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## An Exploration of High School Engagement Factors and their Relationship to College Completion Rates

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AN EXPLORATION OF HIGH SCHOOL ENGAGEMENT FACTORS AND  
THEIR RELATIONSHIP TO COLLEGE COMPLETION RATES

By

Tamela J. Wegener

A DISSERTATION

Presented to the Faculty of

The Graduate College of the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Education

Major: Educational Administration and Supervision

Under the Supervision of Dr. Peter J. Smith

Omaha, Nebraska

December, 2014

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## **Abstract**

### **AN EXPLORATION OF HIGH SCHOOL ENGAGEMENT FACTORS AND THEIR RELATIONSHIP TO COLLEGE COMPLETION RATES**

Tamela J. Wegener, Ed.D.

University of Nebraska, 2015

Advisor: Dr. Peter J. Smith

Today our global economy is demanding a work force that is highly educated and skilled; yet many of our students entering college are not college ready despite all the assessments, increased requirements and state standards work this country has undertaken. The bridge between high school and post-secondary education needs to be built in order for this nation to move forward. This research investigates the predictors of college success. The findings indicate five critical components: (1) academic preparation; (2) demographic characteristics; (3) local and total scholarship amounts; (4) parent engagement; and (5) student engagement as measured by high school participation in (a) sports, (b) band or/and vocal music, (c) clubs, and (d) competitive activities. Overall findings indicate that students who took advantage of the college going culture provided by this high school and completed a higher number of dual credit courses, performed higher academically, and were actively engaged in high school along with having engaged parents were more apt to complete more years of college.

## Acknowledgements

I am forever grateful for all of the individuals that I have met while undertaking this journey. I have been fortunate enough to be in the presence of great people, all I had to do was pay attention.

First and foremost, I had the blessing of having amazing grandparents. They taught me early on that education was a privilege and not a right. My grandparents lived during a difficult time and received a limited education. Their wisdom instilled in me the value of education, which has led me down this path and nurtured a dream that I never knew existed. I deeply miss their encouragement, enthusiasm, faith, and unconditional love.

Thanks to my husband, Kevin, for 30 years of patience, encouragement and support. This journey has taken me much longer than both of us would have ever imagined. You gave me peace of mind and insights that helped me to do my best work. No achievements are accomplished without sacrifices made by loved ones. I am looking forward to the next chapter in our life together.

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and Dr. Jeanne Surface shared their wisdom and expertise. Mrs. Barb Mraz had remarkable patience, and her knowledge helped me navigate the steps necessary to complete this degree. Together, they were a dynamic dream team. Their passion towards education and students fueled mine; I will never forget this experience.

I also have been fortunate to be a member of a school district and community that actively fosters a positive culture and encourages individuals to pursue their passion. My school district is passionate about continually challenging and meeting the needs of their students. I am inspired every day, by my colleagues and community members.

Ultimately, this work is dedicated to my sons and students. I thank you for energizing me to pursue the hard questions and for igniting my passion to search for the answers. Life is a gift and education is a big part of discovering the potential that lies within you. I encourage you to dedicate your life to pursue your passion. Learning may be the most meaningful factor in accomplishing extraordinary triumphs and becoming more than you think you can be.

I am grateful that God gave me the courage and perseverance to complete this journey. Hopefully I am wise enough to understand which door he wants me to enter, so I may use my educational experiences to serve Him and others.

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## CHAPTER ONE

### Introduction

Most Americans would be surprised that only a couple of decades ago our education system was built with a distinct break between high school and college (Conley, 2005). In the late 1800's, this disconnect occurred earlier in the educational process. In the one-room school house students were educated to the 8<sup>th</sup> grade. Upon completion of the 8<sup>th</sup> grade, the students had to make a concerted effort to travel a distance to high school. Back in those days, many students did not have the privilege of attending high school because their families needed them to work in the fields or find work in town.

As this nation grew and prospered more students were able to graduate from high school; but the distinct break between high school and college still existed. The breadwinner of this time period could easily support the family without a post-secondary education. However, today's American society has changed drastically. The high school diploma is no longer the ticket to economic success (Conley, 2005). Today's global economy requires an educated and skilled workforce (Pham & Keenan, 2011).

President Obama has set a national goal to have the highest percentage of college-educated adults in the world by 2020 (Sparks, 2010). A lot of work must be done to attain Obama's goal, because the gap between high school and college is still in existence. One third of our first year college students drop out before their sophomore year. This problem needs to be addressed (Hoffman, 2003). Despite our best efforts to create state standards, increase our high school requirements for

graduation, and increase high school assessments, our college completion rates still remain low (Conley, 2007). Only 30% of the United States population has a bachelor's degree (Gillis, 2007).

Since only 30% of this nation's population has completed a bachelor's degree according to the research in 2007, (Gillis, 2007) vast majorities of American's are experiencing the distinct disconnect to educational opportunity that this country set up decades ago. How do we successfully create a bridge for students to both access college and succeed at college? Maybe part of the solution is to look at our "Forgotten Middle" (Delisio, 2009; Swanson, 2005; Lenonard, 2013 p. 186), which includes many first generation students. First generation students, in this research, refer to students whose parents did not complete an associate or bachelor's degree (Stebleton & Soria, 2012). Research has indicated that only 26% of first generation students have earned a bachelor's degree within eight years. Whereas 68% of students of college educated parents will graduate within eight years (Chen 2005; Engle, Bermeo, & O'Brien, 2006). This is an obvious and alarming disconnect.

The ultimate goal for America's educational system is to make sure students have the knowledge and skills to be productive citizens in our society. First, we need to insure all students have the opportunity to graduate from high school. Secondly, we need to also insure that the students have the skills and knowledge to enter college right after high school graduation. The ultimate goal is to bridge the gap between high school and college so there is a smoother transition for students to perform successfully in college. A problem of concern in decades past has always been the issue of college completion. This issue has cost the nation greatly in lost income and

taxes. In 2002 alone, students failing to complete college cost the nation \$3.8 billion in lost income and \$730 million in lost taxes (Leonard, 2013; Schneider & Yin, 2011). How do we help students reach their full educational potential in order for them to become “difference makers” and move our nation forward?

### **Problem Statement**

Despite 25 years of standard reforms most students are not equipped to be successful at the college level (Conley, 2005; Kirst, 2008; Leonard, 2013). Most would find it unusual to discover that the curriculum between high school and college are undefined at best (Conley, 2005). Despite the increase of college student enrollments and Pell Grants recipients, the percentage of Americans earning degrees over the last couple of decades has not changed (Gillis, 2007). The state standards and high school assessments are not aligned with the curriculum of post-secondary institutions (Conley, 2007). We are finding out that the old measures have not been accurate in finding out what it takes to be college ready (Conley, 2013). Little is being done to connect the data from high school to college (Gillis, 2007). Many times the data that is collected is short term and the continuation of tracking students after graduation is short lived because of the lack of funding (Gillis, 2007). Without the necessary data it is difficult to evaluate and investigate methods to improve college readiness (Gillis, 2007). Therefore, the research is limited on programs that help high school students make a successful transition into college (U.S. Department of Education, 2005; Gillis, 2007). More research needs to be conducted to address the question: how can we ultimately prepare high school students to be successful in college (Conley, 2005)?

**Purpose of the Study**

The purpose of this study is to determine the effects of a college-going culture in high school with such components as dual credit college classes, student engagement, family engagement, counselor engagement with contextual knowledge, and social support to ease the transition to college and ultimately increase college success. The results generated from this study are intended to contribute to the development of an organized systematic system in which college readiness can be measured. This will provide students with best practices and a measuring guideline on how to prepare to be successful at college.

**Research Questions**

The following research questions will be used to analyze student college success as measured by the ACT test, scholarships, and dual enrollment.

**Overarching Posttest Research Question #1.** What are the achievement levels, local scholarship and scholarship totals, student engagement, parent engagement, demographic characteristics of students who have completed over two years, students who completed over one but less than two years, and students who completed less than one year of college?

**Overarching Posttest Research Question #2.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different (a) ACT scores, (b) GPA, and (c) GPA Percentages?

**Overarching Posttest Research Question #3.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different average (a) local scholarship amounts awarded and (b) total scholarship amounts awarded?

**Overarching Posttest Research Questions #4.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different dual credit course completion frequencies for: (a) Is dual credit completion, one to four courses, or five to eight courses different amongst the groups? (b) Is dual credit completion different amongst ACE or Non ACE scholarship student recipients?

**Overarching Posttest Research Questions #5.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for parent participation which included attending a senior parent presentation on college information, scholarships, and dual credit courses.

**Overarching Posttest Research Questions #6.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for:



(a) participation in sports; (b) participation in band or vocal music; (c) participation in clubs; or (d) participation in competitive activities?

**Overarching Posttest Research Questions #7.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies related to free or reduced lunch?

### **Definition of Terms**

**ACE Scholarship.** Is a scholarship that is available for low-income, high-achieving high school students taking college-credit classes while still in high school.

**ACT.** The ACT (originally known as American College Testing) is the college entrance exam used by many Midwest post-secondary institutions to measure college readiness.

**Academic behaviors.** Behaviors such as self-management, time management, study skills, persistence, and awareness of ones performance are all needed for learning and college success.

**Advance Placement (AP).** AP classes are rigorous college courses and exams that high school students may earn college credits. High school teachers that have been certified by the College Board teach AP courses.

**Campus visit.** A tour of the post-secondary campus helps students determine if the college matches their interests and expectations.

**College application.** The application is required to assist the college admission staff in determining if the student meets their criteria to be successful at their institution.

**College entrance exam.** A college entrance exam is the test needed in order for a student to be considered eligible for admissions to a post-secondary institution.

**College fairs.** Representatives from different post-secondary institutions gather at this event to promote their colleges to students. Students learn about the different types of colleges by visiting with college representatives and by looking at college view books.

**College readiness.** The student is prepared with the skills and knowledge to successfully complete post-secondary courses without remediation.

**College representatives.** College representatives are staff from the admissions offices that visit high schools to tell students about their institution. They are sometimes referred to as college reps.

**Community partners.** These partnerships are a supportive relationship between a business, service organization, not-for-profit organization and the school, which commit to goals and activities to help provide resources to improve college access and readiness.

**Compass.** The compass test is a computerized placement test for the community colleges, which identify the student's strengths and needs.

**Competitive Activities.** These are school activities such as mock trial, quiz bowl, one act, speech, academic decathlon where students compete in these activities with students from other schools.

**Conscientious.** Conscientious is measured by characteristics such as paying attention to detail, determination, dependability, perseverance through tasks and work ethic. Conscientious is necessary for college success.

**Content knowledge.** Understanding big ideas, concepts and vocabulary is important when comprehending the subjects of English, math, science, social sciences, world languages and the arts.

**Contextual knowledge.** Contextual knowledge is the understanding of how a post-secondary institution operates as a system and culture. This information includes understanding the admission process, how to enroll for college classes, recognizing professors office hours, understanding financial aid, knowing how to interact, and being comfortable with professors and students from different backgrounds and cultures.

**Dual credit.** Dual credit is offered to high school students and provides them with the opportunity to earn credit in courses for both high school and college credit.

**Dual enrollment.** Students that are enrolled in high school have the opportunity to take and earn transferable college credit in entry-level college courses taught by their high school teacher or college professor while staying in their familiar high school setting.

**Family engagement.** Developing a relationship with a trusted family member to increase the student's college aspirations.

**First generation.** In the present study, students were considered first generation if neither parent had earned/completed an associates or bachelors degree.

**Free Application for Federal Student Aid (FAFSA).** This is the financial aid application from the federal government which parents fill out after their taxes have been filed to determine financial aid benefits from the federal government to help the

students pay for college educational expenses. Financial aid includes grants, work-study and student loans.

**Post-secondary institutions.** Institutions of higher education or colleges that offer associate degrees, bachelor degrees or advanced degrees.

**Scholarships.** Funding provided to the student to pay for college and the educational expenses that accompany with attending college.

**Scholastic Aptitude Test (SAT).** This is a college entrance test that evaluates the students' potential to perform at the college level. The SAT measures math, critical reading, and writing skills.

**Socioeconomic status.** Based on the students' family income level, that qualifies them for a federally based free and reduced lunch program.

**Study skills.** Special techniques are needed to experience optimal learning. The techniques include time management, task prioritizing, taking class notes, researching, organization, and recognizing when to seek help.

**Underrepresented students.** This includes all students that are a first generation student, minority, or from a lower socioeconomic status level.

### **Assumptions**

The school district has deemed it a necessity to create a college going culture. Dual enrollment, student and family engagement, counselor engagement with contextual knowledge and social support are all key components in establishing a college going culture. The families of the school site, who give approval for their children to take dual credit college classes, are assumed to encourage and support their children to learn and benefit from the dual enrollment offerings. The school

board, administrators and teachers understand the value of the dual enrollment courses to help students reach academic potential, develop study skills, and prepare for the rigor of college. In this study, 90% of the students at the school site aspire to continue to a post-secondary institution after high school graduation.

### **Limitations**

Several limitations exist in this study. This study is not able to measure the impact of the college going culture, contextual knowledge or social support. Also, a contributing factor to the outcome variance may be due to the support and expectations of the family. Because participation in this study was voluntary, the number of respondents may not represent the entire population of students in which may skew the study results and limit the general findings.

### **Delimitations**

This study is delimited to a rural mid-western high school serving approximately 440 students in grades 9 through 12. Student participants were delimited to 12<sup>th</sup> grade students who were in attendance and graduated from the class of 2012.

### **Significance of the Study**

This study is significant because minimal research exists on what attributes students need to be college ready. This study will inform policy makers, community members, administrators, teachers, parents and students of best practices related to college access, college readiness, and college success.

## CHAPTER TWO

### Review of Literature

Decades ago the American educational system was built with a distinct break between high school and college (Conley, 2005). Only the privileged had the opportunity to pursue higher education. However, in our nation's infancy, education was not the only ticket to economic success (Conley, 2005). The breadwinner could easily support the family without a post-secondary education. Today, the world economy is in need for an increased educated and skilled workforce (Pham & Keenan, 2011). Yet, only 30% of the United States population has a bachelor's degree (Gillis, 2007). This can easily explain why the socioeconomic gap is wider now than it was 40 years ago (Reardon, 2011; Baum, Kurose, & Ma, 2013). In this country's schools, 48.1% of our children qualify for free or reduced lunch (College Board, 2014). Since 1970, more families are experiencing a decline in resources, more employment uncertainty, and health care benefits have not been provided by their employer (Baum, Kurose, & Ma, 2013). President Obama has been working to address the health care problem in this country. The President has also set a national goal to have the highest percentage of college-educated adults in the world by 2020 (Sparks, 2010). Despite our best efforts to create state standards, increase our high school requirements for graduation and increase high school assessments, our college completion rates still remain low (Conley, 2007). A lot of work must be done in order to attain Obama's goal. One third of our first year college students drop out before their sophomore year (Hoffman, 2003). Students failing to complete college in 2002 cost this nation \$3.8 billion in lost income and \$730 million in lost taxes

(Leonard, 2013; Schneider & Yin, 2011). This problem needs to be addressed because the futures' of our children depends upon it.

The framework of the literature review is a guideline to understanding college access, college readiness, and college success. The framework will contain such components as dual enrollment, student engagement, family engagement, counselor engagement with contextual knowledge and social support. Therefore, this literature review will begin with what research has been found for students to become college ready.

Research has indicated that college success is not based on college exams such as the SAT test, high school grades, (Adelman, 1999; Hoffman, 2003) class rank, or teacher recommendation (Bryant, 2013). Instead, research has found that college success is more likely to occur when a high school has a rigorous curriculum (Adelman, 2006). We need to investigate what high schools can do to help students to be successful when attending college (Conley, 2007). A bridge needs to be built between high school and college. Research has indicated that there is a positive correlation between students taking dual credit college classes in high school and college success (Adelman, 2006). Further research is needed to definitively conclude that dual credit college classes adequately prepare students to become college ready.

In the past, college has belonged to the select few students that were in the top of their class. If they were in prominent high schools, they had the opportunity to take advance placement (AP) classes. However, a shortcoming existed when these classes were only offered to the best, brightest and most affluent student populations (Hoffman, 2003). This practice naturally missed many students that had great

educational potential (Gillis, 2007). Another factor has become apparent: most high schools that offer AP classes put them on their transcripts, but when colleges and universities are not sure if the student took the AP exam to receive college credit, problems arise (Conley, 2007). The AP exam scores range from 1 to a 5. A score of 3 is passing for the vast majority of educational institutions; however, sometimes only a score of a 4 or 5 are accepted for college credit. Some colleges use the AP grade only as a tool for placement and did not award it as college credit (Gillis, 2007). This can create a great deal of uncertainty for the students and colleges alike.

Until recently, AP classes were the only opportunity for high school students to earn college credit and take a rigorous curriculum. Today many high schools are actively offering dual enrollment programs to their first generation and underrepresented students (Hoffman, 2003). This opportunity opens up another door for students from the middle quartile to pursue college credits (Leonard, 2013). Students are now able to take college classes either at their own high school or at a college campus taught by their own qualified high school teacher or college professor (Hoffman, 2003). The partnership between colleges and high schools is valuable to the student because the student can earn transferable college credits before high school graduation (Gillis, 2007). In addition, these college courses are aligned with the knowledge and skills needed to succeed at the next educational level (Conley, 2008). The dual credit college classes offer both high school and college credit concurrently. These classes provide a more rigorous curriculum needed for students to become college ready (Gillis, 2007). Research has indicated that dual credit college classes prepare the students to be successful in college (Adelman, 2006).



## **Academic Preparation**

Dual credit courses offer an opportunity to the first generation students to take advantage of college classes while in high school. The academic preparation creates more of a fishing net approach to capturing the average students (Bandura, 1997; Leonard, 2013). This opportunity of learning provides a comfortable environment because their own qualified high school teachers can teach the college credit classes at their high school (Hoffman, 2003). The students are highly motivated to be successful because they can save on college tuition, demonstrate they are college material, and possibly graduate earlier from college to accelerate down a career path (Hoffman, 2003). Students taking dual credit courses begin to understand college expectations such as using and applying study skills, managing time to complete extended assignments, using determination or “true grit” to get the problem accomplished, and working with classmates to be successful (Conley, 2008, p. 4). After students complete these college classes in high school, students experience higher esteem, confidence, and the feeling of satisfaction when completing difficult academic tasks. The completion inspires them (Hoffman, 2003). The students will then begin to believe that they are college material (Engle et al., 2006). Numerous resources indicate high school students who take at least 12 to 20 college hours are more likely to graduate from college in four years (Adelman, 2006; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; Leonard, 2013), and with higher grades (Hoffman, 2003). Dual credit college classes give students the opportunity to practice what is expected in college while being in a familiar high school setting (Bandura, 1997; Leonard, 2013). After completing the challenging college classes, students begin to

believe that higher education might be an option for them (Engle et al., 2006). This learning opportunity helps them to step outside their learning comfort zone for the first time (Bryant, 2013) and open their eyes to new possibilities they thought were impossible (Engle et al., 2006).

### **Student Engagement**

Creating a college going culture and introducing students to college information early is critical (Engle et al., 2006). Most students are not aware of higher education because no one in their family had pursued such a task (Engle, 2006). Most students are not even aware that their teachers had to go to college to become teachers. Therefore, college can be easily promoted by developing simple activities for students K-12, such as “College Awareness Day” (Wasden, 2013, p. 46). On this day, teachers are encouraged to tell their college stories and wear their college t-shirts to share their alma mater experiences with the students (Wasden, 2013). A drawing or a question and answer session for college logo gifts will increase excitement (Wasden, 2013). The goal of this event is to generate interest and questions about colleges (Wasden, 2013). Additionally, the students might even take the college stories home and start up conversations about the college possibilities with their families (Leonard, 2013). It is important to introduce college to the first generation and underrepresented students because they are not familiar that the college opportunity exists (Pham & Keenan, 2011). These students may not know of anyone that went to college (Engle, et al., 2006).

The schools’ college going culture along with the academic climate can make a difference in our children’s lives (Conley, 2007). The students need to feel like

their high school is like a second family where they experience understanding, a helping hand and, most importantly, that someone believes in them (Epstein, 2010; Isernhagen, Florendo, & Effle, 2011). Teachers are powerful role models and their stories about college are priceless (Engle, et al., 2006). The college going culture needs to start in elementary school because the seed to higher education needs to be planted early. Research has indicated that it is vital for a student entering the 4<sup>th</sup> grade to be a good reader. The 4<sup>th</sup> grade is a transition period for most students. The skill of reading is needed for the student to progress successfully in the educational system (Baum, et al., 2013). Writing skills, a key ingredient for educational success, is also needed for students to reach maximum potential (Conley, 2003). Research has indicated that “conscientiousness, dependability, perseverance, work ethic, teamwork, and being open to new experiences” are top predictors in college readiness (Sparks, 2010, p. 2). All of those characteristics can be nurtured as early as elementary school. If a student falls into an academic gap, immediate attention and assistance needs to be provided to them. This assistance might include tutoring outside the school day (Engle, et al., 2006). It is essential that the academic drive is kept alive in the lives of these children.

As students enter the middle grades, close attention needs to be directed towards providing the students with the appropriate classes to prepare for success at high school and ultimately the college level. They also need to learn how to seek information and adult help when needed (Conley, 2003). Study skills may assist in helping students find compensation skills to perform at higher academic levels (Gillis, 2007). Organization is sometimes difficult for this age group, so having them use a

calendar, assignment book, or a to-do list may be beneficial for them (Conley, 2003). The middle school students will also experience “College Day”. By this time they will become very familiar with all the colleges in the state just by listening to their teachers’ stories (Engle, et al., 2006). Teachers can show their college pride by hanging their alma mater’s banner in their classroom (Wasden, 2013). If several college banners are hung up in the classroom, the banners alone would reinforce the importance of life long learning (Wagner, 2008). Before the 8<sup>th</sup> graders transition into high school, a college visit would be beneficial. One of the most influential activities for students to participate in is the college visit. They get to experience the college environment and culture (Engle, et al., 2006). If they like what they see at the college, students will be enticed to change their academic behaviors in order to make this opportunity possible (Conley, 2003).

The college visit is important at this stage, because at the end of the 8<sup>th</sup> grade year they will be expected to register for high school classes. It is critical that 8<sup>th</sup> graders register for the right classes in order to get ready for college. One wrong decision may mean they will have to go down the remedial road (Conley, 2003). National statistics reveal that 40% of the students take at least one remedial college class when they enter college. This decreases their chances of being successful in college (ACT, 2005b; Conley, 2007). The statistic is higher for the community college, where 65% of the students had to take at least one remedial class (Plummer & Nellhaus, 2008; Leonard, 2013). Therefore, close attention to the registration process in the 8<sup>th</sup> grade is needed. Students need to understand the importance of taking the classes that prepare them to take the dual credit college classes in high

school. This concept needs to be explained to families because they can give the additional push and encouragement to their children (Leonard, 2013).

Providing academic information to students continues in the 9<sup>th</sup> grade. Many of the classes they take are required at this level yet the rigor will increase. “Weaning away from easy learning” is necessary (Conley, 2010, p.4). Giving extended assignments that takes weeks to accomplish, continue to help them with organization such as providing them with an assignment book, having them solve a problem with no right answer, redoing work and working with websites to gather information are all key in preparing students with the skills students need in college (Conley, 2007). 90% of the 9<sup>th</sup> graders indicate that they want to go to college and only 67% actually attend (Standards for Success, 2003; Conley, 2003). This unfortunate statistic demonstrates the need to find ways to keep the college hope alive for all students.

Developing relationships with students 9<sup>th</sup> through 12<sup>th</sup> grades and working with them individually on academic preparation and college access (Kim & Schneider, 2005; Lin, 2001; Pham & Keenan, 2011), assisting all students, not just the ones that seek help, is essential (Conley, 2007). Therefore, introducing all the opportunities such as dual credit college classes, scholarships, financial aid, college entrance exams, and college information is ideal.

Providing students with the information about dual credit as early as possible, is important so they are aware of what it takes to qualify for these courses. Students who feel that college is impossible but have the qualifications to be successful taking the college classes in high school should be encouraged to do so (College Board, 2014). We must find funding for lower socioeconomic students to seize the

opportunity and take the dual credit college classes (Hoffman, 2003). Finding the finances to help these students take dual credit courses will send a powerful message; we want that message to be that we believe in them and that they are college material (College Board, 2014). Dual credit courses are aligned with college expectations along with the rigor and academic behaviors needed for college (Gillis, 2007). Once students complete the course, it improves their self-esteem and they gain confidence in their academic performance (Engle, et al., 2006). First generation and underrepresented students desperately need this boost of academic confidence because now they realize performing at the college level can be possible (Engle, et al., 2006).

Additionally, students and parents appreciate the chance to reduce college costs by taking dual credit college courses in high school (Leonard, 2013). Dual credit courses are one way to reduce costs; scholarships provide another avenue to reduce the expense of college (Higher Education Research Institute, 2007). Along with scholarships, there are grants, loans, and financial aid. Surprisingly, many students and families are not aware of these financial opportunities. When parents were asked about financial opportunities, 62% did not list grants, 58% did not list scholarships, and 64% did not list loans (Chan, Cochrane, Gallegos, & Irons, 2008). This is quite alarming. Parents as well as students often need interaction with counselors to educate them on the many opportunities that exist (Conley, 2007).

Students also need to understand the different types of college entrance exams (Conley, 2007). Many students are intimidated by the exams; however, test-prep programs can help eliminate these issues and familiarize them with the format of the

test (Chaconas, 2013c). Essentially, the students are more fearful of the unknown than they are with anything else so test-prep sessions may help them become more familiar with the testing process. However, the students need to realize that it takes more than a good test score to become college ready (Bryant, 2013). When high schools develop a college going culture, students will become more familiar with the complexities of college success (Conley, 2007).

The best way for students to learn about the complexities of colleges is by actually visiting them (Helsel, 2004). Ideally, part of the college going culture should include students visiting all types of colleges like a community college, state college, university, and a private college before they graduate from high school. This exposure better equips students to decide which learning style and type of institution fits them best (Conley, 2007). They also need to understand that some colleges are more selective, while others have open enrollment (Conley, 2007). Students need to understand that different types of institutions have different types of learning (Conley, 2007) and that one type of college doesn't fit all students (Baum, et al., 2013). The "seeing is believing" experience provides the students with a sense that college is a viable possibility. The students are able to see that there are many routes to a post-secondary education (Gillis, 2007). When students have the next step in mind, they are more apt to see how today's academic work is relevant to their future. The students understand why they need to take a more rigorous course load, study advanced content, increase study skills, and understand the teachers increased expectations in their dual credit college classes (Engle et al., 2006). They grow into becoming their own advocate (Conley, 2013). Students will now be able to visualize

their futures and set applicable goals at a younger age. The ultimate goal of dual credit courses is to help students in high school become college ready (Conley, 2005).

A real problem might occur when the first generation and underrepresented student attempts to pursue higher education. They have a larger difficulty fitting into the college culture because they do not know anyone that has done it before them; thus, feelings of isolation might occur (Engle, et al., 2006). When they turn to their family, they are faced with a lack of support. Family and friends of first generation students might not be able to relate to the college culture and might interpret their child moving away as their child parting from them (Olenchak & Hebert, 2002; Rosa & Hamrick, 2002; Engle, et al., 2006). That student would consequently feel that they do not belong in either the college or family culture (Oldfield, 2007; Stebleton & Soria, 2012). The first generation student will naturally look for colleges close to home in an attempt to alleviate any strain on the family (Engle, et al., 2006). Pursuing higher education for some students takes pure courage; the lack of encouragement from family members that occurs in over half of first generation students can be detrimental to collegiate success (Higher Education Research Institute, 2007). It is important to develop relationships and guide these families towards an understanding of the college going culture so that the student will have a support system in place (Engle, et al., 2006).

### **Family Engagement**

Families are under a lot of stress these days. In the last 30 years, the income inequality gap has widened considerably (Reardon, 2011; Baum, et al., 2013). In 2006, parents from the top income bracket spent \$8,872 a year per child whereas



parents from the low-income bracket were only able to spend \$1,315 a year per child (Reardon, 2011; Baum, et al., 2013). Enrichment opportunities such as trips, educational games, lessons, college test prep, and numerous college visits flourish for affluent children (Baum, et al., 2013). The upper income class has the college know-how needed in order to help their children with little or no help from counselors (Conley 2005; Robbins, Lauver, Le, Davis, Langley, & Calstrom, 2004; Venezia, Kirst, & Antonio, 2004; Conley, 2003). The wealthy student is seven times more apt to earn a bachelor's degree by age 24 (Hoffman, 2003) while the underrepresented students only have a 12% chance to earn a bachelor's degree (Berkner & Chavez, 1997; Chen, 2005; Engle, et al., 2006). The high school is the only place, and in some ways the last chance, to offer college hope to the less fortunate (Conley, 2007). Family engagement is critical for student success.

Families are a key component in bridging the gap and helping their children become college ready (Leonard, 2013). Just like the students, families may believe that college is not a possibility for their children. This myth needs to be addressed early. The lack of encouragement from families is mainly due to the lack of familiarity with the higher educational process (Horn & Nunez, 2000; Engle, et al., 2006). Limited college knowledge leads to inadequate perceptions (Vargas, 2004; Engle, et al., 2006). Developing relationships with families is the most critical component when helping students understand the college complexities (Engle, et al., 2006).

Families need to feel welcome in the school system (Parent Teacher Association, 2009; Isernhagen, et al., 2011). The climate needs to be open to families. Families

must experience trust and sincerity (Epstein, 2010; Isernhagen, et al., 2011). “Opening channels of communication” with parents is important (Glanz, 2006, p. 40; Isernhagen, et al., 2011, p. 5). Regular communication, especially with first generation parents that are unfamiliar with the college readiness process will close the gap (Conley, 2010). Developing trust is a key component, when families begin to feel comfortable; they begin to become interested in encouraging their child to pursue a college education (Engle, et al., 2006). Families play a vital role because their social support and encouragement help students recognize the importance of learning and preparing for college (Leonard, 2013).

Another important factor is to let families know what it takes educationally to become college ready, because many of the characteristics can be reinforced in the home. For example, students need to learn how to be conscientious about the schoolwork they do (Leonard, 2013). Work ethic is another key component that families can encourage (Conley, 2007). It is extremely beneficial when parents make sure that the student has a place to study in the home and requires study time (Conley, 2007). Reading and writing skills are great assets to any student because they are good predictors of college success (Conley, 2007). Other key characteristics include organization, persistence, time management, and dependability (Conley, 2007). Parents can encourage these components and also support their children to take the most challenging courses. This can be accomplished without the parents having obtained higher education themselves (Horn & Nunez, 2000; Engle, et al., 2006).

Today, only 30% of the nation’s population has a bachelor’s degree (Gillis, 2007). Accordingly, 70% of the population needs help learning about the complexities of

college access. The college going activities need to be vibrant starting in kindergarten through 7th grade. These activities will create a buzz of hope in family households. From that point, the college complexities need to be broken down into manageable parts starting with 8th grade orientation (Engle et al., 2006). Eighth grade students need to make the right decisions and take the right classes their 9th grade year in order to set them on the right path towards college entrance (Conley, 2007).

Each year, the families need to receive the same information in a systematic approach to learn about graduation requirements, dual credit college classes, career academies, college requirements, loans, financial aid, and, most importantly, scholarships for their students (Chaconas, 2013a). Families need to understand the complexities of financial aid (Chaconas, 2013b). Research has indicated that when parents were asked to list financial aid, 58% did not list scholarships, 62% did not list grants and 64% did not list loans (Chan, et al., 2008). Once families become aware of the financial opportunities available to them, they will become a powerful, influential force (Leonard, 2013).

Tuition costs can jump-start the parents' attention (Leonard, 2013). That is why dual enrollment is so attractive. Families will gladly invest in their child when they can save on future tuition bills by having them take dual credit courses in high school (Leonard, 2013). Once they understand this opportunity exists, they will be more apt to think ahead to help their children prepare educationally (Leonard, 2013). Parent support behind closed doors of the home is critical for student success (Leonard, 2013). Families want to see their children go to college and succeed (Leonard, 2013). The families are excited to save money, and become the vested encourager because

they see the hope that exists for their children. The families increased support will encourage the student to take dual credit college classes to get them ready for post-secondary education (Horn & Nunez, 2000; Engle, et al., 2006). They will become the social support agent at home when their children are working on their rigorous course work (Leonard, 2013). The parents will ultimately understand that additional time and effort is required for their children to be successful in the college classes. Families are more apt to have their child take out student loans instead of working at a job that takes time away from the more rigorous and demanding academics of college (Engle, et al., 2006). As one student put it, “It’s nice to have your family holding one hand and someone else guiding you with the other hand” (Engle, et al., 2006, p. 7).

### **Counselor Engagement with Contextual Knowledge**

Research has indicated that high school counselors are important because they guide and help students realize their full potential (Pham & Keenan, 2011). First generation and underrepresented students absolutely need a guiding hand from counselors to help break down the complexities of the college going process into manageable parts (Conley, 2007). Meeting with these students early and often helps to build trust so they feel comfortable following the counselor’s advice (Engle, et al., 2006). One-on-one sessions are valuable not only for the student, but for the counselor (Conley, 2007). This provides an opportunity for the counselor to learn about the students’ hopes and dreams and ultimately guide them towards making their goals become reality. Students need individual academic and college advising so they can make good decisions in order for them to reach their full educational

potential (Gillis, 2007). First generation and underrepresented students rarely go out and seek help; a more persistent and proactive approach is needed (Engle, et al., 2006). The high school is an important place for all students to become educated on all the post-secondary opportunities. Therefore, making college information and activities available for all students is essential (Conley, 2007).

The counseling office should resemble a college going culture (Conley, 2010), where students can readily see that college is not just a dream, it is the plan. Few resources are needed to have the college culture come alive in the guidance office (Wasden, 2013). For example, college pennants can be displayed representing all the colleges in the state along with any other college logo gifts (Wasden, 2013). Class photos with graduates in college t-shirts makes a big impression. Moreover, photos of the students going on their college visits and participating in college activities displayed on bulletin boards can help students to visualize the educational possibilities.

The strength of contextual knowledge lies in providing information and opening new possibilities to students that might not have considered college as an option (Leonard, 2013). College activities need to be held during the routine of the school day so that all students have the opportunity to participate (Conley, 2007). Holding a college fair at the high school during the school day is great exposure for students to learn about all the different types of colleges (Leonard, 2013). This yearly activity provides students with the opportunity to directly visit with college representatives so they can learn about the college admissions process, financial aid, scholarships and college requirements (Conley, 2007). The college view books are tangible and serve

as a reminder to the student of future possibilities (Kronish, 2008). College fairs provide a great opportunity for students to practice communicating with adults and becoming their own advocate (Conley, 2013).

College day is another college going activity. During college day teachers are free to wear college t-shirts that represent their alma mater on one day during first semester (Wasden, 2013). The teachers are encouraged to tell students about their college days and give students the opportunity to ask questions (Wasden, 2013). During college day, students will gain valuable knowledge about the different colleges their teachers attended. College day will provide students with another influential resource (Rowan & Heather, 2007; Armor, Schwartz, & Stiefel, 2006; Pham & Keenan, 2011).

One of the most influential events is the college visit (Helsel, 2004). The college visit, especially for first generation and underrepresented students, removes significant obstacles (Helsel, 2004). These visits help students to understand the college culture and to “navigate” the campus (Conley, 2007, p. 5). During the college visit, students are briefed on the admissions process, financial aid, scholarships and college requirements (Lundell, Higbee, Hipp, & Copeland, 2004; Conley, 2007). The college visits give students the opportunity to see the cafeteria, dorm rooms, classrooms, bookstores and parking facilities. Most students at this stage do not realize that they need to buy their books along with purchase a parking pass (Engle, et al., 2006). All these are necessary components for the high school student to learn in order to make an educated decision on which type of college fits them the best

(Conley, 2007). These experiences reduce the culture shock, or fear of the unknown they may experience while pursuing a college education (Conley, 2007).

Individual registration sessions, with every student, every year is important when helping students realize that they are college material (Conley, 2007). Working with students academically and introducing them to dual credit college classes may be a life changer for them because they might not have had the confidence to try doing so on their own (College Board, 2014). Monitoring students often to review grades and celebrating successful completion of the dual credit college classes increases their self-esteem, confidence and helps them to aspire towards higher education (Engle, et al., 2006). However, “college access without support is not opportunity” (Engstom & Tinto, 2008, p. 46; Stebleton & Soria, 2012). Introducing 8<sup>th</sup> graders to scholarship possibilities along with having 10<sup>th</sup> and 11<sup>th</sup> graders look up scholarships is important to help them realize scholarships may be for them (Engle, et al., 2006). Many times a student thinks they have to be top in their class in order to receive a scholarship (Chaconas, 2013a). However, they need to understand scholarships are available for students with different interests and abilities (Chaconas, 2013a). Scholarship information needs to be presented to them early and often (Engle, et al., 2006). Providing funding to students sends a strong message that counselors believe they are college material (College Board, 2014). A well-established college going culture with contextual knowledge will encourage all students to educational aspiration (Gillis, 2007).

## **Social Support**

Opening students' views to new educational aspirations and breaking down the financial barriers helps students to believe that college success is possible (College Board, 2014). Scholarships provide students a financial tool to help build their futures (Institute for Higher Education Policy, 2005). Meeting with students early and often to present scholarship opportunities is valuable (Engle, et al., 2006). Students soon realize that scholarships are everywhere and are obtainable (Engle, et al., 2006).

A key component to making sure the college going culture process is sustainable is to invite the community to be part of the team (Hendrick, 2013). This dynamic relationship creates positive results (Epstein, 2010; Isernhagen, et al., 2011). The community can provide resources for college going activities and local scholarships that benefit the students. When the school, family, and community work together, it creates a powerful and strong environment for students (Epstein, 2010; Isernhagen, et al., 2011). Students realize many constituencies are involved to make sure a post secondary education is possible for them (Hendrick, 2013). This brings about a connectedness, helping students to experience that many are putting forth their best efforts in behalf of their educational futures. This concerted effort also allows the community to work towards the best interest of the students. This intertwined partnership creates a dynamic force, that in the end all can celebrate its success (Epstein, 2010; Isernhagen, et al., 2011). When the community is actively involved with giving, the students will gain a heightened awareness of the power of giving and



will strive to make a difference in their own lives and the lives of others (Engle, et al., 2006).

### **Conclusions**

Today, our global economy demands a well-educated and highly skilled workforce (Pham & Keenan, 2011). It will take teamwork to build the bridge that will create a smoother transition from high school to college. Once students enroll in college, accurate follow-ups need to be pursued (Gillis, 2007). College access is a start, but college completion is the goal. Research has indicated that the strength and rigor of curriculum in high school are good predictors of college success (Adelman, 2006). Other key components include creating a college going culture with student, family, and counselor engagement, college contextual knowledge, and social support (Martinez & Klopot, 2005; Leonard, 2013). There is limited research on what works in the transition from high school to college (National Center for Education Statistics, 2004; Gillis, 2007). As a result, what is the potential of developing a college going culture with the components of dual credit college classes, student, family, and counselor engagement, college contextual knowledge and social support to ease the transition to college and ultimately increase college success? Could there be a more systematic approach to guarantee college success? This research raises some questions that are worth further investigation.

Once we turn the tide with first generation students and help them believe that they are college material, they might become part of the solution. College is a “Leap of Faith” for these students (Engle, et al., 2006, p.5). They are the first ones in their family to attempt the challenge. Once these students successfully complete dual

credit college classes, they will be one step closer to believing that they can achieve a college education and make a positive difference (Engle, et al., 2006). It is of paramount importance that these students successfully earn a college degree and move towards breaking down the barriers that exist (Engle et al., 2006).

## CHAPTER THREE

### Methodology

#### **Purpose of the study**

The purpose of this study is to explore the relationship between college success and college hours completed to high school college prep activities which include dual enrollment, family engagement, student non-academic activities, and scholarships.

#### **Participants**

**Number of participants.** The maximum accrual for this study is ( $N = 98$ ) and includes the students from the 2012 graduating class. All students attended a small rural school district in the Midwest and participated in school counseling activities related to college access planning.

**Gender of participants.** The gender of the study participants represents the gender make-up of the school they attended.

**Age range of participants.** Study participants are 2012 high school graduates ranging from 18-22 years of age.

**Racial and ethnic origin of participants.** The racial and ethnic origin of the study participants represents the racial and ethnic origin make-up of the school they attended.

**Socio-economic status of participants.** The socio-economic status of study participants represents the socio-economic status level of the school they attended.

**Inclusion criteria of participants.** Study participants include students who attended the research high school and graduated May 2012.

**Method of participant identification.** Study participants have been identified as all students that graduated May 2012 from the research high school.

### **Description of Procedures**

**Research design.** The quasi-experimental, posttest only, comparative study design is displayed in the following notation.

Group 1  $X_1 Y_1 Y_2 Y_3 O_1$

Group 2  $X_1 Y_1 Y_2 Y_3 O_1$

Group 3  $X_1 Y_1 Y_2 Y_3 O_1$

**Group 1 = Study participants #1.** Naturally formed group of students who graduated from high school May 2012 and completed two years of college coursework.

**Group 2 = Study participants #2.** Naturally formed group of students who graduated from high school May 2012 and completed 1 year of college coursework.

**Group 3 = Study participants #3.** Naturally formed group of students who graduated from high school May 2012 and completed less than 1 year of college coursework.

**$X_1$  = Study constant.** All study participants completed the York High School graduation requirements and graduated from York High School, May of 2012.

**$Y_1$  = Study independent variable, student engagement.** Student engagement is measured by dual credit courses attempted, sports, clubs, competitive activities, band or vocal music participation during their high school years 9<sup>th</sup> through 12<sup>th</sup> grade.

**Y<sub>2</sub> = Study independent variable, parent engagement.** Parent engagement is measured by whether or not parents or guardians attended a senior parent presentation on college information, scholarships, and dual credit courses.

**Y<sub>3</sub> = Study independent variable, demographic conditions.** Student demographic conditions is measured by whether or not the student received an ACE Scholarship and whether or not the student qualifies for free or reduced price lunch. Students that participated in one or more non-academic activities.

**O<sub>1</sub> = Study high school completion posttest dependent measures.** Achievement as measured by the highest college entrance ACT test scores, achievement as measured by scholarship amounts awarded, GPA and GPA Percentage.

### **Research Questions and Data Analysis**

The following research questions were used to analyze student college success as measured by ACT test scores, scholarships, and dual enrollment.

**Overarching Posttest Research Question #1.** What are the achievement levels, local scholarship and scholarship totals, student engagement, parent engagement, demographic characteristics of students who have completed over two years, students who completed over one but less than two years, and students who completed less than one year of college?

**Analysis.** Research Question #1. Question one analyses includes the descriptive statistics for the achievement levels, scholarship information, student and parent engagement information, and student demographic data for students who have

completed over two years, students who completed over one but less than two years, and students who completed less than one year of college

**Overarching Posttest Research Question #2.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different (a) ACT scores, (b) GPA, and (c) GPA Percentages?

**Analysis.** Research Question #2, will utilize a single factor Analysis of Variance (ANOVA) to determine whether ACT scores, GPA, and GPA Percentages are congruent or different. If a significant F ratio is calculated, post hoc analyses will be used to determine where the differences are significant. Because multiple statistical tests will be conducted, a one-tailed .05 alpha level will be employed to help control for Type I errors. Means and standard deviations will be displayed on tables.

**Overarching Posttest Research Question #3.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different average (a) local scholarship amounts awarded and (b) total scholarship amounts awarded?

**Analysis.** Research Question #3 will use a single classification Analysis of Variance (ANOVA) to determine the main effect between the average amounts of local and total scholarships awarded among the groups. An *F* ratio will be calculated. If a statistically significant main effect is observed *post hoc* contrast analysis will be

conducted to determine where the differences are significant. Because multiple statistical tests will be conducted, a one-tailed .05 alpha level will be employed to help control for Type I errors. Means and standard deviations will be displayed on tables.

**Overarching Posttest Research Questions #4.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different dual credit course completion frequencies for: (a) Is dual credit completion, one to four courses, or five to eight courses different amongst the groups? (b) Is dual credit completion different amongst ACE or Non ACE scholarship student recipients?

**Analysis.** Research Question #4 will utilize a chi-square test of significance to compare observed versus expected frequencies among the groups for (a) dual credit completion (b) ACE and Non ACE completion rates.

**Overarching Posttest Research Questions #5.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for parent participation which included attending a senior parent presentation on college information, scholarships, and dual credit courses?

**Analysis.** Research Question #5 will utilize a chi-square test of significance to compare observed versus expected frequencies among the groups for parent

participation, which included attending a senior parent presentation on college information, scholarships, and dual credit courses.

**Overarching Posttest Research Questions #6.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for: (a) participation in sports; (b) participation in band or vocal music; (c) participation in clubs; or (d) participation in competitive activities?

**Analysis.** Research Question #6 will utilize a chi-square test of significance to compare observed versus expected frequencies among the groups for: (a) participation in sports; (b) participation in band or vocal music; (c) participation in clubs; or (d) participation in competitive activities?

**Overarching Posttest Research Questions #7.** Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies related to free or reduced lunch?

**Analysis.** Research Question #7 will utilize a chi-square test of significance to compare observed versus expected frequencies among the groups for free or reduced lunch recipients.

### **Data Collection Procedures**

All study achievement and engagement data were retrospective, archival, and routinely collected school information. Permission from the appropriate school



research personnel was obtained. High school achievement data will be collected from the graduates of 2012. Non-coded numbers were used to display individual de-identified achievement and engagement data. Aggregated group data, descriptive statistics, and parametric statistical analysis were utilized and reported with means and standard deviations on tables.

**Performance site.** The research was conducted in the public school setting through normal educational practices. The study procedures did not interfere with the normal educational practices of the public school and did not involve coercion or discomfort of any kind. Data will be stored on spreadsheets and computer flash drives for statistical analysis in the office of the primary researcher and the dissertation chair. Data and computer files will be kept in locked file cabinets. No individual identifier will be attached to the data.

**Institutional Review Board (IRB) for the protection of Human Subjects Approval Category.** The exemption categories for this study will be provided under 606-14-EX, categories 1 and 4. The research will be conducted using routinely collected archival data. A letter of support from the district will be provided for IRB review.

## CHAPTER FOUR

### Results

#### **Purpose of the Study**

The chapter presents an analysis of the data collected to determine the effects of a college-going culture in high school with such components as dual credit classes, student engagement, family engagement, counselor engagement with contextual knowledge, and social support to ease the transition to college and ultimately increase college success. The results generated from this study will contribute to the development of an organized systematic system in which college readiness can be measured. This will provide students with best practices and a measuring guideline on how to prepare to be successful at college. Data related to each of the dependent variables were retrospective, archival, and routinely collected school information. Permission from the appropriate school research personnel was obtained before data were collected and analyzed.

#### **Research Questions #1**

What are the academic statistics, scholarship amounts, student and parent engagement frequencies, and demographic characteristics of students who have completed over two years, students who completed over one but less than two years, and students who completed less than one year of college? Tables 1-3

Table 1 displays students' ACT test score, GPA, GPA percentages averages and local and total scholarship amount averages related to amount of college completed. Table 2 displays frequencies of engagement activities such as dual credit classes, student engagement with activities, sports, competitive activities, clubs, band, choir,

and parent engagement related to amount of college completed. Table 3 displays demographic characteristics such as free or reduced lunch and ACE scholarship recipients related to amount of college completed.

### **Research Question #2**

Tables 4-6 display academic achievement data in response to research question 2. Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different (a) ACT scores, (b) GPA, and (c) GPA Percentages? Table 4 displays single classification analysis of variance (ANOVA), indicating the difference between ACT scores for different amounts of college completed. As seen in Table 4 null hypothesis was rejected indicating a difference between groups,  $F(2,62) = 3.78, p = .03$ . Post hoc follow up tests indicate that there is a statistically significant difference between the students who completed at least two years of college ( $M = 23.59, SD = 4.56$ ) and the students who completed at least one year of college but less than two years of college ( $M = 18.60, SD = 3.97$ ). There was no significant difference between students who completed at least two years of college ( $M = 23.59, SD = 4.56$ ) and students who completed less than one year of college ( $M = 20.40, SD = 3.21$ ). Table 5 displays a single classification analysis of variance (ANOVA), determining differences between GPA for different amounts of college completed. As seen in Table 5 null hypothesis was rejected indicating a difference between groups.  $F(2, 81) = 20.23, p = <.01$ . Post hoc follow up tests indicate there is a statistically significant difference between the students who completed at least two years of college ( $M =$

3.38,  $SD = 0.63$ ) and students who completed one year of college but less than two years of college ( $M = 2.40$ ,  $SD = 0.87$ ) and students who completed less than one year of college ( $M = 2.40$ ,  $SD = 0.70$ ). Table 6 displays a single classification analysis of variance (ANOVA) determining differences between GPA Percentages for different amounts of college completion. As seen in Table 6 null hypothesis was rejected indicating a significant difference between groups,  $F(2,81) = 23.04$ ,  $p = <.01$ . Post hoc follow up tests indicate that there was a statistically significant difference between GPA percentages for the students who had completed at least two years of college ( $M = 91.50$ ,  $SD = 5.43$ ) and the students who completed at least one year of college but less than two years of college ( $M = 83.10$ ,  $SD = 6.64$ ) and students who completed less than one year of college ( $M = 82.70$ ,  $SD = 5.38$ ).

### **Research Question #3**

Tables 7 – 8 display data in response to research question 3. Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different average (a) local scholarship amounts awarded and (b) total scholarship amounts awarded? Table 7 displays a single classification analysis of variance (ANOVA), indicating the difference between local scholarships awarded and amount of college completed. As seen in Table 7, the analysis of variance (ANOVA), determining the difference between groups  $F(2,81) = 2.42$ ,  $p = .09$ , fails to reject the null hypothesis, indicating no significant difference between groups. Table 8 displays a single classification analysis of variance (ANOVA) determining differences between total scholarships

awarded and amount of college completed. As seen in Table 8 null hypothesis was rejected indicate that there was a statistically significant difference between groups. Post hoc analyses indicated that students with two or more years of college ( $M = 52781.16$ ,  $SD = 61458.11$ ) received significantly more total scholarships than students who completed one but less than two years ( $M = 9017.03$ ,  $SD = 15411.85$ ). Also, students with two or more years of college ( $M = 52781.16$ ,  $SD = 61458.11$ ) received significantly more total scholarships than students who completed less than one year ( $M = 670.44$ ,  $SD = 1137.45$ ). There was no significant difference between the total amounts of scholarships awarded for students who completed one but less than two years and students who completed less than one year of college

#### **Research Question #4**

Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, students who completed less than one year of college have congruent or different dual credit course completion frequencies for: (a) Is dual credit completion, one to four courses, or five to eight courses different amongst the groups? (b) Is dual credit completion different amongst ACE or Non ACE scholarship student recipients? The results of chi-square ( $X^2$ ) test, Table 9 displays frequency of years of college completion related to dual credit courses attempted. There was a statistically significant difference in students who have completed at least two or more years of college and dual credit courses attempted ( $X^2(4) = 35.55$ ,  $p = .05$ ). Table 10 displays the frequency of ACE scholarship participation and no ACE participation as related to dual credit courses attempted. The results of a chi-square ( $X^2$ ) test are ( $X^2(2) = 4.90$ ,  $p$

= .05). There is not a significant difference between ACE recipients and no ACE recipients compared to dual credit courses attempted.

#### **Research Question #5**

Table 11 displays frequency of college years completed related to parent engagement. Did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for parent participation which included attending a senior parent presentation on college information, scholarships, and dual credit courses. As seen in Table 11, there was a statistically significant difference in parent engagement ( $X^2 (2) = 22.01, p = .05$ ). Students that had parents that attended the meeting on college information, scholarships, and dual credit courses their sons and daughters were more apt to complete more years of college.

#### **Research Question #6**

In Tables 12 – 15 display the data in response to question 6, did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies for: (a) participation in sports; (b) participation in band or vocal music; (c) participation in clubs; or (d) participation in competitive activities? Table 12 displays the results of a chi-square ( $X^2$ ) test, measuring the frequencies of college years completed related to student sports engagement ( $X^2 (2) = 68.10, p = .05$ ). There was a very statistically significant difference in students that participated in sports and

students that did not participate in sports compared to college completion rates. Table 13 displays the results of a chi-square ( $X^2$ ) test, measuring the frequency of college years completed related to student band and/or vocal music engagement ( $X^2 (2) = 36.63, p = .05$ ). There was a significant difference in students that participated in band and/or vocal music and years of college completion. Table 14 displays the results of a chi-square ( $X^2$ ) test, measuring the frequency of college years completed related to student school club engagement ( $X^2 (2) = 78.49, p = .05$ ). There was a very significant difference in students' engagement in school clubs. Students that were engaged in clubs completed more years of college. Table 15 displays the results of a chi-square ( $X^2$ ) test, measuring the frequency of college years completed related to student competitive activity engagement ( $X^2 (2) = 37.74, p = .05$ ). There was a significant difference in students' engagement in competitive activities. Students that engaged in competitive activities were more apt to complete more years of college.

#### **Research Question #7**

Table 16 display the data in response to question 7, did students who graduated in 2012 and who had completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college have congruent or different frequencies related to free or reduced lunch? Table 16 displays the results of a chi-square ( $X^2$ ) test, measuring the frequencies of college years completed related to free or reduced lunch ( $X^2 (2) = .45, p = .05$ ). There was not a significant difference in students that received free or reduced lunch compared to college completion rates.

Table 1  
*Academic Statistics for Students Related to Amount of College Completed*

	Over 2 Years of College		1-2 Years of College		Less than 1 Year of College	
	<i>N</i>	Average Score	<i>N</i>	Score	<i>N</i>	Score
ACT Test	54	23.59	5	18.80	5	20.40
GPA	56	3.38	8	2.39	20	2.39
GPA Percentage	56	91.46	8	83.11	20	82.65
Average Scholarship Amount (Local)		\$ 2,749.91		\$ 654.53		\$ 447.94
Average Scholarship Amount (Total)		\$ 52,781.16		\$ 9,017.03		\$ 670.44



Table 2  
*Frequencies of Engagement Activities Related to Amount of College Completed*

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	Over 2 Years College ( <i>N</i> = 56) <i>N</i> (%)	1-2 Years College ( <i>N</i> = 8) <i>N</i> (%)	Less than 1 Year College ( <i>N</i> = 20) <i>N</i> (%)
Engaged in Dual Credit	50 (89%)	4 (50%)	4 (20%)
Engaged in Student Activities	55 (98%)	6 (75%)	12 (60%)
Engaged in Sports	52 (93%)	5 (63%)	8 (40%)
Engaged in Competitive Activities	21 (38%)	2 (25%)	4 (20%)
Engaged in Clubs	51 (91%)	5 (63%)	5 (25%)
Engaged in Band and/or Vocal Music	23 (41%)	3 (38%)	6 (30%)
Parent Engaged	34 (61%)	1 (13%)	1 (5%)

Table 3  
*Student Financial Characteristics Related to Amount of College Completed*

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	Over 2 Years College ( <i>N</i> = 56) <i>N</i> (%)	1-2 Years College ( <i>N</i> = 8) <i>N</i> (%)	Less than 1 Year College ( <i>N</i> = 20) <i>N</i> (%)
Free/Reduced Lunch	9 (16%)	2 (25%)	3 (15%)
ACE Scholarship	8 (14%)	1 (13%)	0 (0%)

Table 4  
*Single Classification Analysis of Variance (ANOVA) Determining Differences  
 Between ACT Scores for Different Amounts of College Completion*

ACT TEST SCORES					
ANOVA:Single					
Factor	Count	Sum	<i>M</i>	<i>SD</i>	
Groups					
Over Two Years	54	1274.00	23.59	4.56	
1 to 2 Years	5	93.00	18.60	3.97	
Less than 1 Year	5	102.00	20.40	3.21	
ANOVA					
Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	149.42	2	74.71	3.78	.03
Within Groups	1205.44	61	19.77		
Total	1354.86	63			

*Note.* An F ratio was calculated and an alpha level of .05 was utilized to control for Type 1 errors.

Table 5  
*Single Classification Analysis of Variance (ANOVA) Determining Differences  
 Between GPA for Different Amounts of College Completion*

GPA					
ANOVA:Single					
Factor	Count	Sum	<i>M</i>	<i>SD</i>	
Groups					
Over Two Years	56	190.40	3.38	0.63	
1 to 2 Years	8	19.20	2.40	0.87	
Less than 1 Year	20	48.00	2.40	0.70	
ANOVA					
Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	18.20	2	9.10	20.23	< .01
Within Groups	36.44	81	0.45		
Total	54.65	83			

*Note.* An F ratio was calculated and an alpha level of .05 was utilized to control for Type 1 errors.

Table 6  
*Single Classification Analysis of Variance (ANOVA) Determining Differences  
 Between GPA Percentage for Different Amounts of College Completion*

GPA PERCENTAGE					
ANOVA:Single					
Factor	Count	Sum	<i>M</i>	<i>SD</i>	
Groups					
Over Two Years	56	5121.80	91.50	5.43	
1 to 2 Years	8	664.84	83.10	6.63	
Less than 1 Year	20	1653.00	82.70	5.38	
ANOVA					
Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	1408.55	2	704.28	23.04	< .01
Within Groups	2475.53	81	30.56		
Total	3884.08	83			

*Note.* An F ratio was calculated and an alpha level of .05 was utilized to control for Type 1 errors.

Table 7  
*Single Classification Analysis of Variance (ANOVA) Determining Differences  
 Between Local Scholarships Awarded and Amount of College Completed*

LOCAL SCHOLARSHIPS ANOVA:Single					
Factor	Count	Sum	<i>M</i>	<i>SD</i>	
<b>Groups</b>					
Over Two Years	56	153994.96	2749.91	5315.53	
1 to 2 Years	8	5236.24	654.53	850.77	
Less than 1 Year	20	8958.76	447.94	907.75	
ANOVA					
Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	94152320	2	47076160.01	2.42	.09
Within Groups	1574737513	81	19441203.86		
Total	1668889833	83			

*Note.* An F ratio was calculated and an alpha level of .05 was utilized to control for Type 1 errors.

Table 8  
*Single Classification Analysis of Variance (ANOVA) Determining Differences  
 Between Total Scholarships Awarded and Amount of College Completed*

TOTAL SCHOLARSHIPS ANOVA:Single					
Factor	Count	Sum	<i>M</i>	<i>SD</i>	
<b>Groups</b>					
Over Two Years	56	2955736	52781.16	61458.11	
1 to 2 Years	8	72136	9017.03	15411.85	
Less than 1 Year	20	13400	670.44	1137.45	
<b>ANOVA</b>					
Source of Variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	4.66E+10	2	2.33E+10	9.00	< .01
Within Groups	2.09E+12	81	2.59E+9		
Total	2.56E+12	83			

*Note.* An F ratio was calculated and an alpha level of .05 was utilized to control for Type 1 errors.

Table 9

*Frequency of Years of College Completion Related to Dual Credit Courses**Attempted*

Frequency	0 courses	1 to 4 Courses	5 to 8 Courses	
	Attempted	Attempted	Attempted	
	<i>N</i> (%)	<i>N</i> (%)	<i>N</i> (%)	$\chi^2$
Over 2 Years	6 (23%)	32 (82%)	18 (95%)	
1 to 2 Years	4 (15%)	3 (3%)	1 (5%)	
Less than 1	16 (62%)	4 (5%)	0 (0%)	
Year				
Total	26 (100%)	39 (100%)	19 (100%)	35.55 <sup>a</sup>

*Note:* (a)  $\chi^2$  is statistically significant for Observed versus Expected cell frequencies with a  $df = 4$  and tabled value = 9.49 for alpha level of .05.



Table 10

*Frequency of ACE Scholarship Participation and Dual Credit Courses Attempted*

Frequency	0 courses	1 to 4 Courses	5 to 8 Courses	
	Attempted	Attempted	Attempted	
	<i>N</i> (%)	<i>N</i> (%)	<i>N</i> (%)	<i>X</i> <sup>2</sup>
ACE Recipient	0 (0%)	5 (13%)	4 (21%)	
No ACE	26 (100%)	34 (87%)	15 (79%)	
Total	26 (100%)	39 (100%)	19 (100%)	4.90 <sup>a</sup>

*Note:* (a)  $X^2$  is not statistically significant for Observed versus Expected cell frequencies with a  $df = 2$  and tabled value = 5.99 for alpha level of .05.

Table 11

*Frequency of College Years Completed Related to Parent Engagement*

Frequency	2 Or More Years of College <i>N</i> (%)	1 to 2 Years of College <i>N</i> (%)	Less than 1 Year of College <i>N</i> (%)	<i>X</i> <sup>2</sup>
Parent Engagement	34 (61%)	1 (13%)	1 (5%)	
No Parent Engagement	22 (39%)	7 (87%)	19 (95%)	
Total	56 (100%)	8 (100%)	20 (100%)	22.01 <sup>a</sup>

*Note:* (a) *X*<sup>2</sup> is statistically significant for Observed versus Expected cell frequencies with a *df* = 2 and tabled value = 5.99 for alpha level of .05.

Table 12

*Frequency of College Years Completed Related to Student Sports Engagement*

Frequency	2 Or More Years of College <i>N</i> (%)	1 to 2 Years of College <i>N</i> (%)	Less than 1 Year of College <i>N</i> (%)	<i>X</i> <sup>2</sup>
Sports	52 (90%)	5 (63%)	8 (40%)	
No Sports	4 (10%)	3 (37%)	12 (60%)	
Total	56 (100%)	8 (100%)	20 (100%)	68.10 <sup>a</sup>

*Note:* (a)  $X^2$  is statistically significant for Observed versus Expected cell frequencies with a  $df = 2$  and tabled value = 5.99 for alpha level of .05.

Table 13

*Frequency of College Years Completed Related to Student Band and/or Vocal Music Engagement*

Frequency	2 Or More Years of College <i>N</i> (%)	1 to 2 Years of College <i>N</i> (%)	Less than 1 Year of College <i>N</i> (%)	<i>X</i> <sup>2</sup>
Music	23(41%)	3 (38%)	6 (30%)	
No Music	33 (59%)	5 (62%)	14 (70%)	
Total	56 (100%)	8 (100%)	20 (100%)	36.63 <sup>a</sup>

*Note:* (a)  $X^2$  is statistically significant for Observed versus Expected cell frequencies with a  $df = 2$  and tabled value = 5.99 for alpha level of .05.

Table 14

*Frequency of College Years Completed Related to Student School Club**Engagement*

Frequency	2 Or More Years of College <i>N</i> (%)	1 to 2 Years of College <i>N</i> (%)	Less than 1 Year of College <i>N</i> (%)	<i>X</i> <sup>2</sup>
Clubs	51 (91%)	5 (63%)	5 (25%)	
No Clubs	5 (9%)	3 (37%)	15 (75%)	
Total	56 (100%)	8 (100%)	20 (100%)	78.49 <sup>a</sup>

*Note:* (a)  $X^2$  is statistically significant for Observed versus Expected cell frequencies with a  $df = 2$  and tabled value = 5.99 for alpha level of .05.

Table 15

*Frequency of College Years Completed Related to Student Competitive Activity Engagement*

Frequency	2 Or More Years of College <i>N (%)</i>	1 to 2 Years of College <i>N (%)</i>	Less than 1 Year of College <i>N (%)</i>	<i>X</i> <sup>2</sup>
Competition	21 (38%)	2 (25%)	4 (20%)	
No Competition	35 (63%)	6 (75%)	16 (80%)	
Total	56 (100%)	8 (100%)	20 (100%)	37.74 <sup>a</sup>

*Note:* (a)  $X^2$  is statistically significant for Observed versus Expected cell frequencies with a  $df = 2$  and tabled value = 5.99 for alpha level of .05.

Table 16

*Frequencies of College Years Completed Related to Students Qualifying for Free or Reduced Lunch*

Frequency	2 Or More Years of College <i>N</i> (%)	1 to 2 Years of College <i>N</i> (%)	Less than 1 Year of College <i>N</i> (%)	<i>X</i> <sup>2</sup>
Free or Reduced Lunch	9 (16%)	2 (25%)	3 (15%)	
No Free or Reduced Lunch	47 (84%)	6 (75%)	17 (85%)	
Total	56 (100%)	8 (100%)	20 (100%)	.45 <sup>a</sup>

*Note:* (a) *X*<sup>2</sup> is statistically significant for Observed versus Expected cell frequencies with a *df* = 2 and tabled value = 5.99 for alpha level of .05.

## CHAPTER FIVE

### Conclusions and Discussion

The final chapter will provide a summary of the study. The following conclusions may be drawn from the study for each of the seven research questions. The analysis of the data will provide implications for policy, practice, and possible future research.

#### Research Question #1 Conclusions

Overall, the posttest-posttest results indicated the dependent measure of ACT test scores, GPA and GPA percentages were statistically significant different. Students who completed over two years had significantly higher ACT test scores, GPAs, and GPA percentages. This study of comparing student academic averages by years of college completion contributes to discovering a framework. Students that completed two or more years of college had a mean average of 23.59 on the ACT test as compared to students who completed at least one year of college but less than two years of college had a mean average of 18.80 and students who completed less than one year of college had a mean average of 20.40. Secondly, students that completed two or more years of college had a mean average of 3.38 on a 4.0 scale or (91.46%) grade point average compared to students who completed at least one year of college but less than two years of college had a mean average of 2.39 (83.11%) GPA and students who completed less than one year of college had a mean average of 2.39 (82.65%) GPA.

This study suggests that students who have obtained higher ACT and GPA scores have an increased rate of completing more years of college. Many post-secondary institutions use the ACT scores and GPA as predictors of college readiness. This data



would support that students with higher ACT scores and GPAs would be more prepared for college.

Overall, the posttest-posttest comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college had statistically significantly different local and total scholarship amounts. The students who completed at least two years of college obtained \$2,749.91 in local scholarships compared to \$654.53 for students who completed at least one year of college but less than two years of college and \$447.94 for students who completed less than one year of college. Also, the differences increased substantially when comparing total scholarship amounts. Students who completed at least two years of college averaged \$52,781.16 in total scholarship amounts whereas students who completed at least one year of college but less than two years of college averaged \$9,017.03 and \$670.44 for students who completed less than one year of college. This study suggests that students who obtain more scholarships have an increase rate of college completion.

The posttest-posttest results indicated the independent measures of engagement frequencies were statistically significantly different. Students who completed at least two years of college, 89% of them took dual credit college classes compared to 50% of the students who completed at least one year of college but less than two years of college and 20% of the students who completed less than one year of college. Students who were engaged in student activities, 98% of the students who completed at least two years of college were engaged in at least one student activity compared to 75% of students who completed at least one year of college but less than

two years of college and 60% of students who completed less than one year of college. Other comparisons would include sports, competitive activities, clubs, band, and or vocal music. Students who completed at least two years of college, 93% would be engaged in sports, 38% would be engaged in competitive activities, 91% would be engaged in clubs, and 41% would be engaged in band or/and vocal music. Whereas student who completed at least one year of college but less than two years of college, 63% would be engaged in sports, 25% would be engaged in competitive activities, 63% would be engaged in clubs and 38% would be engaged in band or/and vocal music. Students who completed less than one year of college, 40% would be engaged in sports, 20% would be engaged in competitive activities, 25% would be engaged in clubs and 30% would be engaged in band or/and vocal music. Lastly, parent engagement would include parents that attended a presentation on scholarships, college admissions, and financial aid during their child's senior year. Students that completed at least two years of college, 61% of their parents attended the senior meeting whereas students that completed at least one year but less than two years, 13% parents attended and students that completed less than one year of college had 5% parent participation.

The posttest-posttest results indicated the independent measure of student financial characteristics as related to amount of college completion were not statistically different. For students who completed at least two years of college, 16% qualified for free or reduced lunch whereas students that completed at least one year of college but less than two years, 25% qualified, and students that completed less than one year of college, 15% qualified for free or reduced lunch. The ACE scholarship, which

provides funding for underrepresented students to take dual credit college classes 14% of the students that completed at least two years of college received the scholarship whereas 13% of the students that completed at least one year but less than two years of college received the scholarship and 0% of the students that completed less than one year of college received the scholarship.

### **Research Questions #2 Conclusions**

Overall, the posttest-posttest results indicated the dependent measure of ACT test scores had differences between ACT scores for different amounts of college completed. The null hypothesis was rejected indicating a difference between groups. There is a statistically significant difference between the students who completed at least two years of college ( $M = 23.59$ ) and the students who completed at least one year but less than two years of college ( $M = 18.60$ ). There was no significant difference between students who completed at least two years of college ( $M = 23.59$ ) and students who completed less than one year of college ( $M = 20.40$ ). One conclusion that can be drawn is that more tests are needed to better understand the students who completed less than one year of college.

It was discovered that in some cases, even those student who scored lower than the class average on the ACT, students were successful in their post-secondary pursuits. Some were finding success in community college trade programs, while others were using community college and state college programs as stepping stones to four-year colleges/universities.

The posttest-posttest results indicated the dependent measure of GPA and GPA percentages were for different amounts when compared based on the amount of

college completed. The null hypothesis was rejected indicating a difference between groups. There was a statistically significant difference between the students who completed at least two years of college (GPA = 3.38 or GPA percentage = 91.46%) and the students who completed at least one year but less than two years of college (GPA = 2.40 or GPA percentage = 83.10%) and students who completed less than one year of college (GPA = 2.50 or GPA percentage = 82.70%). This indicates that the students that had higher GPA's and GPA percentages were the students that completed the most college. Adelman found that college success could often be traced to the rigor of the high school curriculum (2006).

### **Research Question #3 Conclusions**

Overall, the posttest-posttest comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college, had no significant difference in the amount of local scholarships awarded compared to the amount of college completed. Students who completed at least two years of college had a mean average of \$2,749.91 total amount of local scholarships received, whereas students who completed at least one year of college but less than two years of college had a mean average of \$654.53 and students who completed less than one year of college had a mean average of \$447.94 total amount of local scholarships received. One conclusion that can be drawn from this study is that the community is offering scholarships to students from all groups, students who completed at least two years of college, students who completed less than one year of college, and students who completed less than one year of college.

However, when considering the total amount of scholarships awarded, the null hypothesis was rejected. The posttest-posttest comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college indicated that there was a significant difference with total scholarships awarded and amount of college completed. Students who completed at least two years of college had a mean average of \$52,781.16 total amount of total scholarships received, whereas students who completed at least one year of college but less than two years of college had a mean average of \$9,017.03 and students who completed less than one year of college had a mean average of \$670.44 total amount of scholarships received. One conclusion that can be drawn from this study is that higher academic performance does indicate larger scholarship totals. These findings support the research completed by the College Board in which it was established that almost half of our country's students qualify for free and or reduced priced lunch, implying that the need for scholarships and other financial assistance is critical (2014).

#### **Research Question #4 Conclusions**

This question explored the relationship between dual credit courses completed and the amount of college completed as well as the relationship between dual credit courses completed and whether or not the student was a recipient of an ACE scholarship, which is available to low-income, high-achieving students to enroll in college-credit classes while still in high school. The posttest-posttest comparison of students who were ACE recipients and students who were not ACE and who

completed at least two years of college, completed at least one year of college but less than two years of college, or completed less than one year of college were statistically significantly different. There was a statistically significant difference in students who have completed at least two or more years of college and dual credit courses attempted, however there was not a significant difference between ACE recipients and no ACE recipients compared to dual credit courses attempted. The data suggests that students that take more dual credit courses have a higher college year's completion rate, reinforcing the research findings that link college success to frequency of dual credit courses completed (Adelman, 2006). Also, there was not a difference between students who were ACE recipients and students who were not ACE recipients and dual credit courses attempted.

#### **Research Question #5 Conclusions**

Overall, the posttest-posttest parent engagement data indicated a significant difference when comparing students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college. There was a statistically significant difference in students who had parents that attended a senior meeting on college information, scholarships, and dual credit courses and college years completed. The data suggests that parent engagement is very important and can significantly influence student college completion rates. As noted in the literature review section of this study, families are a key component in helping their children become college ready (Leonard, 2013). When families believe that college is not a possibility for their children, this may influence the expectation of their high school

aged students. This research district encourages families to take an active role in investigating the higher education processes (Horn & Nunez, 2000; Engle et al., 2006).

### **Research Question #6 Conclusions**

The posttest-posttest sports engagement data comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college was statistically significant. There was a significant difference in college completion rates for students who had participated in sports compared to students who did not participate in sports.

This was also true for students who participated in band and/or vocal music programs in high school. The posttest-posttest band or/and vocal music engagement data comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college was a statistically significantly higher than completion rates for students who did not participate in band or/and vocal music.

When exploring club engagement rates and college completion rates, analyses of data comparing students who completed at least two years of college, students who completed at least one year of college but less than two years of college indicate that students who were engaged in clubs had higher college completion rates than students who did not engage in clubs, while students who completed less than one year of college had more students not engaged in clubs than were engaged in clubs. This

seems to indicate that college completion rates are related to participation in clubs in high school.

Overall, the posttest-posttest competitive activity engagement data comparison of students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college indicate that students who completed less than one year of college were engaged in competitive activities much less frequently than students with higher college completion rates.

The data suggests that student engagement will support students attending higher education, giving them a greater possibility of completing more years of college.

#### **Research Question #7 Conclusions**

Overall, the posttest-posttest free or reduced priced lunch data comparing students who completed at least two years of college, students who completed at least one year of college but less than two years of college, and students who completed less than one year of college indicate that participation in the subsidized free and/or reduced priced lunch has no significant impact on college completion rates. The data suggests free or reduced lunch students are receiving the same level of education as the non-free or reduced lunch students preparing both, regardless of financial limitation, the possibility of completing college at a greater rate.

#### **Implications for Practice**

Today our global economy needs a well-educated and skilled workforce. This research has taken the initiative to build the bridge for students to make the leap towards higher education. The framework includes academic performance,



scholarships, dual credit college courses, student engagement, and parent engagement.

This research has indicated that academic performance measured by the ACT test score and Grade Point Average (GPA) does predict years of college completion. In this study it was determined that the average ACT score for the group that completed two or more years of college was a 23.59 and their average GPA was a 3.38 or 91.46%. Although the average ACT score was a 23.59 the range was a 32 to a 15 for students that completed two or more years of college. Note that some students that completed two years of college received associates degrees in the technical areas or were students that started in a community college transferring to a state college or university making it possible for them to be successful with lower ACT scores. In this study the GPA or GPA percentages has indicated a larger predictor of college completion rate. The GPA average was a 3.38 or 91.46% for the students that completed two or more years of college, whereas the students that completed one year, but less than two was a 2.39 or 83.11%, and the students that completed less than one year of college was a 2.39 or 82.65%.

Another brick to the Bridge was scholarships. The students that completed two or more years of college were able to accumulate \$2,749.91 in local scholarships and \$52,781.16 in total scholarships. In the class of 2012, 92.86% received at least one scholarship. Scholarships are one avenue to reduce the expense of college (Higher Education Policy, 2005). In this study there was not a significant difference amongst the three different groups of college completion rate and local scholarships received. This provides a good indication that scholarships are being promoted to all students

with various interests and abilities. Breaking down the stigma of students believing they have to be top in their class to receive a scholarship.

Research has indicated there is a connection between students taking dual credit college courses in high school and college success (Adelman, 2006). This study also indicated a positive correlation between dual credit courses taken and the number of years completion rate in college. Students that took five to eight dual credit college classes were 94.74% more apt to complete two or more years of college whereas students that took one to four dual credit college classes the percentage was 82.50%. Lastly, if a student took at least one dual credit class they had a 59% chance of completing two or more years of college. The rigorous curriculum that dual credit college classes provide is essential in helping students to perform successfully in college.

Another key block to the bridge framework was student engagement. The students that had completed two or more years of college, 98% were in at least one activity during high school proving that student engagement is an important key. As other categories were investigated it was determined that students that completed two or more years of college, 93% were in at least one sport, 91% were in at least one school club, 41% were involved in band and/or choir, and 38% were active in at least one competitive school activity such as mock trial, speech, quiz bowl, one act, or academic decathlon.

Probably the most significant but most difficult to measure is parent engagement. Families are a key component in bridging the gap and helping their children become college ready (Leonard, 2013). In this study, parents attending a senior meeting that

entailed information about scholarships, college admissions, financial aid, and other college contextual information indicated the measure of parent engagement. The results indicated 61% of the students that completed two or more years of college had parents that attended the parent senior meeting.

Students with financial limitation did not serve a deterrent in this study. The underprivileged students that qualified for free or reduced lunch were just as apt to meet the goal of completing two or more years of college as the students that did not qualify for free and reduced lunch. These results indicate that regardless of family income levels, students from this study are receiving the same educational opportunities. In fact, students that qualified for the ACE Scholarship, which pays for lower income students to take dual credit college classes in high school, 76.90% were able to complete two or more years of college. The lower socioeconomic students' completion rate of dual credit college classes was 95.70%. These statistics are remarkable. This may in part be due to the high quality of teachers in the research district. Over 70% have a master's degree or above and on average have over 17 years of teaching experience.

In conclusion, this study was conducted to create a bridge of best practices for younger students to follow. Only 30% of the United States population has a bachelor's degree (Gillis, 2007). Remarkable, the underrepresented students from the class of 2012 that qualified for the ACE Scholarship had a 76.90% success rate of completing more than two years of college. This was substantially higher than the other two groups. The students that completed their associate degree and working towards their bachelor's degree had a 65.10% success rate. For the students that

completed two or more years of college that were working towards their bachelor's degree the percentage was 55.80. All in which are above the 30% average for the country.

### **Implications for Policy**

The ACE scholarship is designed for low-income, high-achieving high school students to get an early start on college credits. To qualify, a student and his family must participate in one of the federal need-based programs or show financial need by extreme hardship. This scholarship pays for lower-income students to take dual credit college classes. This opportunity for lower income students has achieved great results. Lower income students do not believe they are college material. When suggestions are made to encourage them to take dual college classes they turn the opportunity down because they believe they cannot afford dual credit college classes. This ACE scholarship provides hope and a vehicle for them to try out college classes while still in high school. Once these students complete the dual credit college classes successfully they begin to believe they are college material for the first time in their lives. This study indicates the success rate these students have been achieving. Despite the success, the federal government is pulling \$285,000 from the program, the state will pay \$685,000 this year, however with the loss of federal funds this may mean as many as 1,000 fewer students being able to be awarded the ACE scholarship in the state of Nebraska according the Nebraska Coordinating Commission for Postsecondary Education. The Coordinating Commission is asking the Legislature to help fund the ACE scholarship. Finding the finances to help these students take dual credit courses sends a powerful message that we believe in them and that they are

college material (College Board, 2014). Studies like this reinforce the importance of programs like the ACE scholarship. Higher education is a great difference maker. It opens doors to economic opportunities as well as enriches the quality of life.

Providing these underrepresented talented students with the chance to pursue college credit while in high school is priceless.

### **Implications from the Class of 2012 Participants**

This research provides another component, the voices of the students from the Class of 2012. We have found that the old measures have not proved to be accurate when investigating college readiness (Conley, 2013). This study goes to the source, 22% of the Class of 2012 graduates were contacted. Many comments matched directly to the research found in this study. First, research has indicated a positive correlation between students taking dual credit college classes in high school and college success (Adelman, 2006). Many of the students contacted were great advocates of dual credit classes. Dual credit classes taught them how to write comprehensive papers, better understand the value of time management, and gave them a better sense of what college would be like. One student stated that his success in college is directly related to his enrollment in dual credit classes in high school. Most students reaffirmed they felt prepared academically in college because dual credit classes prepared them well. The high school teachers pushed them to do quality work. The dual credit classes were aligned with the knowledge and skills needed to be successful in college (Conley, 2008). One student advised this researcher to make sure that future students take as many dual credit college courses

as they can because they give students the opportunity to practice what is expected in college.

Secondly, the graduate members stressed work ethic and discipline in college is invaluable. They mentioned you have to read the book even if it is difficult, go to class, don't get behind, do your homework, talk to your professors, keep priorities straight, be persistent, work with you classmates, know how to manage your time, learn how to teach yourself, and be your own advocate. These ideals match up with the research done in this study. Research has indicated that "conscientiousness, dependability, perseverance, work ethic, teamwork, and being open to new experiences" are top predictors in college readiness (Sparks, 2010, p. 2).

### **Implications for Further Research**

This study examined 84 students from the Class of 2012. This study found the ACT score, GPA, dual credit college classes, scholarships, student engagement, and family engagement are measurable predictors of years of college completion. This study agrees that more research needs to be accomplished to connect the data from high school to college (Gillis, 2007). The data collection needs to be long term following several graduating classes to discover a stronger framework for students to follow. Research is limited due to lack of funding (Gillis, 2007). However, if we want to better prepare our students to be successful in college, this research needs to be continued.

## References

- ACT. (2005). *Crisis at the core: Preparing all students for college and work access*. Iowa City, IA: ACT, Inc.
- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.
- Adelman, C. (1999). *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington DC: U.S. Department Of Education, Office of Educational Research and Improvement.
- Armor, H., Schwartz, A., & Stiefel, L. 2006. *Do Good High Schools Produce Good College Students? Early Evidence form New York City*. Vol. *Advances in Applied Microeconomics* 14, pp. 51-80.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*, New York, NY: W.H. Freeman.
- Baum, S., Kurose, C., & Ma, J. (2013). *How college shapes lives: understanding the issues. Trends in higher education series* College Board Advocacy & Policy Center. 45 Columbus Avenue, New York, NY 10023.
- Berkner, L. & Chavez, L. (1997). *Access to Postsecondary Education for 1992 High School Graduates*. Washington, DC: National Center for Education Statistics.
- Bryant, E. (2013). Selectivity is changing for college admissions. *LINK Magazine*, p. 53.
- Chaconas, A. (2013a). Sending students off to college with scholarships: Get your students scholarship—even at college. *LINK Magazine*, pp. 36-37.
- Chaconas, A. (2013b). Understanding financial aid forms. *LINK Magazine*, p. 38.

- Chaconas, A. (2013 c). Cracking the code. *LINK Magazine*, p. 13.
- Chan, D., Cochrane, D.F., Gallegos, S., & Irons, E. (2008). *Paving the way: How financial aid awareness affects college access and success*. The Institute for College Access and Success.
- Chen, X. (2005). First-Generation Students in Postsecondary Education: A Look at their College Transcripts. Washington, DC: National Center for Education Statistics.
- College Board. (2014). The 10<sup>th</sup> annual Feb] report to the nation. 45 Columbus Avenue, New York, NY 10023
- Conley, D.T. (2008). Rethinking college readiness. *New England Journal of Higher Education*, 22(5), pp. 24-26.
- Conley, D.T. (2007). Redefining college readiness. Eugene, OR: Educational Policy Improvement Center.
- Conley, D.T. (2005). College knowledge: What it really takes for students to succeed and what we can do to get them ready (1<sup>st</sup> ed.). San Francisco, CA: Jossey-Bass.
- Conley, D.T. (2003). Understanding university success. Eugene, OR: Center for Education Policy Research, University of Oregon.
- Conley, D.T. (2010). College and career ready: Helping all students succeed beyond high school. San Francisco, CA: Jossey-Bass.
- Conley, D.T. (2013, November 13). Interviewed by Allison J. Head. Project Information Literacy, Smart talk interview, no. 17.



- Delisio, E.R. (2009). Remembering supporting, the “forgotten middle.” Retrieved from the Education World website:  
[http://www.educationworld.com/a\\_issues/chat/chat165.shtml](http://www.educationworld.com/a_issues/chat/chat165.shtml).
- Engle, J., Bermeo, A., & O’Brien, C. (2006). Straight from the source: What works for first-generation college students Pell Institute for the Study of Opportunity in Higher Education. 1025 Vermont Avenue NW Suite 1020, Washington, DC 20005.
- Engstrom, C., & Tinto, V. (2008). Access without support is not opportunity. *Change*, 40(1), 46-50.
- Epstein, J. L. (2010, November). School/family/community partnerships: Caring for the children we share. *The Phi Delta Kappan*, pp. 81-96. Retrieved from [www.kappanmazazine.org](http://www.kappanmazazine.org)
- Gillis, C. (2007). A “jump start” on college: How early college access programs can help high school students in Baltimore city. Abell Foundation. 111 South Calvert Street Suite 2300, Baltimore, MD 21202. Retrieved from <http://search.proquest.com/docview/61890188?accountid=14692>
- Glanz, J. (2006). *School-community leadership*. Thousand Oaks, CA: Corwin.
- Helsel, R.S. (2004). Campus visit drives college choice. *Art and science group*, 5(5).
- Hendrick, A. (2013). How to create a college-going culture: Tips for your students, parents and faculty. *LINK Magazine*, p. 43.
- Higher Education Research Institute. (2007). *First in my Family*. Retrieved from: <http://www.heri.ucla.edu/pdfs/pubs/briefs/firstgenresearchbrief.pdf>

- Hoffman, N. (2003). College credit in high school: Increasing postsecondary credential rates of underrepresented students. Boston, MA: Jobs for the Future.
- Horn, L. & Nunez, A. (2000). Mapping the Road to College: First-Generation Students' Math Track, Planning Strategies, and Context of Support. Washington, DC: National Center for Education Statistics
- Institute for Higher Education Policy. (2005). Private Scholarships Count: Access to higher education and the critical role of the private sector. Washington, DC.
- Isernhagen, J., Florendo, J., & Effle, N. (2011). Parental involvement models and Programs. Unpublished manuscript, Department of Educational Administration, University of Nebraska, Lincoln, Nebraska.
- Karp, M.M., Calcagno, J.C., Hughes, K. L., Jeong, D. W., & Bailey, T. R. (2007). The post-secondary achievement of participants in dual enrollment: An analysis of student outcomes in two states. St. Paul, MN: National Research Center for Career and Technical Education.
- Kim, D.H., & Schneider, B.L. (2005). Social capital in action: Alignment of parent support in adolescents' transition to postsecondary education. *Social Forces* 84, pp. 1181-1206.
- Kirst, M.W. (2008, Fall). Secondary schools and colleges must work together. Thought & Action: *The NEA Higher Education Journal*, pp. 111-122.
- Kronish, E. (2008). College fairs. Retrieved from <http://www.fastweb.com/collegesearch/articles/763-college-fairs>

- Leonard, J. (2013). Maximizing college readiness for all through parental support. *School Community Journal*, 23(1), pp.183-202.
- Lin, N. (2001). *Social capital: A theory of social structure and action*. New York: Cambridge University Press.
- Lundell, D.B., Higbee, J.L., Hipp, S., & Copeland, R.E. (2004). Building bridges for access and success from high school to college: Proceeding of the metropolitan higher education consortium's developmental education initiative. Minneapolis, MN:Center for Research on Developmental Education and Urban Literacy, University of Minnesota.
- Martinez, M., & Klopot, S. (2005). *The link between high school reform and college access and success for low-income and minority youth*. Washington, DC: American Institutes for Research.
- National Center for Education Statistics. (2004). *Conditions of education 2004*. Washington, DC: U.S. Department of Education.
- Oldfield, K. (2007). Humble and hopeful: Welcoming first-generation poor and working-class students to college. *About Campus*, 11(6), pp. 2-12.
- Olenchak, F.R. & Hebert, T.P. (2002). Endanger academic talent: Lessons learned from gifted first-generation college males. *Journal of College Student Development*, 43(2), pp. 195-212.
- Parent Teacher Association (PTA). (2009). *PTA National standards for family-school partnerships*. Retrieved from [http://www.pta.org/Documents/National\\_Standards\\_Implementation\\_Guide\\_2009.pdf](http://www.pta.org/Documents/National_Standards_Implementation_Guide_2009.pdf)

- Pham, C., & Keenan, T. (2011). Counseling and college matriculation: Does the availability of counseling affect college-going decisions among highly qualified first-generation college-bound high school graduates?. *Journal Of Applied Economics & Business Research*, 1(1), pp. 12-24.
- Plummer, P., & Nellhaus, J. (2008). *Massachusetts school-to-college report, high school class of 2005*. Malden, MA: Massachusetts Board of Higher Education & Massachusetts Department of Education.
- Reardon, S. (2011). The widening academic achievement gap between the rich and the poor. New evidence and possible explanations. In G.J. Duncan & R.J. Murnane (Eds.) *Whither opportunity? Rising inequality, schools, and children's life chances* (pp. 91-116). New York and Chicago: Russell Sage Foundation and Spencer Foundation.
- Robbins, S.B., Lauver, K., Le,H., Davis, D., Langley, R., & Calstrom, A. (2004). *Do psychosocial and study skill factors predict college outcomes? A meta-analysis*. *Psychological Bulletin*, 130 (2), pp. 261-288.
- Rosa, M. & Hamrick, F. (2002). Family influences on academic decision making among women college students of Mexican descent. *Equity and Excellence in education*, 35(1), pp. 59-69.
- Rowan, K., & Heather, T. (2007). Predictors of delayed college enrollment and the impact of socioeconomic status. *The Journal of Higher Education* 78:2, pp. 188-214.

- Schneider, M., & Yin, L. M. (2011). The high cost of low graduation rates: How much does dropping out of college really cost? Washington, DC: American Institutes for Research.
- Sparks, S.D. (2010). Experts begin to identify nonacademic skills key to success. *Education Week*, 30(15). Retrieved from <http://www.edweek.org/ew/articles/2010/12/23/15aera.h30.html>
- Standards for Success. (2003). An introduction to work samples and their uses. Eugene, OR: Center for Educational Policy Research, University of Oregon.
- Stebbleton, M.J., & Soria, K.M. (2012). Breaking down barriers: Academic obstacles of first-generation students at research universities. *Learning Assistance Review*, 17(2), pp. 7-20.
- Swanson, M.C. (2005). It's time to focus on the forgotten middle. *Education Week*, 25,31,33.
- U.S. Department of Education Office of Vocational and Adult Education Pathways to College Access and Success. (2005).
- Vargas, J.H. (2004). College Knowledge: Addressing Information Barriers to College. Boston, MA: The Education Resources Institute.
- Venezia, A., Kirst, M., & Antonio, A. (2004). Betraying the college dream: How disconnected K-12 and post-secondary systems undermine student aspirations. San Francisco: Jossey-Bass.
- Wagner, T. (2008). Rigor redefined. *Educational Leadership*, 66(2), pp. 20-25.
- Wasden, C. (2013). Creative ways to promote college: Broaden your students' horizons with these cool ways to get the message out about college. *LINK Magazine*, pp. 46-47.