colleges Consortium, 2011a). The seven federal work colleges scattered throughout the United States require all students to work from 8-15 hours per week in exchange for all or part of [their] tuition, while earning work grades (Work Colleges Consortium, 2014).

To understand the basic components which link the seven federal work colleges, each is described with fundamental similarities and differences including; location, cost of tuition, number of degrees offered, and/or workstation positions (Work College Consortium, 2014). The seven federal work colleges located throughout the Midwest and the Appalachian Highlands in the United States include Blackburn College, College of the Ozarks, and Ecclesia College across the Midwest. Blackburn College in Illinois is the only nationally recognized work college with a student managed work program (2016). The student managed program allows student leaders to supervise peers and contribute to decisions which impact the 12 work departments on campus (Blackburn College, 2016). Blackburn College offers 30 majors; however, the student debt exceeds other work colleges tuition, room, and board costing students approximately $25,000 per year. (Blackburn College, 2016).

In Southwest Missouri, College of the Ozarks recognized nationally as Hard Work U, students work 15 hours a week at one of 80 workstations across campus (College of the Ozarks, 2016). At Hard Work U, students' tuition is waived, while room and board costs $6,500 per year; however, students chosen to participate in the summer work program, based solely on financial need, have the opportunity to work for half or all of their room and board (College of the Ozarks, 2016). College of the Ozarks (2016) focuses on integrating their five-fold mission of academics, Christian, cultural, patriotic, and vocational goals in the campus community. The final work college in the Midwest, Ecclesia College, located in Northwest Arkansas, takes a Christ-centered approach in educating students (Ecclesia College, 2016). The students at Ecclesia work 15 hours a week at one of seven work stations on campus, while studying for one of 16 undergraduate degrees while accumulating $6,000 per year in student debt (Ecclesia College, 2016).

The four remaining work colleges located in the Appalachian Highlands are Alice Lloyd and Berea College in Kentucky, Sterling College in Vermont, and Warren Wilson College in North Carolina (Work College Consortium, 2014). While attending Alice Lloyd College, students work from 10-20 hours a week at one of 14 workstations (Alice Lloyd College, 2012). Alice Lloyd, recruits from the surrounding 108 county Appalachians (Alice Lloyd College, 2012). Student entering from one of the qualifying counties will earn free tuition, while incurring $7,400 of debt a year for room and board (Alice Lloyd College, 2012). Eighty percent of alumni return to the Appalachian region to serve in communities (Alice Lloyd College, 2012).

Since 1855, Berea College has been "educating the whole person—the head, the heart, and the hands" (Work Colleges Consortium, 2014). Berea guarantees every student a no-tuition promise. (Berea College, 2015). Berea enrolls approximately 1,600 students involved in the work program in which each student becomes an active learner, worker, and server with compassion and dignity (Berea College, 2015). Berea students have the opportunity to graduate with one of 28 available degrees, while accumulating $7,000 a year (Berea College, 2015).

Sterling College, the smallest of the work colleges, with a population of 110 students averages 10 students per class with a student-to-faculty ratio of 7:1 (Sterling College, 2016). Sterling College is known for being environmentally focused on the human and natural world, while concentrating on climate, soil, water, food, energy, and wilderness (Sterling College, 2016). Warren Wilson College promotes the Triad, the blend of strong academics, work, and service, which allows students to gain skills, which equip them for life (Warren Wilson, 2016). Students work 15 hours a week at one of more than 100 work stations on campus and earn minimum wage to be credited toward the cost of their education each academic year (Warren Wilson, 2016). With the addition of a graduate program for writers, Warren Wilson College became the nation's first college to obtain a graduate program in creative writing (Warren Wilson, 2016).

Working in college is not new; however, the federal work college and mandatory work component (WPA) in this study are rare and could affect a student's academic success if not addressed.

Perna (2010) stated:

> Quantitative studies consistently show that retention rates are higher for students who work a modest number of hours per week (ten to fifteen) than they are for students who do not work at all or those who work more than fifteen hours per week. Research also shows increased academic success for students working on rather than off campus. (para. 1)

The evidence on the effects of working on student persistence has been positive as Tuttle et al. (2005) explained:

> Some studies have shown the positive benefits of working on student persistence. King (2015) noted that students from all income groups who worked part time persisted at higher rates than students who did not work at all. Pascarella and Terenzini (1991) reviewed a number of studies and noted the positive relationship between working and student success. (p. 5)

In one study, Tuttle et al. (2005) continued and found that students who were employed on campus the first two years of college had a higher rate of persistence, and these students also had both higher graduation and satisfaction rates.

Some studies indicate how working on campus benefits students. Working on campus appears to have the most positive impact on student performance and satisfaction with college (Astin, 1993). Researchers at the National Center for Education Statistics (NCES) found working on campus part time may facilitate social integration (Nunez & Cuccaro-Alamin, 1998). Tuttle et al. (2005) explained, “This seems to support the findings of earlier researchers who suggested that working off campus is more likely to

inhibit social or academic integration; while on-campus work strengthens campus integration and academic engagement" (p. 7). Tuttle et al. (2005) continued by stating:

> Helping inform students of the benefits of working, but within the limits known to be beneficial to student success, and helping students meet their educational goals should be the objective. Integrating this with messages of time management and financial choices is the challenge. (p. 8)

Whether it is a college work component or just working outside of college, students need to learn to balance work and education in order to be successful.

**Summary**

The United States Founding Fathers believed education was necessary to maintain the young new country (Good, 1960; Hartford, 1964). As new states were formed, the citizens wrote and approved state constitutions, which provided for education (Good, 1960; Hartford, 1964). The educational structure has changed from colonial schools, common schools, and academies to private schools, homeschools, and public schools, into the higher education system of colleges and universities (Aasen, 2010; Berger, 1997; Cogan, 2010; Gutek, 1986; Hartford, 1964; Karier, 1991). While the organization of education has changed, college administrators have been trying to determine how students can become academically successful. Specifically, data obtained from this study will assist faculty, administrators, and college trustees to ascertain the importance of different educational backgrounds (public, private, and homeschool) on students' academic success.

Researchers (Astin, 1993; Bean, 1982; Pascarella & Terenzini, 1991; Spady, 1971; Tinto, 1993) with theories in the field of student departure and persistence were

studied. Vincent Tinto's (1993) student departure model of academic and social integration (Harvey-Smith, 2002) was found to be the best model to use with this study. The academic track of Tinto's (1993) model best reflected the variables of high school GPA, ACT, college GPA, WPA, and college graduation rates for this study. Tinto's (1993) stages of separation, transition, and incorporation were discussed in regard to the student departure model, which can lead to academic success.

In this chapter, a review of the history of education in the United States was examined. Education in Colonial America within the New England, Middle Atlantic, and Southern Colonies was discussed, as well as the history of the Academy and Common Schools throughout the United States. Public, homeschool, and higher education were assessed, including the history of work colleges and vocational education. The theories of Astin (1993), Bean (1982), Pascarella and Terenzini (1991, 2005), Spady (1971), and Tinto (1993) describing college student departure were analyzed. A summary of the chapter was presented.

In Chapter Three, an overview of the problem and purpose of the study are outlined. The research questions and hypotheses are posed. The research design, sample demographics and sample size are discussed. Instrumentation and data collection are detailed. An analyses of data is presented in Chapter Four. The descriptive statistics and analysis of data for research questions one through three are presented first, followed by the descriptive statistics and analysis of data for research question four.

The conclusions and recommendations for the study are presented in Chapter Five. A summary of findings, as detailed by each research question, and the conclusion of the case study are reviewed. Implications and recommendations for further study in

academic success of students with different educational backgrounds are discussed, as well as the summary of the study.

## Chapter Three: Methodology

As students enter college with varied educational backgrounds, college administrators are learning they must aid students' college transition to ensure academic success (Cleary et al., 2011). However, a lack of research on the academic success of students from varied educational backgrounds leaves college administrators looking for answers to aid students' academic success in college. The knowledge gained from this study will allow college administrators to assist new students entering college from varied educational backgrounds become academically successful.

A restatement of the problem, purpose, research, and hypotheses questions are included in this chapter. The research design, demographics, population, and sample size are also assessed. The instrumentation and data collection used within the study are included within this chapter, as well as the analyses used to analyze the variables of high school cumulative GPAs and ACT scores, college cumulative GPAs and WPA scores, along with graduation rates of each group.

### Problem and Purpose Overview

There is a growing disconnect between a positive college transition and the success rates of students from varied K-12 educational backgrounds. The purpose of this study was to determine if students' educational backgrounds influence high school cumulative GPAs and ACT scores, college cumulative GPAs and WPAs, and graduation rates. With college administrators concerned how to increase retention and graduation rates (Bailey & Xu, 2012; Sander, 2014), this study will provide a private work college in the Midwest access to data that will assist college administrators when discerning the influence of students' educational backgrounds on academic success.

**Research questions and hypotheses.** The following research questions and hypotheses guided this study:

1. What is the significant difference, if any, between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores?

*$H1_0$*. There is no significant difference between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores.

*$H1_a$*. There is a significant difference between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores.

2. What is the significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college?

*$H2_0$*. There is no significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college.

*$H2_a$*. There is a significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college.

3. What is the significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college?

*$H3_0$*. There is no significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college.

*$H3_a$*. There is a significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college.

4. What is the difference between students' educational backgrounds and graduation rates at a private work college?

*$H4_0$*. There is no significant difference between students' educational backgrounds and graduation rates at a private work college.

*$H4_a$*. There is a significant difference between students' educational backgrounds and graduation rates at a private work college.

**Research Design**

This study was a quantitative case study. According to Creswell (2013), "Quantitative research is a means for testing objective theories by examining the relationship among variables" (p. 4). The independent variables examined in this study included the public, private, and homeschool educational backgrounds students received prior to entering college. The dependent variables of high school cumulative GPAs and ACT scores, college cumulative GPAs and WPAs, as well as graduation rates of the differing educational groups were examined.

In addition to a quantitative approach, the researcher used a case study design to gain specific information from one institution. Creswell (2013) stated a case study "enables the researcher to explore a program or process in depth, while collecting detailed information using a variety of measurements over a specific period of time" (p. 13). Feagin, Orum, and Sjoberg (1991) also stated, "Case studies can permit the researcher to discover complex sets of decisions and to recount the effect of decisions over time" (p. 10).

A private work college in the Midwest was chosen for the research, with the expectation to gain insight into how different educational backgrounds affect college academic outcomes. In comparing the data acquired from the college Jenzabar database on high school cumulative GPAs and ACT scores, college cumulative GPAs and WPA

scores, and graduation rates, these data provided the statistics needed for a quality case study.

Within this design structure a triangulation was used to inspect the findings of this study. Denzin (2012) and Denzin and Lincoln (2011) described the importance of triangulation to improve the overall depth and complexity of a study. The use of college cumulative GPA scores, college cumulative WPA scores, and graduation rates lead to a more complete evaluation of the research.

Each educational background was examined independently, while also analyzing the varied educational backgrounds against one another and as groups. The influence of educational background on college cumulative GPAs, WPAs, and graduation rates was explored. The focus of this study was to allow the college administrators at a private work college in the Midwest to become better equipped in helping new college freshmen with varied educational backgrounds become more successful in academics, work environment, and social circles of college life.

**Ethical Considerations**

In order to assure confidentiality, the data collected were secondary data gained through the Director of Information Technology at the private work college. The secondary data were de-identified to assure anonymity. The coded data were then sent to a third party, a Doctor of Mathematics at the private work college in the Midwest. The Doctor of Mathematics then recoded the data a second time, in order to guarantee there were no identifiers and in order to place the data into the SPSS software system. Once the researcher acquired the coded data in an Excel spreadsheet, the data were saved onto a personal computer on a secure site that was password protected.

**Sample Demographics**

All participants of this study attended a private work college located in the Midwest of the United States. According to the United States Census Bureau (2010), the state had an average population of 6,000,000 residents, and the county population was approximately 54,000 residents. The city where the private work college is located had an average of 4,400 residents with 92.5% White, followed by 6.4% Hispanic (United States Census Bureau, 2010).

At the time of this study, the four-year, private work college had an undergraduate student population of 1,450 students (M. Linson, personal communication, August 18, 2015). Of those undergraduate students, 51% were female and 49% were male with 99% of students attending full-time, while only 1% attend part-time (NCES, 2016). Ninety-eight percent of the student body was at most 24 years old, and only 2% were 25 years old or older (NCES, 2016). The student population was made up of 92% White, 1% African American, 2% Hispanic, 2% with two or more races, and 2% non-resident alien (NCES, 2016). Only 19% of undergraduate students were from out-of-state, leaving 80% of students coming from within the state (NCES, 2016). The graduation rate for the past six years has averaged 63% (NCES, 2016).

**Population and Sample**

The institution participating in this case study is a small private work college located in the Midwest. The annual student population averages 1,400 students with 100% classified as undergraduates (M. Linson, personal communication, August 18, 2015). Each fall, the college administration enrolls a freshman class of approximately 350 students (M. Linson, personal communication, August 18, 2015). A minimum of 1,300 to a maximum of 1,700 college students' data within a four-year period of time

were studied. The institution maintains a comprehensive data warehouse system, Jenzabar, which allows the Director of Information Technology to label and organize student data as needed for examination. A nonrandom (Davidson, 2013) cluster sample (Bluman, 2013) was used for this research project.

The participants in this study were comprised of the entire population of work college students who graduated in 2011 through 2014, with the exception of those students who began their college education at another institution. The secondary data acquired were clustered by graduation year. The data from these clusters were disaggregated by educational background. The variables of GPA, ACT, WPA, and graduation rate for each participant were then disaggregated by educational background for analysis and comparisons. The ability to analyze both the aggregated and disaggregated data allowed a greater opportunity to answer the research questions.

**Instrumentation**

For the purpose of this study, secondary data were the only instruments used. The secondary data acquired consisted of cumulative high school GPAs and ACT scores students received upon entering the private work college. The college cumulative GPAs and WPA scores received upon completion of each college year were assessed. The final data evaluated were the graduation rates of those students who entered the private work college in the Midwest from academic year 2007 through 2010 and thus graduated in the academic years 2011 through 2014.

**Data Collection**

Once the Institutional Review Board (IRB) at Lindenwood University (Appendix B) and the private work college in the Midwest (Appendices C-F) gave permission, the

request for data was sent to the Director of Information Technology at the private work college. The secondary data needed to answer the research questions were kept on a secure database maintained by the private work college. The Director of Information Technology acquired the information for the researcher from the Jenzabar EX, which is a Structured Query Language (SQL) database used to regulate data for the college. The Director utilized the Infomaker reporting system within the Jenzabar EX database to make a query and to de-identify the data using codes, therefore extracting "any identifiable elements of personal data collected" (Future of Privacy Forum, 2014, para. 1).

The data were then sent to a third party, a Doctor of Mathematics, at the private college in the Midwest. The data were coded so the Doctor of Mathematics would not be able to identify individuals, while making certain confidentiality was maintained. The Doctor of Mathematics then recoded the secondary data to help ascertain and place the data into the SPSS software system in order to gather the information needed. The data were then sent via email to the researcher in an Excel spreadsheet. The data were coded twice to ensure there were no identifiers present before the researcher began assessing the data.

**Data Analysis**

The data were analyzed according to students who graduated from a public, private, or homeschool prior to entering college. The variables analyzed included high school cumulative GPAs and ACT scores, college cumulative GPAs and WPA scores, along with graduation rates of each group. A chi-square "independence test will be used to test the independence" (Bluman, 2013, p. 588) of the educational backgrounds and

variables being studied. In order to distinguish whether "the means of the variables are independent from each other" (Bluman, 2013, p. 480), a *t*-test was utilized. Bluman (2013) discussed the importance of using an Analysis of Variance (ANOVA) "when comparing three or more means" (p. 604).

As the data were analyzed, a Levene's test for equality of variance was performed to determine the appropriate type of ANOVA test to perform (C. Haile, personal communication, March 5, 2016). As the results of the ANOVA indicated significant differences in the means, a post-hoc test for multiple comparisons was performed; if the variances were equal, a Tukey HSD was used, and if the variances were unequal, a Tamhane T2 test was used (C. Haile, personal communication, March 5, 2016). As the analysis showed statistically significant differences in the means, a Cohen's *d* was computed to estimate the difference in means in terms of the pooled standard deviation of the sample (C. Haile, personal communication, March 5, 2016).

**Summary**

Data acquired from a private work college in the Midwest to evaluate which high school background best leads to academic success in college and ultimately a college diploma were compared. The data acquired from the Jenzabar database of the private work college were analyzed, collected, and evaluated to determine if a difference exists between those students who attended a public, private, or homeschool educational setting. The high school GPAs and ACT scores, college GPAs, WPAs, and graduation rates were also evaluated. The analysis of the research finding is presented in Chapter Four. The descriptive statistics and data analyses for each research question are also presented. The conclusions and recommendations for the study are presented in Chapter Five, along with

a summary of findings, implications, and recommendations for further study in academic success of students with different educational backgrounds.

## Chapter Four: Analysis of Data

The purpose of this study was to determine the academic success of students from varied educational backgrounds at a private work college in the Midwest. As students enter college with varied educational backgrounds, college administrators are learning they must aid students' college transition to ensure academic success (Bailey & Xu, 2012; Sander, 2014). For the purpose of this study the data analyzed consisted of students' final high school GPAs and ACT test scores, college cumulative GPAs and work point average (WPA) scores, as well as college graduation rates among public, private, and homeschool graduates.

The participants in this study were comprised of 1,381 college students who graduated from college between 2011 and 2014. The secondary data needed for this study were acquired from a query made by the Director of Information Technology via the Jenzabar database regulated by the college. The director then sent the coded data to a third party, a Doctor of Mathematics, who recoded the secondary data in order to enter it into a SPSS software system. The variables of ACT scores, high school GPAs, college GPAs, college WPAs, and graduation rates for each participant were then analyzed and compared by the educational background.

### Descriptive Statistics: Question One through Three

Research questions one through three were answered by completing hypothesis testing on multiple means followed by multiple comparison post-hoc tests. The null hypothesis in each case was that the means were the same for each variable studied (high school GPAs, ACT scores, college GPAs, WPAs) regardless of educational background

(public, private, and homeschool), excluding graduation rates. Research questions one through three were examined using five steps:

1. Basic descriptive statistics such as the mean (Bluman, 2013) and standard deviation (Bluman, 2013), as well as confidence intervals for the mean computed for the variable of interest (Bluman, 2013).

2. A test for equality of variances using Levene's test was done to determine an appropriate type of ANOVA test to perform (C. Haile, personal communication, March 5, 2016).

3. A one-way ANOVA (Bluman, 2013) was performed to test the equality of means. This was done using a traditional *F* test under the equal variances assumption and confirmed with an alternate Brown-Forsyth *F* test if variances were determined to be unequal (C. Haile, personal communication, March 5, 2016).

4. In each case, the ANOVA indicated there were significant differences in the means, so a post-hoc test (Bluman, 2013) for multiple comparisons of means was performed. If the variances were equal, a Tukey HSD (Bluman, 2013) was used. If the variances were unequal, a Tamhane T2 test (Bluman, 2013) was used

5. For statistically significant differences in means, a *d* was computed to measure the effect size. Cohen's *d* gives an estimate of the difference in means in terms of the pooled standard deviation of the sample (Bluman, 2013). For instance, if the distributions are normal, $d = 0.2$ would mean that 58% of the population corresponding to the higher mean would be above the lower mean (C. Haile, personal communication, March 5, 2016). This is generally considered a "small" effect, while $d = 0.5$ would be

considered “medium,” and $d = 0.8$ or larger would be considered a “large” effect (C. Haile, personal communication, March 5, 2016).

**Data Analysis: Question One through Three**

Basic descriptive statistics including mean, standard deviation, and confidence intervals were applied. Tables were used to display how the different educational backgrounds (public, private, and homeschool) affected the outcomes of the variables (ACT scores, high school GPAs, college GPAs, college WPAs) studied. The following research questions guided this study:

**Research question one.** What is the significant difference, if any, between and among students’ educational backgrounds and high school cumulative Grade Point Averages and ACT scores?

The results of this study helped determine the differences, if any, between the educational backgrounds of 1,304 students and high school cumulative GPAs. The descriptive statistics in Table 1 seem to indicate standard deviation is not significantly different between students who attend public schools ($SD = 0.36$) and private schools, ($SD = 0.37$), although for students attending homeschool the standard deviation appears smaller ($SD = 0.26$). The difference in the standard deviations of the public and private school students compared to the homeschool students required a test for the equality of variances.

Table 1

*High School GPA*

| | | | | | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *SE* | Lower Bound | Upper Bound |
| Public | 1079 | 3.52548 | 0.36289 | 0.01105 | 3.5038 | 3.54715 |
| Private | 90 | 3.55321 | 0.36954 | 0.03895 | 3.47581 | 3.63061 |
| Homeschool | 135 | 3.68433 | 0.26068 | 0.02244 | 3.63996 | 3.72871 |
| Total | 1304 | 3.54384 | 0.35721 | 0.00989 | 3.52443 | 3.56324 |

A Levene's test was then conducted to test for the equality of the variances of the public, private, and homeschool variables (see Table 2). The variances were shown not to be equal ($p = 0.000$). An unequal variance allows for the data to be tested using a traditional ANOVA test, which showed whether to reject or not reject the null hypothesis.

Table 2

*Test of Homogeneity of Variances for High School GPA*

| Levene Statistic | *df1* | *df2* | Sig. |
|---|---|---|---|
| 12.363 | 2 | 1301 | 0 |

In Table 3, the data were tested used a traditional *F*-test ANOVA, which showed there was a difference between the two mean squares (1.518 and .125), resulting in a significant difference ($F = 12.101$; Sig. = .000). The null hypothesis was rejected; therefore, there was a difference between and among students' educational backgrounds and high school cumulative Grade Point Averages.

Table 3

*ANOVA for High School GPA*

| | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|
| Between Groups | 3.036 | 2 | 1.518 | 12.101 | .000 |
| Within Groups | 163.222 | 1301 | .125 | | |
| Total | 166.258 | 1303 | | | |

Because the lack of homogeneity of variance violates part of the underlying assumption of an ANOVA with *F*, the GPA data were entered into a Brown-Forsythe test as seen in Table 4. The Brown-Forsythe test, similar to the results in Table 3, showed a significant difference in mean GPAs among differing educational backgrounds ($p$ = 0.000).

Table 4

*Test of Equality of Means for High School GPA*

| | Statistic[a] | *df1* | *df2* | Sig. |
|---|---|---|---|---|
| Brown-Forsythe | 14.406 | 2 | 211.771 | .000 |

*Note*. [a]Asymptotically *F* distributed.

In order to further explore the difference between student GPAs, a post-hoc test using Tamhane T2 (similar to a student *t*-test) was conducted on the data. The T2 makes multiple comparisons and shows the differences between each variable (C. Haile, personal communication, March 5, 2016). The results in Table 5 show students who attended a homeschool had a moderately higher mean GPA (sample mean difference = 0.16, effect size $d = 0.44$, $p = 0.000$) than those students who attended a public school. Homeschool students in the sample also had a moderately higher mean GPA than private school students (sample mean difference = 0.13, effect size $d = 0.36$, $p = 0.012$). The difference between private and public school students' mean GPAs was not significant ($p = 0.871$).

Table 5

*T2 Test of Multiple Comparisons for High School GPA*

| (I) HST | (J) HST | Mean Difference (I-J) | *SE* | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound |
| Public | Private | -.027735 | .040490 | .871 | -.12600 | .07053 |
| | HS | -.158857* | .025008 | .000 | -.21906 | -.09865 |
| Private | Public | .027735 | .040490 | .871 | -.07053 | .12600 |
| | HS | -.131122* | .044952 | .012 | -.23969 | -.02255 |
| HS | Public | .158857* | .025008 | .000 | .09865 | .21906 |
| | Private | .131122* | .044952 | .012 | .02255 | .23969 |

*Note*. *The mean difference is significant at the 0.05 level.

The results of this study also helped determine the differences, if any, between the educational backgrounds of 1,322 students and ACT composite scores. The descriptive statistics for ACT composite scores are shown in Table 6 and indicate the means to be different between students of differing educational backgrounds. Students who attended public schools had the lowest standard deviation (*SD* = 3.19), while private school students (*SD* = 3.390) had a slightly higher standard deviation than public school students, yet lower than those who attended homeschool (*SD* = 3.473). The differences

in the standard deviations of the public, private, and homeschool students required a test for the equality of variances.

Table 6

*ACT Composite*

| | | | | | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *SE* | Lower Bound | Upper Bound |
| Public | 1093 | 22.15 | 3.197 | .097 | 21.96 | 22.34 |
| Private | 92 | 22.82 | 3.390 | .353 | 22.11 | 23.52 |
| Homeschool | 137 | 23.00 | 3.473 | .297 | 22.41 | 23.59 |
| Total | 1322 | 22.29 | 3.251 | .089 | 22.11 | 22.46 |

In Table 7, results of a Levene's test showed the outcome for the test of equality of the variances. The variances of public, private, and homeschool students were shown to not be significantly different ($p = 0.255$). Therefore, the assumptions were met to test the data using a traditional ANOVA.

Table 7

*Test of Homogeneity of Variances for ACT Composite*

| Levene Statistic | *df1* | *df2* | Sig. |
|---|---|---|---|
| 1.367 | 2 | 1319 | .255 |

The data were then tested using an ANOVA, as seen in Table 8. The ANOVA showed a difference between the two mean squares of 57.502 and 10.497, resulting in the difference being significant ($F = 5.478$; $p = .004$), thus rejecting the null hypothesis. Consequently, there was a difference between and among students' educational backgrounds and high school composite ACT scores.

Table 8

*ANOVA for ACT Composite*

| | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|
| Between Groups | 115.003 | 2 | 57.502 | 5.478 | .004 |
| Within Groups | 13845.343 | 1319 | 10.497 | | |
| Total | 13960.346 | 1321 | | | |

The Levene's test indicated not to reject the hypothesis of equal variances; therefore, a post-hoc Tukey HSD test was conducted on the data in order to make further comparisons on the difference between the students' ACT composite scores. Table 9 shows students who attended a homeschool had a slightly higher mean ACT composite score than those students who attended a public school (mean difference = 0.847, effect size $d = 0.26$, $p = 0.011$). However, there was no significant difference between students who attended public school compared to private school students ($p = 0.144$). The analysis on the first research question showed students who attended a homeschool had a statistically significant higher mean GPA and ACT composite score than those who attended public school, while also having a higher mean GPA than students who attended private schools.

Table 9

*Tukey HSD Post-Hoc Test for ACT Composite*

| | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) HST | (J) HST | Mean Difference (I-J) | *SE* | Sig. | Lower Bound | Upper Bound |
| Public | Private | -.662 | .352 | .144 | -1.49 | .16 |
| | HS | -.847* | .294 | .011 | -1.54 | -.16 |
| Private | Public | .662 | .352 | .144 | -.16 | 1.49 |
| | HS | -.185 | .437 | .906 | -1.21 | .84 |
| HS | Public | .847* | .294 | .011 | .16 | 1.54 |
| | Private | .185 | .437 | .906 | -.84 | 1.21 |

*Note.* *The mean difference is significant at the 0.05 level.

To recognize the distribution of the data more efficiently, a box and whisker plot (see Figure 2) was used to show the high school cumulative GPA scores of students from public, private, and homeschools. Figure 2 illustrates and aligns with the previous data analyses that there was a difference between students' educational backgrounds and high school cumulative GPAs, while presenting the outliers and extremes of the data.

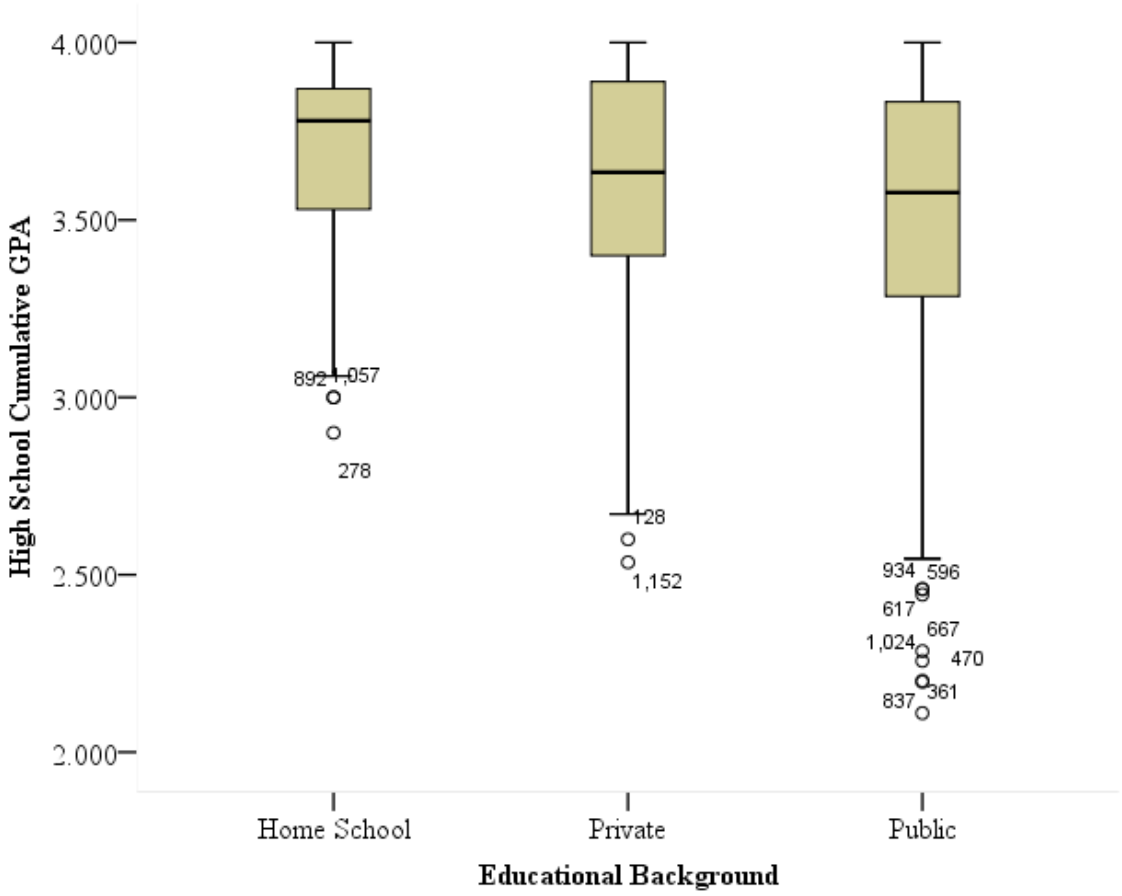



*Figure 2.* Box and whisker plot for high school cumulative GPA.

The box and whisker plot (see Figure 3) shows the distribution of data for high school ACT scores of students from public, private, and homeschools. Figure 3 illustrates and corresponds with data shown in Tables 6 through 9 that there was a slight difference between and among students' educational backgrounds and high school ACT scores, while also showing the extremes and outliers of the data.

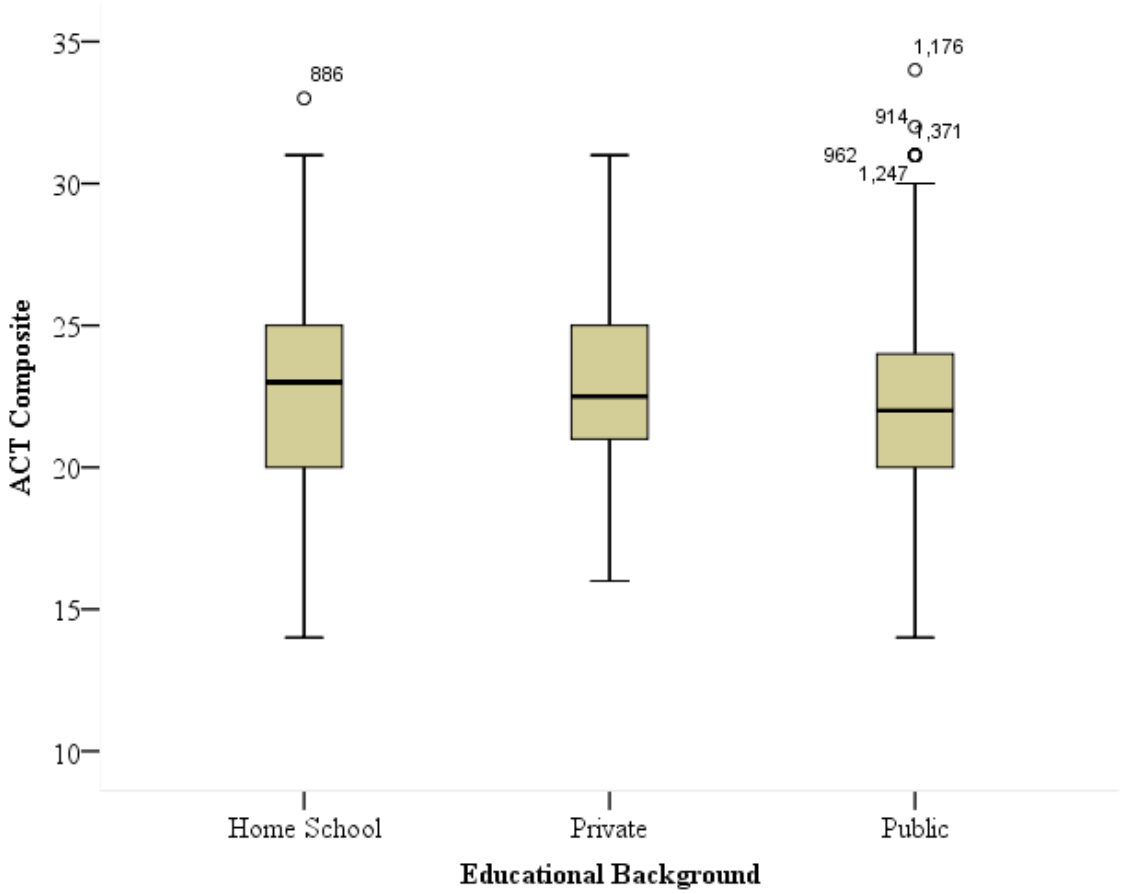



*Figure 3.* Box and whisker plot for ACT composite.

**Research question two.** What is the significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college?

The results of this study helped determine the differences between the educational backgrounds of 1,381 students and their college cumulative GPAs. The descriptive statistics in Table 10 show differences in college cumulative GPAs among educational backgrounds. The standard deviation was significantly different between students who

attend public schools (*SD* = 0.83), private schools, (*SD* = 0.72), and homeschools (*SD* = 0.66). Consequently, the homeschool students (3.22) had a higher college cumulative GPA compared to the public and private school students, with the public school students (2.83) obtaining the lowest college cumulative GPA. The results of the descriptive statistics required a test for the equality of variances.

Table 10

*College Cumulative GPA*

| | | | | | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *SE* | Lower Bound | Upper Bound |
| Public | 1120 | 2.832982 | .8333952 | .0249024 | 2.784122 | 2.881843 |
| Private | 109 | 3.038401 | .7252707 | .0694683 | 2.900703 | 3.176099 |
| HS | 152 | 3.225239 | .6688358 | .0542497 | 3.118053 | 3.332426 |
| Total | 1381 | 2.892370 | .8185678 | .0220271 | 2.849159 | 2.935580 |

A Levene's test illustrates the outcome for the test of homogeneity of variances in Table 11. The public, private, and homeschool variances were shown to be significantly different at $p = .043$. Therefore, the equality of variances assumption was violated and

the null hypothesis was rejected. The results indicated there was a significant difference between students' educational backgrounds and college cumulative GPAs at a private work college, so both the traditional ANOVA and Brown-Forsythe test were performed.

Table 11

*Test of Homogeneity of Variances for College Cumulative GPA*

| Levene Statistic | *df1* | *df2* | Sig. |
|---|---|---|---|
| 3.162 | 2 | 1378 | .043 |

The data were then tested using an ANOVA, as seen in Table 12. The ANOVA showed significant differences between the two mean squares of 23.11 and 901.55, resulting in the difference being significant ($F = 17.66$; $p = .000$), thus rejecting the null hypothesis. Therefore, a difference existed between students' educational backgrounds and college cumulative GPA scores.

Table 12

*ANOVA for College Cumulative GPA*

| | | | | | |
|---|---|---|---|---|---|
| Between Groups | 23.116 | 2 | 11.558 | 17.666 | .000 |
| Within Groups | 901.557 | 1378 | .654 | | |
| Total | 924.674 | 1380 | | | |

Because the lack of homogeneity of variance violates part of the underlying assumption of an ANOVA with *F*, the college cumulative GPA data were entered into a Brown-Forsythe test as seen in Table 13. The Brown-Forsythe test, similar to the results in Table 12, showed a significant difference in mean college cumulative GPAs among differing educational backgrounds ($p = 0.000$) at a private work college.

Table 13

*Tests of Equality of Means for College Cumulative GPA*

| | Statistic[a] | *df1* | *df2* | Sig. |
|---|---|---|---|---|
| Brown-Forsythe | 22.800 | 2 | 317.409 | .000 |

*Note*. [a]Asymptotically *F* distributed.

In order to discover the differences in college cumulative GPAs, a Tamhane T2 post-hoc test was performed (see Table 14) on the data. The post-hoc test showed private and homeschool students' college GPAs were not significantly different ($p = 0.102$), while both were higher than students who attended public school.

Table 14

*T2 Post-Hoc Test of Multiple Comparisons for College Cumulative GPA*

| | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) HST | (J) HST | Mean Difference (I-J) | *SE* | Sig. | Lower Bound | Upper Bound |
| Public | Private | -.2054185* | .0737969 | .018 | -.383801 | -.027036 |
| | HS | -.3922571* | .0596923 | .000 | -.535880 | -.248634 |
| Private | Public | .2054185* | .0737969 | .018 | .027036 | .383801 |
| | HS | -.1868386 | .0881413 | .102 | -.398903 | .025226 |
| HS | Public | .3922571* | .0596923 | .000 | .248634 | .535880 |
| | Private | .1868386 | .0881413 | .102 | -.025226 | .398903 |

Due to the results of the post-hoc test, the homeschool and private school data were pooled and an independent samples *t*-test, as seen in Table 15, was conducted against the public school data. The independent samples *t*-test showed significant, moderate differences between the public school and the pooled private and homeschool college cumulative GPAs with the public school mean GPA being lower (mean difference = 0.314, effect size $d = 0.38$, $p = 0.000$).

Table 15

*t-Test for College Cumulative GPA*

| | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|
| | | *df* | Sig. (2-tailed) | Mean Diff. | Std. Error Diff. | Lower | Upper |
| Cum. GPA | Equal variances assumed | 1379 | .000 | .3142287 | .0556436 | .2050735 | .4233839 |
| | Equal variances not assumed | 450.064 | .000 | .3142287 | .0498534 | .2162544 | .4122030 |

The analysis on the second research question showed students who attended a homeschool had a significantly higher college cumulative GPA than students who attended public school, while also having a slightly higher GPA than students who attended private schools.

To recognize the distribution of the data more efficiently, a box and whisker plot (see Figure 4) was used to show the college cumulative GPA scores of students from

public, private, and homeschools. Figure 4 illustrates and aligns with the previous data analyses found in Tables 10 through 15, that there was a difference between students' educational backgrounds and college cumulative GPAs, while also presenting the outliers and extremes of the data.

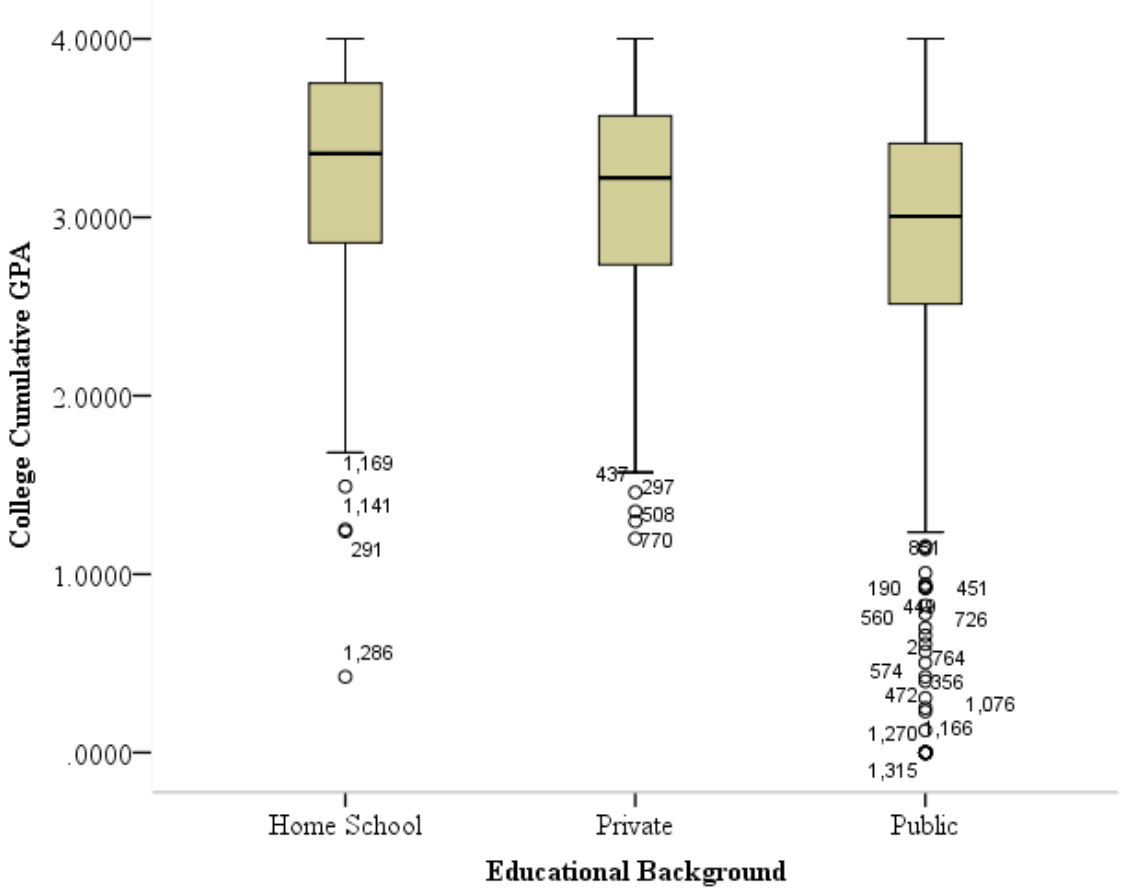



*Figure 4.* Box and whisker plot for college cumulative GPA.

**Research question three.** What is the significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college?

The results of the study allowed for determination of the differences between the educational backgrounds of 1,367 students and college cumulative WPAs. The descriptive statistics in Table 16 show differences in the mean college cumulative WPAs among public, private, and homeschool backgrounds. The standard deviation was slightly different between students who attended private schools (*SD* = 0.50) and homeschools (*SD* = 0.38), while being significantly different from students who attended public schools (*SD* = 0.62). Consequently, the homeschool students (3.76) had a higher college cumulative WPA compared to the public and private school students, with the public school students (3.62) obtaining the lowest college cumulative WPA of the differing educational backgrounds. The results of the descriptive statistics required a test for the equality of variances.

Table 16

*College Cumulative WPA*

| | | | | | 95% Confidence Interval for Mean | |
|---|---|---|---|---|---|---|
| | *N* | *M* | *SD* | *SE* | Lower Bound | Upper Bound |
| Public | 1106 | 3.62047303 | .628253124 | .018891093 | 3.58340657 | 3.65753949 |
| Private | 109 | 3.70778235 | .504861678 | .048356979 | 3.61193043 | 3.80363427 |
| HS | 152 | 3.76034153 | .385844821 | .031296148 | 3.69850663 | 3.82217642 |
| Total | 1367 | 3.64298709 | .598476112 | .016186858 | 3.61123330 | 3.67474089 |

In Table 17, a Levene's test for homogeneity of variances was performed followed by an ANOVA. The public, private, and homeschool variances were shown to be significantly different at $p = .007$. Therefore, the equality of variances assumption was violated and the null hypothesis was rejected. There was a significant difference between students' educational backgrounds and college cumulative WPAs at a private work college; therefore, both the traditional ANOVA and Brown-Forsythe test were performed.

Table 17

*Test of Homogeneity of Variances of College Cumulative WPA*

| Levene Statistic | *df1* | *df2* | Sig. |
|---|---|---|---|
| 4.999 | 2 | 1364 | .007 |

In Table 18 the data were tested using an ANOVA. The ANOVA showed significant differences between the two mean squares of 3.11 and 486.154, resulting in the difference being significant ($F = 4.36$; $p = .013$), thus rejecting the null hypothesis. Therefore, a difference existed between students' educational backgrounds and college cumulative WPA scores.

Table 18

*ANOVA of College Cumulative WPA*

| | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|
| Between Groups | 3.112 | 2 | 1.556 | 4.365 | .013 |
| Within Groups | 486.154 | 1364 | .356 | | |
| Total | 489.265 | 1366 | | | |

Due to the lack of homogeneity of variance violating part of the underlying assumption of an ANOVA with *F*, the college cumulative WPA data were entered into a Brown-Forsythe test as seen in Table 19. The Brown-Forsythe test, similar to the results in Table 18, showed a significant difference in mean college cumulative WPAs among differing educational backgrounds ($p = 0.001$) at a private work college. The results of Table 18 and 19 showed not all work GPAs were equal.

Table 19

*Tests of Equality of Means for College Cumulative WPA*

| | Statistic[a] | *df1* | *df2* | Sig. |
|---|---|---|---|---|
| Brown-Forsythe | 7.036 | 2 | 310.183 | .001 |

*Note*. [a]Asymptotically *F* distributed.

In order to discover the differences in college cumulative WPAs, a T2 Post-Hoc Test was performed (see Table 20) on the data. The post-hoc test showed private and homeschool college WPAs were not significantly different ($p = 0.741$). Public and private school students were also not significantly different ($p = 0.258$); however, the public and homeschool difference in means was significantly different ($p = 0.000$).

Table 20

*T2 Post-Hoc Test of Multiple Comparisons for College Cumulative WPA*

| | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) HST | (J) HST | Mean Difference (I-J) | *SE* | Sig. | Lower Bound | Upper Bound |
| Public | Private | -.087309321 | .051915997 | .258 | -.21273815 | .03811950 |
| | HS | -.139868498* | .036555742 | .000 | -.22768678 | -.05205021 |
| Private | Public | .087309321 | .051915997 | .258 | -.03811950 | .21273815 |
| | HS | -.052559178 | .057600748 | .741 | -.19129734 | .08617899 |
| HS | Public | .139868498* | .036555742 | .000 | .05205021 | .22768678 |
| | Private | .052559178 | .057600748 | .741 | -.08617899 | .19129734 |

*Note*. *The mean difference is significant at the 0.05 level.

Due to the results of the post-hoc test, the homeschool and private school data were pooled and compared to the public school data in a *t*-test as seen in Table 21. The independent samples *t*-test showed the public school students' mean WPAs was somewhat lower than those of the combined private and homeschool students (mean difference = 0.118, effect size $d = 0.20$, $p = 0.000$).

Table 21

*t-Test for College Cumulative Mean WPA*

| | | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|
| | | *t* | *df* | Sig. (2-tailed) | Mean Diff. | Std. Error Diff. | Lower | Upper |
| Cum WPA | Equal variances assumed | 2.871 | 1365 | .004 | .117918 | .041075 | .037340 | .198496 |
| | Equal variances not assumed | 3.561 | 541.802 | .000 | .117918 | .033111 | .052875 | .182961 |

The analysis on the third research question showed students who attended a homeschool had a significantly higher college cumulative WPA than students who attended public school, while also having a slightly higher mean GPA than students who attended private schools.

To recognize the distribution of the data more efficiently, a box and whisker plot (see Figure 5) was used to show the college cumulative WPAs of students from public,

private, and homeschools. Figure 5 illustrates and aligns with the previous data analyses that there was a difference between students' educational backgrounds and college cumulative WPAs. There are more outliers and extremes in Figure 5 due to the differences in grading per work station, leading to the data not fitting in a normal distribution.

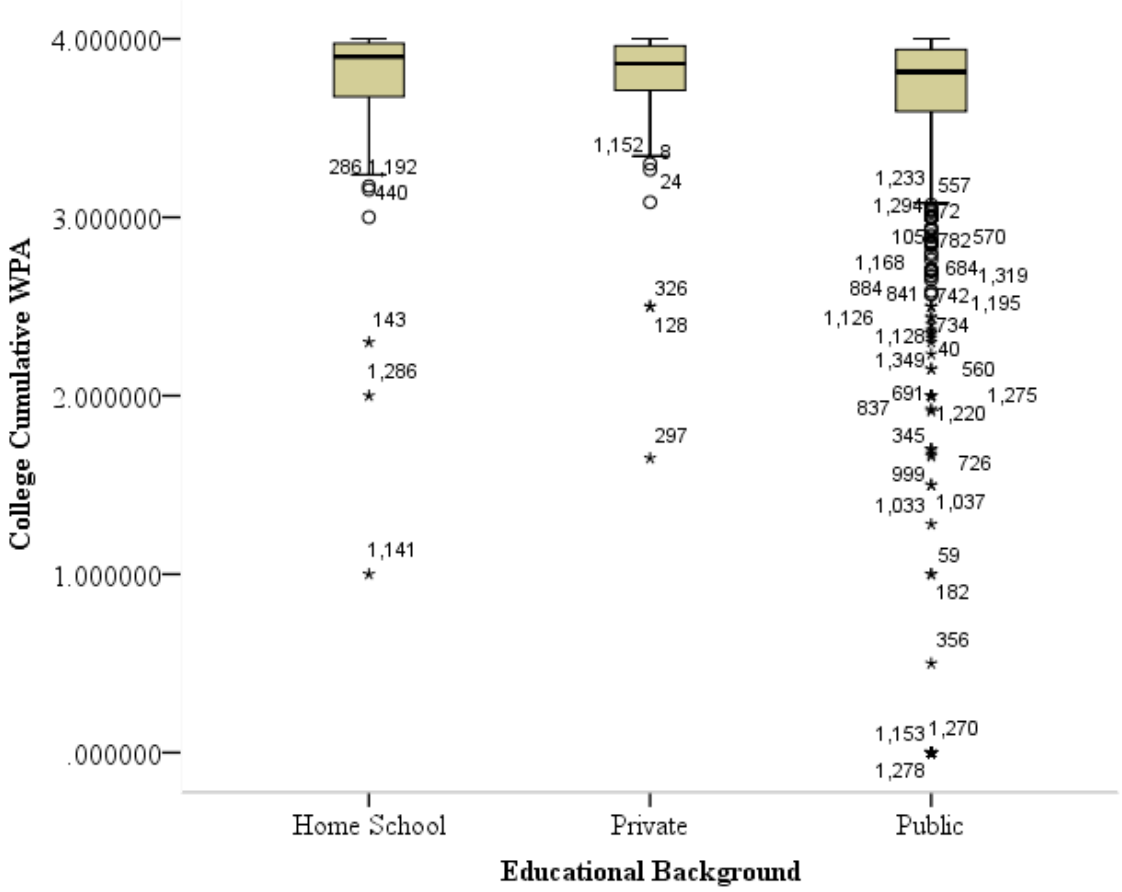



*Figure 5.* Box and whisker plot for college cumulative WPA.

**Descriptive Statistics: Question Four**

Research question four was answered by completing a hypothesis test for independence. The null hypothesis was that the graduation rate was independent of

educational background (public, private, or homeschool). Research question four was analyzed using three steps:

1. The descriptive statistics of the mean (Bluman, 2013), standard deviation (Bluman, 2013), and confidence intervals (Bluman, 2013) were calculated. These statistics indicated the graduation rates for private and homeschool students were almost identical (C. Haile, personal communication, March 5, 2016).

2. A chi-squared test (Bluman, 2013) was then used to test for the independence of educational background and graduation rate with the null hypothesis (independence) being rejected (C. Haile, personal communication, March 5, 2016).

3. Private and homeschool students were combined and a new 2x2 contingency table was created allowing an odds ratio and confidence interval to be computed, a typical measure of effect size for this type of data (C. Haile, personal communication, March 5, 2016).

**Data Analysis: Question Four**

Basic descriptive statistics including mean, standard deviation, and confidence intervals were applied. Tables were used to display how the different educational backgrounds (public, private, and homeschool) affected the outcome of the variable (college graduation) studied. The following research question guided this part of the study:

**Research question four.** What is the difference between students' educational backgrounds and graduation rates at a private work college?

The results of this study helped determine the differences between the educational backgrounds of 1,381 students and college graduation rates. The descriptive statistics

were performed and the results can be seen in Table 22, which show that for the sample data, homeschool and private school students had nearly the same completion rates with 0.763 and 0.761, respectively. The results found in Table 22 also show students in the sample who attended a public school had a lower college graduation rate at 0.629.

Table 22

*Completion Percentage for College Graduation*

| Educational Background | *M* | *N* | *SD* |
|---|---|---|---|
| Home School | .763 | 152 | .4266 |
| Private | .761 | 109 | .4282 |
| Public | .629 | 1120 | .4834 |
| Total | .654 | 1381 | .4759 |

The results contained in Table 23 display the contingency table, which illustrate the frequency of students who graduated or did not graduate for each of the different educational background groups. The results showed the students who attend homeschool and private school had 24% who did not graduate from college, while the graduation rate was 76% for both groups. The public school students' data showed a significant difference with 37% not graduating and only 63% who did graduate.

Table 23

*Contingency Table for College Graduation Rates*

| | Completion | | |
|---|---|---|---|
| Educational Background | Did Not Graduate | Graduated | Total |
| Home School | 36 | 116 | 152 |
| Private | 26 | 83 | 109 |
| Public | 416 | 704 | 1120 |
| Total | 478 | 903 | 1381 |

The contingency table is the basis for the chi-squared test for independence. A chi-square test was completed, and the results shown in Table 24 clarify whether the college graduation rate was independent or dependent of the educational background. The graduation rate of students was dependent on the educational background ($p$ = 0.000); therefore, a significant relationship existed between the college graduation rate and the educational background of the student.

Table 24

*Chi-Square Test for College Graduation Rates*

| | Value | *df* | Asymptotic Significance (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 16.765[a] | 2 | .000 |
| *N* of Valid Cases | 1381 | | |

*Note*. [a]0 cells (.0%) have expected count less than 5. The minimum expected count is 37.73.

**Summary**

The results of this study allowed for identification of which educational background (public, private, homeschool) was academically more successful at a private work college in the Midwest. The public school population tested within each variable averaged 1,104 students, which consisted of the largest group, while the homeschool population tested averaged 146 students. Private school was the smallest population tested in each variable averaging 102 students. The overall average number tested in each variable was 1,351 students.

Basic descriptive statistics, Levene's equality of variance, ANOVA, and a post-hoc test were applied to address the research questions. Of the 1,304 high school student GPAs tested, the homeschool students had a moderately higher high school cumulative GPA of 3.68 than those students who came from a public (3.52) or private (3.55) school

background, while the public and private school GPAs were not significantly different. The 1,322 high school student ACT composite scores tested showed those students who attended a homeschool had a slightly higher ACT composite score at 23 compared to the public school ACT mean of 22.15 and the private school ACT mean of 22.82. Homeschool students had a higher high school mean GPA and ACT composite score than those who attended public school, while also having a higher GPA than students who attended private schools.

A significant difference also existed between a student's educational background and the college cumulative GPA. Of the 1,381 college cumulative GPAs tested, homeschool students had a significantly higher college cumulative GPA of 3.22 compared to the college cumulative GPAs of the public school students at 2.83. There was no significant difference between the homeschool college cumulative GPAs at 3.22 and the private school students at 3.03 as verified by the post-hoc test. Due to the result of the post-hoc test, the data of the homeschool and private school college cumulative GPAs were pooled, and a *t*-test showed the public school mean college cumulative GPA was lower than that of the homeschool and private school college cumulative GPA.

The results of the tests performed on the data also determined a significant difference between a student's college cumulative WPA and educational background. Of the 1,367 college cumulative WPAs tested, homeschool students showed a significantly higher college cumulative WPA at 3.76 than that of the public school students at 3.62. There was no significant difference between the homeschool WPA of 3.76 and the private school WPA at 3.71 as verified by a T2 post-hoc test. Due to the result of the T2 test, the homeschool and private school college cumulative WPA data were pooled and a

*t*-test performed. The *t*-test showed the public school students' mean WPA was somewhat lower than those of the combined private and homeschool students with a mean difference of 0.118.

The results of the tests performed on the data did determine graduation from college was dependent on the educational background of students. Of the 1,381 students, the homeschool and private school students had a graduation rate of 76%, while the public school students only graduated at a mean rate of 62%. A contingency table was performed to show the frequency of the students who did or did not graduate. The results of the contingency table led to a chi-square test being completed to clarify the independence or dependence of the college graduation rate on the educational background. The college graduation rate was shown to be dependent with a *p* value of 0.000.

The overall statistics for the high school mean GPAs and ACT composite scores can be seen below in Figure 6. Notice both the homeschool and private school mean scores were higher than the public scores, with the homeschool scores being higher than both. Both of the public school mean scores were also lower than the overall mean for the differing educational backgrounds studied.

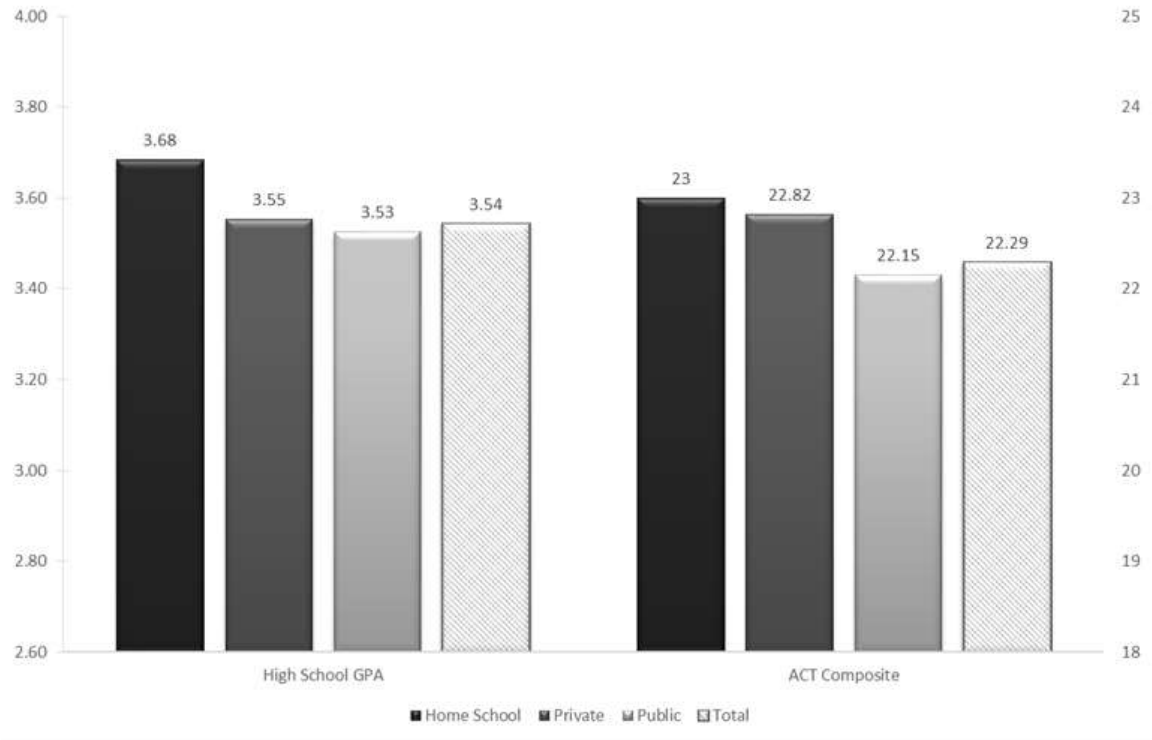



*Figure 6.* High school variables [GPA and ACT composite].

Figure 7 shows the overall statistics for the college mean GPA, WPA, and graduation rate. In the college mean scores, the homeschool and private school scores were higher than the public scores, with the homeschool scores being higher than both in the three areas analyzed. Both of the public school mean scores were again lower than the overall mean for the differing educational backgrounds studied.

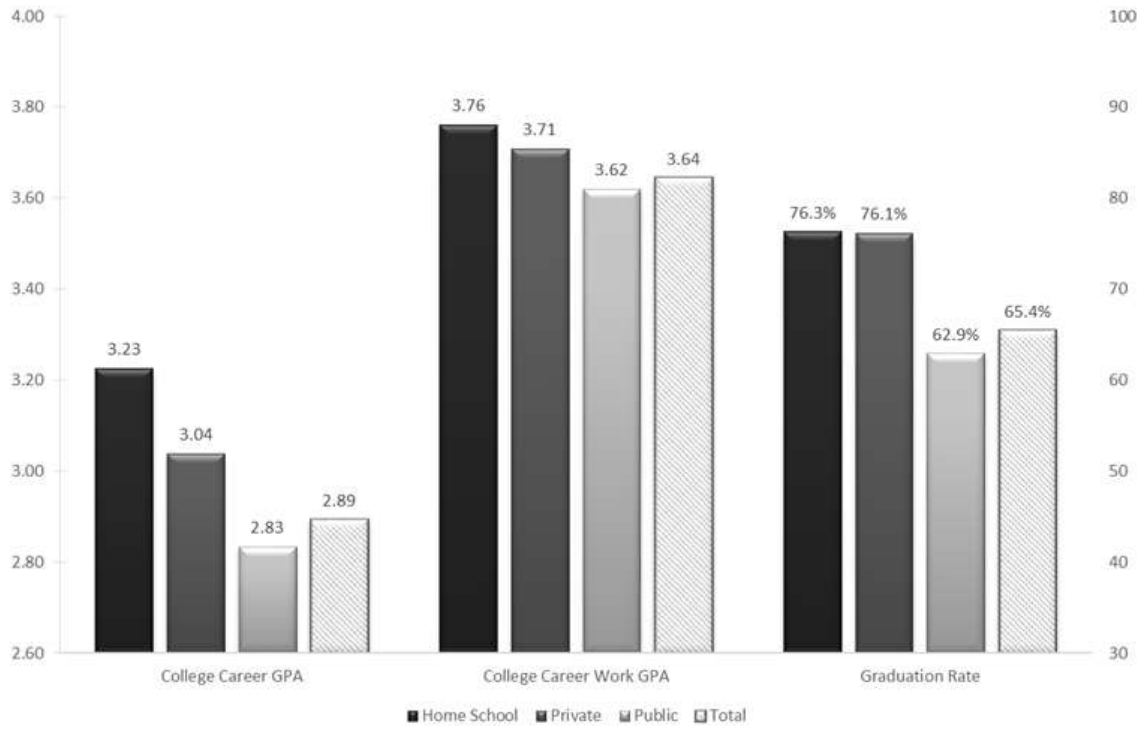



*Figure 7.* College variables [GPA, WPA, graduation rate].

In Chapter Five, a summary of findings and the conclusion of the case study are reviewed. In addition, implications and recommendations for further research in academic success of students with different educational backgrounds are examined. Finally, the summary of the study is presented.

## Chapter Five: Conclusions and Recommendations

The purpose of this study was to determine differences in multi-year college academic performance among public, private, and homeschool graduates who attended a private work college in the Midwest. The variables analyzed consisted of students' final high school GPAs and ACT test scores, college cumulative GPAs and work point average (WPA) scores, as well as college graduation rates of each group. This study was an attempt to find differences in students' academic success based on their educational backgrounds. The findings will help college administrators aid incoming freshmen from differing educational backgrounds to have more academic success and a higher rate of graduation.

The following research questions were used to guide this study:

1. What is the significant difference, if any, between and among students' educational backgrounds and high school cumulative Grade Point Averages and ACT scores?

2. What is the significant difference between students' educational backgrounds and college cumulative Grade Point Averages at a private work college?

3. What is the significant difference between students' educational backgrounds and college cumulative Work Point Averages at a private work college?

4. What is the difference between students' educational backgrounds and graduation rates at a private work college?

This chapter contains the summary of the findings, conclusion, implications, and suggestions for future research of the study. The summary of the findings of the study are presented based on the research questions. The implications of the study are addressed along with the recommendations for future research.

**Summary of Findings**

Research questions one through three were addressed using basic descriptive statistics, a Levene's equality of variance, ANOVA, post-hoc, and if necessary, a *d* analysis. There was no significant difference found between homeschool and private school students in two of the first three research questions. However, homeschool students were found to have a moderately higher high school mean GPA than both public and private school students. It was determined there was a significant difference between homeschool and public school students in the first three research questions analyzed. The public school students' mean scores in each variable tested were not only lower than the private and homeschool students' scores, but also lower than the overall mean in each variable tested.

Research question four was addressed using basic descriptive statistics, a contingency table, and a chi-square test of independence. There was a significant relationship found between the educational backgrounds of students and college graduation rates at a private work college in the Midwest. The graduation rates of students in the analysis of the chi-square test were found to be dependent upon the educational backgrounds.

Research question number one was posed to find the difference, if any, between and among students' educational backgrounds and high school cumulative GPAs and ACT scores. In analyzing the first variable of question one, the mean GPA of homeschool students was found to be moderately higher (3.68) than that of both public (3.52) and private (3.55) school students. There was no significant difference found between the public and private school mean GPAs analyzed. These findings supported previous studies (Bolle, Wessel, & Mulvihill, 2007; Snyder, 2013) that homeschooled

students' high school GPA scores are higher than those of public or private school students.

In assessing the second variable of question one, the mean ACT composite scores of homeschooled students was found to be 23.00, with private school students having a mean of 22.82 and public school students with a mean of 22.15. The ANOVA test conducted showed a significant difference in the mean ACT composite scores, and the post-hoc test conducted on the data showed students who attended a homeschool had a slightly higher ACT composite score than those students who attended a public school. There was no significant difference found between public and private school ACT composite scores. Studies by Bolle et al. (2007) and Snyder (2013) supported the findings of this study. The GPAs and ACT scores of students who attended a public school were not only found to be lower than those of students who attended a homeschool, but lower than the overall mean scores of the educational backgrounds studied.

The researcher found the results of the study indicated students who attended public school maintained lower overall high school GPAs and ACT scores than both private and homeschool students. The findings can be used to help college administrators of the private Midwestern work college understand public school students admitted may not begin college as strong academically as the private and homeschool students. However, the results are not so disheartening that the college administrators should implement an academic transition class for all public school students. The results will allow college administrators to have knowledge of the public school students, and therefore, be able to monitor grades and intervene if needed. The researcher also found

private and homeschool students who enter the work college have a greater chance at academic success due to the background in which they were educated.

Research question two was presented to find the difference between students' educational backgrounds and college cumulative GPAs at a private work college. The equality of variance test was 0.043 indicating a violation; therefore, an ANOVA and Brown-Forsythe test were performed and the *p* value was 0.000, which showed a significant difference in the college cumulative GPAs of students from differing educational backgrounds. The researcher noticed the post-hoc test results revealed private and homeschool students' college mean GPAs were not significantly different with a *p* value of 0.102, yet both were higher than the mean GPA of students who attended public school.

An independent *t*-test was then conducted with the private and homeschool data being pooled against the public school data. The results of the *t*-test showed significant differences between the public school and pooled private and homeschool college cumulative GPAs. The mean difference was 0.314, showing the public school college GPA was lower than that of the private and homeschooled students.

A study focused on homeschoolers' success in college yielded similar results. Cogan (2010) reported as homeschool students entered college they earned a higher fall semester college GPA, first-year college GPA, and fourth-year college GPA than students who attended public or private schools. Cogan's (2010) study was conducted at a college in the Midwest, and while this current study averaged 1,351 students over a four-year period, Cogan's (2010) study was much larger averaging 7,776 students over a five-year period.

Research question three was formed to determine if there was a difference between students' educational backgrounds and college cumulative Work Point Averages (WPAs) at a private work college. A private work college in the Midwest was studied, and the work component is mandatory for all students who attend. The results from this research question will allow for the college administrators at the private work college to determine if work habits differ among students of differing educational backgrounds.

The data results revealed the mean of public school WPAs at 3.62, with private and homeschool mean WPAs at 3.70 and 3.76, respectively. An ANOVA was performed and confirmed not all mean work GPAs were equal. The findings of the post-hoc test showed no significant differences among the WPAs of private and public or homeschool students; however, the public and homeschool WPAs were significantly different with the *p* value of 0.000.

The results of this study complement the results of numerous studies that have shown college students who work on campus maintain higher grades, a higher rate of graduation, and a higher rate of persistence than those who do not work on campus (Astin, 1993; Perna, 2010; Tuttle et al., 2005). With public school students' data revealing a significantly lower mean WPA than that of private and homeschool students, college administrators must begin to focus on assisting students coming from a public school background. With public school students scoring lower in college cumulative GPA paired with college cumulative WPA, the odds become greater the public school student may not be successful or graduate from college.

Research question four was proposed to determine the difference between students' educational backgrounds and graduation rates at a private work college. The

results indicated both homeschool (0.763) and private (0.761) school students had a comparable college completion rate; however, public school students had a lower graduation rate of 0.629. A chi-square test of independence was performed to determine if a student's educational background was dependent upon the graduation rate. With a *p* value of 0.000, the test showed there is a significant relationship between the college graduation rate and the educational background of the student.

A previous study by Jones and Gloeckner (2004) revealed retention in college was directly related to the ACT composite scores of students. With ACT composite scores and college graduation linked, college administrators at the private work college in the Midwest must be vigilant in efforts to help students from public schools be successful. Within the college variables of GPA, WPA, and graduation rate, public school students are shown to not only have the lowest mean scores, but also mean scores that are lower than the overall means for the differing educational backgrounds studied.

**Conclusion**

The results of this study indicate the impact differing educational backgrounds have on academic success at a private work college in the Midwest. The results of the homeschool and private school students were not significantly different for all variables tested. The homeschool students maintained a slightly higher average overall; however, both homeschool and private school students' scores were consistently higher than those of students who attended public schools.

The data results for public school students was alarming. Not only did public school students average the lowest percentage in all variables, but they were below the overall average of each variable tested. With college graduation rate determined to be

dependent upon educational background, both homeschool and private school students have a better opportunity to graduate with a college degree. However, public school students do not maintain an average graduation rate of 65%.

**Implications for Practice**

The results of this study have provided some answers to how the educational backgrounds of students can affect college academic success and graduation. Before implementing any academic or social program, the college administration might consider what can be done for all students. As shown in this study, there is room for greater academic success in each of the educational backgrounds studied; therefore, any new program should be used to encourage the academic success of all students. These results should help the trustees and administration at the private work college in the Midwest to understand students who enter from the public schools will need to be monitored more effectively, or at least have a better network at the college to allow them to be more successful.

Tinto (1993) affirmed these implications in discussing the transition and incorporation phase of his student departure theory. In order to help students become successful, the college must help them transition into and incorporate into college life, both academically and socially (Tinto, 1993). By monitoring and putting in place an academic network, college administrators will be able to begin the transition and incorporation phase and thus help students from all educational backgrounds, especially those from the public school system (Tinto, 1993).

**Recommendations for Future Research**

The outcome of this case study focused on a small private work college in the Midwest. Expanding the sample size to include all work colleges, all private colleges, or all public colleges and universities may provide insight for a more complete study. Examining how students from differing educational backgrounds are more academically successful geographically, by size of the institution, or through programs available at each institution would allow for a much larger sample size and more generalizable results.

The case study results yielded information that students from public schools were not as academically successful as students who had attended a homeschool or private school. The researcher analyzed the high school variables of GPA and ACT score; therefore, an analysis of the curriculum used in each educational background would be able to yield further results on the academic success of students. Expanding the analysis to include the race, economic, and social backgrounds of the students from differing educational backgrounds would allow for additional data to be obtained.

The researcher examined the college variables of GPA, WPA, and graduation rate. In order to have a more accurate picture of the overall success of students, analyzing the social track of Tinto's (1993) student departure theory would add value to this study. Assessing the students' individual and family attributes, institutional commitment, peer group, and faculty interactions (Tinto, 1993) would allow for a more thorough examination of the possibility of success in both the academic and social track.

A study in which students from each educational background are interviewed would produce qualitative data. Interviewing students in order to identify the reasons which influence academic success, or the lack thereof, along with how the work program

affects academic success and reasons students graduate or do not graduate, should be considered. These recommendations allow for a deeper analysis of academic success at a private work college in the Midwest and the nation.

**Summary**

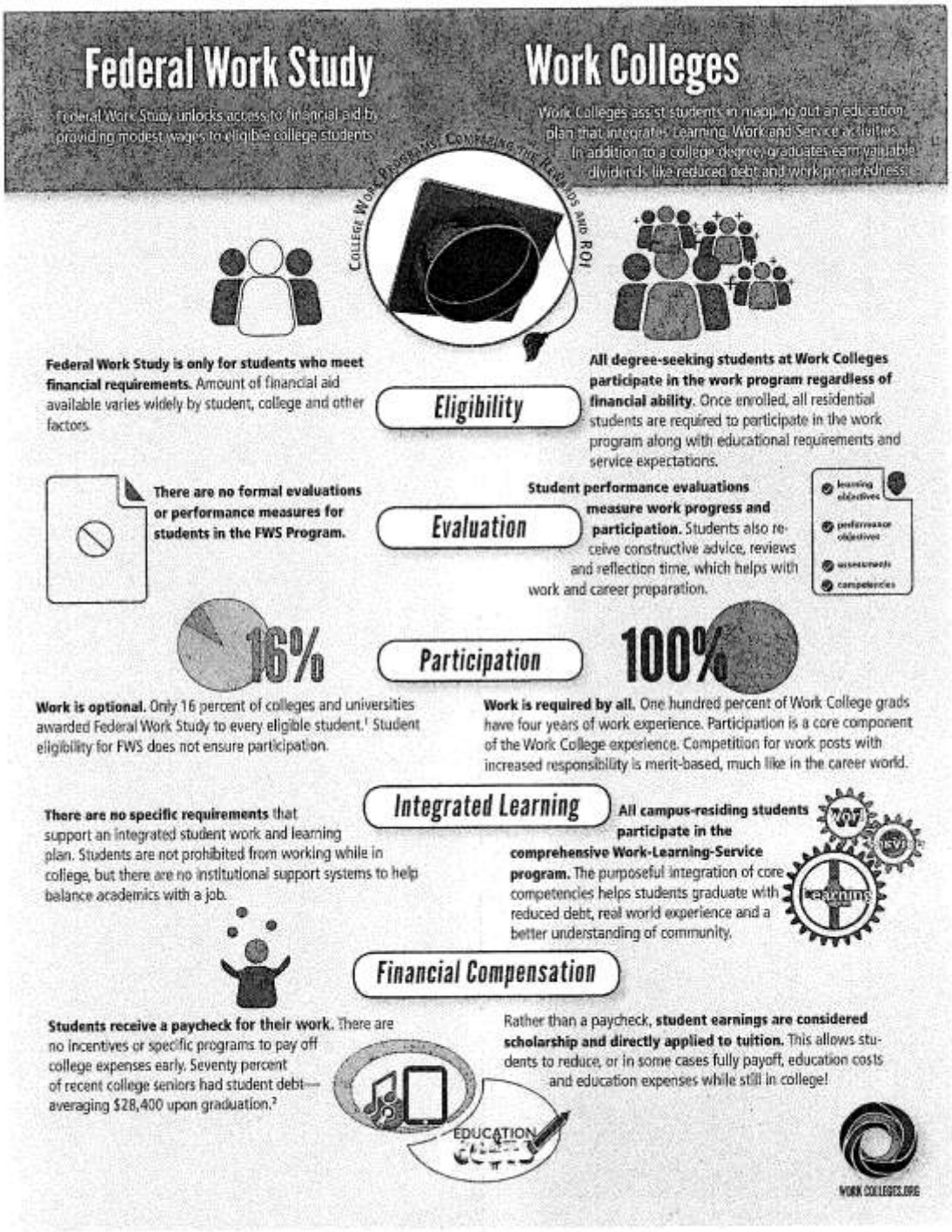
This case study was conducted in an effort to help determine differences in multi-year college academic performance among public, private, and homeschool graduates who attended a private work college in the Midwest. No significant difference was found between private and homeschool students in all variables tested using an equality of variance, ANOVA, and post-hoc analysis for high school cumulative GPA, ACT composite score, college cumulative GPA, and WPA variables. However, there was a significant difference found between students who attended public school and the homeschool and private school students using an equality of variance, ANOVA, and post-hoc analysis. Both homeschool and private school students had a comparable college completion rate; however, public school students had a lower graduation rate. A chi square test of independence was used to determine a significant relationship existed between the educational background of students and college graduation. The analyses showed the graduation rate was dependent upon the educational background.

Several recommendations were suggested based on the findings of this case study. The outcome of this case study has provided significant results for students who attend a public school and enter into the private work college in the Midwest. The results of this case study indicate the educational backgrounds of students entering the private work college in the Midwest do impact the students' academic success. Therefore, in creating

programs to help ensure success, college administrators must take these results into account.

Academic success and graduation rates remain a challenge in colleges and universities throughout the United States. Through additional studies of multi-year college academic performance among public, private, and homeschool graduates, more programs can be implemented to encourage students to succeed academically. For students to be successful, it is essential for college administrators to focus resources on addressing the issue of academic success in college.

# Appendix A


Federal Work Study
Federal Work Study unlocks access to financial aid by providing modest wages to eligible college students.
Work Colleges
Work Colleges assist students in mapping out an education plan that integrates Learning, Work and Service activities. In addition to a college degree, graduates earn valuable dividends, like reduced debt and work preparedness.
College Work Programs: Comparing the Rewards and ROI
Federal Work Study is only for students who meet financial requirements. Amount of financial aid available varies widely by student, college and other factors.
Eligibility
All degree-seeking students at Work Colleges participate in the work program regardless of financial ability. Once enrolled, all residential students are required to participate in the work program along with educational requirements and service expectations.
There are no formal evaluations or performance measures for students in the FWS Program.
Evaluation
Student performance evaluations measure work progress and participation. Students also receive constructive advice, reviews and reflection time, which helps with work and career preparation.
learning objectives
performance objectives
assessments
competencies
16%
Participation
100%
Work is optional. Only 16 percent of colleges and universities awarded Federal Work Study to every eligible student.[1] Student eligibility for FWS does not ensure participation.
Work is required by all. One hundred percent of Work College grads have four years of work experience. Participation is a core component of the Work College experience. Competition for work posts with increased responsibility is merit-based, much like in the career world.
There are no specific requirements that support an integrated student work and learning plan. Students are not prohibited from working while in college, but there are no institutional support systems to help balance academics with a job.
Integrated Learning
All campus-residing students participate in the comprehensive Work-Learning-Service program. The purposeful integration of core competencies helps students graduate with reduced debt, real world experience and a better understanding of community.
Learning
Financial Compensation
Students receive a paycheck for their work. There are no incentives or specific programs to pay off college expenses early. Seventy percent of recent college seniors had student debt—averaging $28,400 upon graduation.[2]
Rather than a paycheck, student earnings are considered scholarship and directly applied to tuition. This allows students to reduce, or in some cases fully payoff, education costs and education expenses while still in college!
EDUCATION
WORK COLLEGES.ORG

# Appendix B

LINDENWOOD

LINDENWOOD UNIVERSITY ST. CHARLES, MISSOURI

| | |
|---|---|
| DATE: | January 6, 2016 |
| TO: | Abbey Vogt |
| FROM: | Lindenwood University Institutional Review Board |
| STUDY TITLE: | [841091-1] The Impact of Educational Backgrounds on Academic Success at a Private Work College in the Midwest |
| IRB REFERENCE #: | |
| SUBMISSION TYPE: | New Project |
| ACTION: | Approved |
| DECISION DATE: | January 6, 2016 |
| REVIEW CATEGORY: | Exemption category |

Thank you for your submission of New Project materials for this research study. Lindenwood University Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office.

If you have any questions, please send them to swisdom@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

# Appendix C

**Lindenwood University**
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

**Permission Letter from Institution**

Date: 12/2/15

Dear Dean Bolger,

I am conducting a research study titled, *The impact of differing educational backgrounds on academic success at a private work college in the Midwest*, in partial fulfillment of the requirement for a doctoral degree at Lindenwood University.

The purpose of this quantitative study is to determine differences in college performance among public, private, and homeschool graduates at [redacted] through evaluating high school cumulative Grade point averages and ACT scores, college cumulative GPA's and WPA's, as well as graduation rates.

It is hopeful this study's findings will assist the college administrators at [redacted] a greater opportunity to help students from different educational backgrounds to succeed academically, while attending [redacted]

I am seeking your permission to gather secondary data from the Jenzabar database via [redacted] and [redacted]

Participation in the study is completely voluntary. You may withdraw from the study at any time without penalty. The institution's name will remain anonymous in the dissertation or future publications of this study. Any identifying information acquired for the study will be maintained in a secured, locked cabinet and/or password protected to assure confidentiality.

Please do not hesitate to contact me with any questions or concerns about participation in the study. A copy of this letter and your written consent should be retained by you for future reference.

Yours truly,

A. Vogt

Primary Researcher
Doctoral Candidate
Lindenwood University

# Appendix D

**Permission Form**

I, Eric W. Bolger, grant permission to Abbey Vogt, the primary researcher, to Lindenwood University in partial fulfillment of the requirement for a doctoral degree.

By signing this permission form, I understand that the following safeguards are in place:

1. I may withdraw from the study at any time without penalty.
2. The identity of the institution will remain anonymous in the dissertation or any future publications of the study.

I have read the information above, and any questions that I have posed have been answered to my satisfaction.

Eric W. Bolger

Signature

12.2.15

Date

# Appendix E

**Lindenwood University**
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

**Permission Letter from Institution**

Date: 12/1/15

Dear President [redacted]

I am conducting a research study titled, *The impact of differing educational backgrounds on academic success at a private work college in the Midwest*, in partial fulfillment of the requirement for a doctoral degree at Lindenwood University.

The purpose of this quantitative study is to determine differences in college performance among public, private, and homeschool graduates at [redacted] through evaluating high school cumulative Grade point averages and ACT scores, college cumulative GPA's and WPA's, as well as graduation rates.

It is hopeful this study's findings will assist the college administrators at [redacted] a greater opportunity to help students from different educational backgrounds to succeed academically, while attending [redacted]

I am seeking your permission to gather secondary data from the Jenzabar database via [redacted]

Participation in the study is completely voluntary. You may withdraw from the study at any time without penalty. The institution's name will remain anonymous in the dissertation or future publications of this study. Any identifying information acquired for the study will be maintained in a secured, locked cabinet and/or password protected to assure confidentiality.

Please do not hesitate to contact me with any questions or concerns about participation in the study. A copy of this letter and your written consent should be retained by you for future reference.

Yours truly,

A. Vogt

Primary Researcher
Doctoral Candidate
Lindenwood University

# Appendix F

**Permission Form**

I, Jerry C. Davis, grant permission to Abbey Vogt, the primary researcher, to Lindenwood University in partial fulfillment of the requirement for a doctoral degree.

By signing this permission form, I understand that the following safeguards are in place:

1. I may withdraw from the study at any time without penalty.
2. The identity of the institution will remain anonymous in the dissertation or any future publications of the study.

I have read the information above, and any questions that I have posed have been answered to my satisfaction.

Signature

12/4/15
Date

## References

Aasen, S. H. (2010). New followers of an old path—homeschoolers. *The Journal for Quality & Participation, 32*(4), 12-14.

ACT, Inc. (2015). American college testing program. Retrieved from http://www.act.org

Adams, F. C., & Stephens, C. W. (1970). *College and university student work programs: Implications and implementations*. Carbondale, IL: Southern Illinois University.

Addis, C. (2003). *Jefferson's vision for education, 1760-1845*. New York, NY: Peter Lang International.

Adelman, C. (1999). *Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment*. Jessup, MD: Education Publications Center.

Advisory Committee on Student Financial Assistance. (2012). *Pathways to success: Integrating learning with life and work to increase national college completion*. Retrieved from Advisory Committee on Student Financial Assistance website: http://www2.ed.gov/about/bdscomm/list/acsfa/ptsreport2.pdf

Alice Lloyd College. (2012). http://www.alc.edu/

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.). Lancaster, PA: Author.

Astin, A. W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass.

Avery, C., & Turner, S. (2012). Student loans: Do college students borrow too much—Or not enough? *The Journal of Economic Perspectives, 26*(1), 165-192. Retrieved from http://www.jstor.org/stable/41348811

Bailey, T., & Xu, D. (2012). Input-adjusted graduation rates and college accountability: What is known from twenty years of research. *Context for Success.* Retrieved from http://www.hcmstrategists.com/contextforsuccess/papers/LIT_REVIEW.pdf

Bean, J. P. (1982). Student attrition, intentions and confidence: Interaction effects in a path model [Entire issue]. *Research in Higher Education, 17*(4). Retrieved from http://www.aabri.com/rhej.html

Berea College. (2015). https://www.berea.edu/

Berger, E. H. (1997). Working with families: Home schooling. *Early Childhood Education Journal, 24*(3), 205-208.

Blackburn College. (2016). https://blackburn.edu/

Bluman, A. G. (2013). *Elementary statistics: A step by step approach* (9th ed.). New York, NY: McGraw-Hill.

Bolle, M. B., Wessel, R. D., & Mulvihill, T. M. (2007). Transitional experiences of first-year college students who were homeschooled. *Journal of College Student Development, 48*, 637-654.

Bolle-Brummond, M. B., & Wessel, R. D. (2012). Homeschooled students in college: Background influences, college integration, and environment pull factors [Entire issue]. *Journal of Researching Education, 22*(1). Retrieved from eeraonline.org/journal/files/v22/JRE_v22n1_Article_10_Wessel.pdf

Brock, T. (2010). Young adults and higher education: Barriers and breakthroughs to success. *Future of Children, 20*(1), 109-132. Retrieved from http://eric.ed.gov/?id=EJ883081

Brown, H. S., & Mayhew, L. B. (1965). *American higher education*. New York, NY: The Center for Applied Research in Education.

Brubacher, J. S., & Rudy, W. (1958). *Higher education in transition: An American history: 1636-1956*. New York, NY: Harper and Brothers.

Burrus, J., Elliott, D., Brenneman, M., Markle, R., Moore, G., Betancourt, A., … Roberts, R. (2013). *Putting and keeping students on track: Toward a comprehensive model of college persistence and goal attainment*. Retrieved from Educational Testing Service website: https://www.ets.org/Media/Research/pdf/RR-13-14.pdf

Cai, Y., Reeve, J., & Robinson, D. T. (2002). Home schooling and teaching style: Comparing the motivating styles of home school and public school teachers. *Journal of Educational Psychology, 94*, 372-380. Retrieved from http://dx.doi.org/10:1037//0022-0663.94.2.372

Cheng, D. X., & Alcantara, L. (2004, May-June). *To work or not to work: The impact of work on students' college experience.* Paper presented at the Annual Forum of the Association for Institutional Research, Boston, MA. Retrieved from Institute of Education Sciences website: http://eric.ed.gov/?id=ED490999

Choy, S. P. (2001). Students whose parents did not go to college: Postsecondary access, persistence, and attainment. *The Condition of Education 2001*. Retrieved from National Center for Educational Statistics website: http://nces.ed.gov/pubs2001/2001072_Essay.pdf

Cleary, M., Walter, G., & Jackson, D. (2011). Not always smooth sailing: Mental health issues associated with the transition from high school to college. *Issues in Mental*

*Health Nursing*, *32*(4), 250-254. Retrieved from http://dx.doi.org/10.3109/01612840.2010.548906

Cogan, M. F. (2010). Exploring academic outcomes of homeschooled students. *Journal of College Admission*, (208), 18-25. Retrieved from http://eric.ed.gov/?id=EJ893891

College of the Ozarks. (2015). Requirements and policies. Retrieved from http://www.cofo.edu/Page/Work-Education/Requirements-and-Policies.116.html

College of the Ozarks. (2016). http://www.cofo.edu/

Conger, D. (2015). High school grades, admissions policies, and the gender gap in college enrollment. *Economics of Education Review*, *46*, 144-147.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE.

Cruz, J. L., & Haycock, K. (2012). Occupy higher education: Why colleges should own the effort to improve student success. *Change: The Magazine of Higher Learning*, *44*(5), 49-52. Retrieved from http://dx.doi.org/10.1080/00091383.2012.706514

Davidson, J. (2013). Non-probability (non-random) sampling. In *The SAGE dictionary of social research methods*. Retrieved from http://dx.doi.org/http://dx.doi.org/10.4135/9780857020116

Denzin, N. K. (2012, February 23). Triangulation 2.0. *Journal of Mixed Methods Research*, *6*(2), 80-88. http://dx.doi.org/10.1177/1558689812437186

Denzin, N. K., & Lincoln, Y. S. (2011). *Handbook of qualitative research* (4th ed.). Thousand Oaks, CA: SAGE.

DeVane, W. C. (1965). *Higher education in twentieth-century America*. Cambridge, MA: Harvard University Press.

Drenovsky, C. K., & Cohen, I. (2012). The impact of homeschooling on the adjustment of college students. *International Social Science Review, 87*(1-2), 19-34. Retrieved from http://web.b.ebscohost.com/ehost/detail/detail?sid=4ad5affd-d200-4616-8929-7f0ea79c9377%40sessionmgr110&vid=27&hid=125&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=a9h&AN=77242933

Dwyer, R. E., Hodson, R., & McCloud, L. (2013). Gender, debt, and dropping out of college. *Gender & Society, 27*(1), 30-55.

Ecclesia College. (2016). http://ecollege.edu/

Electronic Code of Federal Regulations: Work Colleges Program, 34: Education C.F.R. § 675.41 (2016).

Fay, M. P., Barnett, E. A., Trimble, M. J., & Pheatt, L. E. (2014). *Early assessments and transition curricula: What states can do* [Issue brief]. Retrieved from Columbia University website: http://academiccommons.columbia.edu/catalog/ac:170480

Feagin, J., Orum, A. M., & Sjoberg, G. (1991). *A case for the case study*. Chapel Hill, NC: The University of North Carolina Press.

Fishman, R. (2014). The diploma deficit: The problem is not college debt, it's low graduation rates. Fix that, and you fix the economy. *Washington Monthly, 46*(11-12), 23-27.

Forsman, J., Linder, C., Moll, R., Fraser, D., & Andersson, S. (2012). A new approach to modelling student retention through an application of complexity thinking [Entire

issue]. *Studies in Higher Education*, *39*(1). Retrieved from http://dx.doi.org/10.1080/03075079.2011.643298

Future of Privacy Forum. (2014). De-identification: A critical debate. Retrieved from http://www.futureofprivacy.org/de-identification/

Good, H. G. (1960). *A history of American education*. New York, NY: The Macmillan Company.

Grade point average. (2011). In *American heritage dictionary of the English language* (5th ed.). Retrieved from http://www.thefreedictionary.com/grade+point+average

Grantmakers for Education. (2012). From access to success: A funder's guide to ensuring more Americans earn postsecondary degrees. Retrieved from http://www.edfunders.org/sites/default/files/funders_guide_postsecondary_success_2010.pdf

Gutek, G. L. (1986). *Education in the United States: An historical perspective*. Englewood Cliffs, NJ: Prentice-Hall.

Hanna, L. G. (2011). Homeschooling education: Longitudinal study of methods, materials, and curricula. *Education and Urban Society, 44*(5), 609-631. Retrieved from http://dx.doi.org/10.1177/0013124511404886

Harden, N. (2013, June). Peter Pan goes to college [Article]. *Symposium: Higher Education and the Challenges of Reform, 50*(3), 257-260.

Hartford, E. F. (1964). *Education in these United States*. New York, NY: The Macmillan Company.

Harvey-Smith, A. B. (2002). An examination of the retention literature and application in student success. Retrieved from

https://www.google.com/?gws_rd=ssl#q=an+examination+of+the+retention+literature+and+application+in+student+success

Hu, S. (2010). Reconsidering the relationship between student engagement and persistence in college. Retrieved from Innovative Higher Education website: http://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=fad1c38e-a72a-4b5f-904f-bca208f760bb%40sessionmgr4001&vid=0&hid=4209&preview=false

Ice, C. L., & Hoover-Dempsey, K. V. (2011). Linking parental motivations for involvement and students proximal achievement outcomes in homeschooling and public schooling settings. *Education and Urban Society, 43*(3), 339-369. Abstract retrieved from http://eus.sagepub.com/content/43/3/339.short

Jones, P., & Gloeckner, G. (2004). First-year college performance: A study of home school graduates and traditional school graduates. *The Journal of College Admission*, (183), 17-20.

Karier, C. J. (1991). *The individual, society, and education: A history of American educational ideas* (2nd ed.). Chicago, IL: University of Illinois Press.

King, J. E. (2015). *Crucial choices: How students' financial decisions affect their academic success*. Washington, DC: American Council on Education Center for Policy Analysis.

Kuh, G. (2003). What we're learning about student engagement from NSSE. *Change, 35*(2), 24-32.

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006, July). *What matters to student success: A review of the literature*. Commissioned report for the National Symposium on Postsecondary Student Success, Washington, DC.

Retrieved from National Center for Education Statistics website: http://nces.ed.gov/npec/pdf/kuh_team_report.pdf

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2011). Piecing together the student success puzzle: Research, propositions, and recommendations. *ASHE Higher Education Report*. Hoboken, NJ: John Wiley & Sons.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2010). *Student success in college: Creating conditions that matter* (Rev. ed.). San Francisco, CA: Jossey-Bass.

Kunzman, R. (2012). Education, schooling, and children's rights: The complexity of homeschooling. *Educational Theory, 62*(1), 75-89.

Kunzman, R., & Gaither, M. (2013). Homeschooling: A comprehensive survey of the research. *Other Education: The Journal of Educational Alternatives, 2*(1), 4-59.

Lang, B. K. (2012). The similarities and differences between working and non-working students at a mid-sized American public university. *College Student Journal, 46*(2), 243-255.

Lara, B., Mizala, A., & Repetto, A. (2011). The effectiveness of private voucher education: Evidence from structural school switches. *Educational Evaluation and Policy Analysis, 33*(2), 119-137.

Lovett, M. B. (2014). *The reasoning behind non-public school choices: Using a decision-making model to better understand the process and influence of private school and homeschool parents in northeast Louisiana.* Retrieved from http://search.proquest.com/docview/1662483922?accountid=130237

Major theoretical perspectives on student success in college. (2007). *Association for the Study of Higher Education Report, 32*(5), 13-20.

Mangan, K. (2013). Despite push for college completion, graduation rates haven't budged. *Chronicle of Higher Education*, *60*(13), A3-A4.

Martin-Chang, S., Gould, O. N., & Meuse, R. E. (2011). The impact of schooling on academic achievement: Evidence from homeschooled and traditionally schooled students. *Canadian Journal of Behavioural Science*, *43*(3), 195-202. Retrieved from http://dx.doi.org/10.1037/a0022697

McConaghy, M. D., Silberman, M., & Kalashnikova, I. (2004). Penn in the 18th century. Retrieved from http://www.archives.upenn.edu/histy/features/1700s/penn1700s.html

Milem, J. F., & Berger, J. B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development*, *38*(4), 387-400. Retrieved from http://scholarworks.umass.edu/cie_faculty_pubs/11/?utm_source=scholarworks.umass.edu%2Fcie_faculty_pubs%2F11&utm_medium=PDF&utm_campaign=PDFCoverPages

Mounsey, R., Vandehey, M., & Diekhoff, G. (2013). Working and non-working university students: Anxiety, depression, and grade point average [Entire issue]. *College Student Journal*, *47*(2).

Net Industries. (2016). Private schooling—What is a private school? History of private schools in the United States. Retrieved from http://education.stateuniversity.com/pages/2334/Private-Schooling.html

Nunez, A., & Cuccaro-Alamin, S. (1998). *First-generation students: Undergraduates whose parents never enrolled in postsecondary education* [NCES 98-082]. Retrieved from National Center for Education Statistics website: http://nces.ed.gov/pubs98/98082.pdf

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research*. San Francisco, CA: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.

Perna, L. W. (2010). Understanding the working college student [Entire issue]. *Acadame*. Retrieved from http://www.aaup.org/article/understanding-working-college-student#.VuCI3md0xdg

Private school. (2015). In *Merriam-Webster's online dictionary*. Retrieved from http://www.merriam-webster.com/dictionary/private%20school

Quaye, S. J., & Harper, S. R. (2015). *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* (2nd ed.). New York, NY: Routledge.

Ray, B. D. (2010). Academic achievement and demographic traits of homeschool students: A nationwide study [Entire issue]. *Academic Leadership*, *8*(1). Retrieved from

http://www.nheri.org/AcademicAchievementAndDemographicTraitsOfHomeschoolStudentsRay2010.pdf

Ray, B. D. (2015). Research facts on homeschooling. Retrieved from http://www.nheri.org/research/research-facts-on-homeschooling.html

Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology, 104*(3), 700-712.

Sander, L. (2014). In quest for success, colleges ask: What's working? *Chronicle of Higher Education, 61*(3), B4-B6.

Snyder, M. (2013). An evaluative study of the academic achievement of homeschooled students versus traditionally schooled students attending a Catholic university. *Catholic Education: A Journal of Inquiry and Practice, 16*(2), 288-308. Retrieved from http://files.eric.ed.gov/fulltext/EJ1005657.pdf

Soria, K. M., Fransen, J., & Nackerud, S. (2013). Library use and undergraduate student outcomes: New evidence for students' retention and academic success. *Portal: Libraries and the Academy, 13*(2), 147-164. Retrieved from http://muse.jhu.edu

Spady, W. G. (1971). *The influence of major ambition resources on college aspirations and attainments: Toward a comprehensive model* [ED 049 695]. Retrieved from American Educational Research Association website: http://files.eric.ed.gov/fulltext/ED049695.pdf

Sparkman, L. A., Maulding, W. S., & Roberts, J. G. (2012). Non-cognitive predictors of student success in college. *College Student Journal, 46*(3), 642-652.

Sterling College. (2016). http://www.sterlingcollege.edu/

Sternberg, R. J. (2013, February 7). Research to improve retention. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/views/2013/02/07/essay-use-research-improve-student-retention

Strayhorn, T. L. (2011). Bridging the pipeline: Increasing underrepresented students' preparation for college through a summer bridge program. *American Behavioral Scientist*, *55*(2), 142-159.

Sun, L., Gorry, D., & Israelsen, D. (2015). Factors Affecting College Students' Academic Success.

Svanum, S., & Bigatti, S. M. (2009). Academic course engagement during one semester forecasts college success: Engaged students are more likely to earn a degree, do it faster, and do it better. *Journal of College Student Development*, *50*(1), 120-132.

Taylor, T. B. (2013). *Differences in student engagement of entering Texas community college students* (Doctoral dissertation, DALLAS BAPTIST UNIVERSITY).

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago, IL: University of Chicago Press.

Tinto, V. (2010). From theory to action: Exploring the institutional conditions for student retention. In *Higher education: Handbook of theory and research* (pp. 51-89). New York, NY: Springer. Retrieved from http://dx.doi.org/10.1007/978-90-481-8598-6_2

Tinto, V. (2012). *Completing college: Rethinking institutional action*. Chicago, IL: University of Chicago Press.

Trow, M. (1988). American higher education: Past, present, and future [Entire issue]. *Educational Researcher, 17*(3). Retrieved from http://www.jstor.org/stable/1174829?seq=1#page_scan_tab_contents

Tuttle, T., McKinney, J., & Rago, M. (2005). *A review of research literature on college students and work*. Retrieved from http://indiana.edu/~ipas1/workingstudentbrief.pdf

United States Census Bureau. (2010). State and county quick facts [Fact sheet]. Retrieved from http://quickfacts.census.gov/qfd/states/29/29213.html?cssp=SERP

U.S. Department of Education. (n.d.). From there to here: The road to reform of American high schools. Retrieved from United States Department of Education website: https://www2.ed.gov/about/offices/list/ovae/pi/hsinit/papers/history.pdf

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2015a). Parent and family involvement in education survey of the national household education surveys program. Retrieved from https://nces.ed.gov/programs/digest/d13/tables/dt13_206.10.asp?current=yes

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2015b). Public high school graduation rates. Retrieved from https://nces.ed.gov/programs/coe/indicator_coi.asp

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2016). College navigator [Educational statistics]. Retrieved from http://nces.ed.gov/collegenavigator/?q=College+of+the+Ozarks&s=all&id=178697

Venezia, A., & Jaeger, L. (2013). Transitions from high school to college. *Future of Children, 23*(1), 117-136. Retrieved from http://www.futureofchildren.org/futureofchildren/publications/docs/23_01_06.pdf

Voigt, L., & Hundrieser, J. (2008). Student success, retention, and graduation: Definitions, theories, practices, patterns, and trends. Retrieved from http://www.stetson.edu/law/conferences/highered/archive/media/Student%20Success,%20Retention,%20and%20Graduation-%20Definitions,%20Theories,%20Practices,%20Patterns,%20and%20Trends.pdf

Vuong, M., Brown-Welty, S., & Tracz, S. (2010). The effects of self-efficacy on academic success of first-generation college sophomore students. *Journal of College Student Development, 51*(1), 50-64.

Wagner, D. M. (2014). Homeschooling as a Constitutional Right: A Close Look at Meyer and Pierce and the Lochner-Based Assumptions They Made About State Regulatory Power. *Oklahoma City University Law Review, 39*(385).

Walker, C. (2010). *Educational backgrounds and their effects on students' transition to college* (Master's thesis, Liberty University). Retrieved from http://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1130&context=honors

Wang, Y., Cullen, K. L., Yao, X., & Li, Y. (2013). Personality, freshmen proactive social behavior, and college transition: Predictors beyond academic strategies. *Learning and Individual Differences, 23* http://dx.doi.org/doi:10.1016/j.lindif.2012.09.010

Webb, L. D. (2006). *The history of American education: A great American experiment*. Columbus, OH: Pearson.

Wolniak, G. C., Neishi, K. M., Rude, J. D., & Gebhardt, Z. (2012, August). *The state of our nation's youth: 2012-2013*. Alexandria, VA: Retrieved from Horatio Alger Association of Distinguished Americans, Inc. website: http://www.norc.org/PDFs/SONY/2012_SONY.pdf

Work Colleges Consortium. (2011a). About work colleges. Retrieved from http://workcolleges.org/about-work-colleges

Work Colleges Consortium. (2011b). Becoming a work college. Retrieved from http://workcolleges.org/professionals/becoming-work-college

Work Colleges Consortium. (2014). Home page. Retrieved from http://www.workcolleges.org/

Wyatt, G. (2014). Home Is Where the School Is: The Logic of Homeschooling and the Emotional Labor of Mothering. New York: New York University Press

York, T. T., Gibson, C., & Rankin, S. (2015). Defining and measuring academic success. *Practical Assessment, Research & Evaluation*, *20*(5), 1-20.

## Vita

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