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Nathan Wade Morris

*Arkansas Tech University*

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IMPROVING COLLEGE MATRICULATION IN HIGH POVERTY  
ARKANSAS HIGH SCHOOLS THROUGH EARLY  
ADVISING AND COLLEGE MATCHING

A Dissertation Submitted  
to the Graduate College  
Arkansas Tech University

in partial fulfillment of requirements  
for the degree of

DOCTOR OF EDUCATION

in School Leadership

in the Department of Center of Leadership and Learning  
of Arkansas Tech University

May 2019

Nathan Wade Morris

Bachelor of Science in Education and Health Professions, University of Arkansas, 1998  
Master of Arts in Teaching, University of Arkansas, 1999  
Educational Specialist, Arkansas Tech University, 2018

## Dissertation Approval

This dissertation, “Improving College Matriculation in High Poverty Arkansas High Schools through Early Advising and College Matching,” by Nathan Wade Morris, is approved by:

Dissertation Chair:

---

Steve Bounds  
Professor, Center for Leadership and  
Learning

Dissertation Committee

---

John Freeman  
Professor, Center for Leadership and  
Learning

---

Matt McClure  
CLO/CFO, Cross County School District

Program Director:

---

John Freeman  
Professor, Center for Leadership and  
Learning

Graduate College Dean:

---

Jeff Robertson  
Dean, Graduate College

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Most of all, thank you to all of my bosses, colleagues, co-workers, players, and students, both past and present. You have helped this moment happen, and for that, I am forever grateful.

## Dedication

This dissertation is dedicated to five people. Two of them have been in my life since their day one, one has been with me during every step of this dissertation, and two of them have been a part of my life since my day one.

To my twins, Cambree Louise and Cooper Frederick. You were born on August 27<sup>th</sup>, 2018 just as I was in the middle stages of writing this dissertation. I love you both with all my heart and it will be the greatest joy of my life to watch you grow and mature. My hope is that you both live in a world that continues to allow you to be any and everything you want to be. I hope you develop the value of a good education and think independently, but also understand the value of seeking good advice. Above all else, work hard and be determined in all you do and always be kind, helpful, and love one another.

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## Abstract

This study addressed college matriculation rates among high-poverty Arkansas high schools and public charter schools. The purpose of the study was to examine the effects of the college preparation program of Cross County New Tech High School and KIPP Delta Collegiate High School from 2014-2015 through 2017-2018. Central High School in Helena-West Helena was added along with KIPP Blytheville Collegiate, along with the aforementioned schools, once they formed the Delta College Attainment Network (DCAN) in the 2017-2018 school year. The study examined ACT scores of the schools from the previously mentioned dates, as well as, the college matriculation rates to Arkansas two-year and four-year colleges and universities. These four schools were compared to other Arkansas high schools and public charter schools of similar social-economic status (SES). The DCAN consortium has guidelines for the participating schools to use in the development of the college-going culture for its students. Early college advising, and college matching are two pillars of the program. There were varied results with the ACT data in that only KIPP Delta Collegiate showed a higher statistical difference in those scores. However, data revealed there was a statistically significant difference in the college matriculation rate of the schools and the combined efforts of DCAN.

*Keywords:* matriculation; college advising; college matching; post-secondary education

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## **Chapter One: Introduction**

### **Background of the Study**

High school administrators are responsible for the preparation of student's post-secondary education. Not all students will choose the post-secondary education path for the future, but the ones that do must be ready. In 2015, 69.0% of high school graduates chose to attend a two-year or four-year college directly after high school. That number of high school graduates enrolling in post-secondary education has increased 14.0% from 2005-2015 (United States Department of Education, n.d.). For various reasons, the group often left behind are students from low socioeconomic status (SES). According to Hartle and Nellum (2015), college enrollment by recent low SES high school graduates dropped from 55.9% to 45.5% from the years 2008 to 2013. In today's high-tech society, low SES college enrollment should be increasing and closer to the percentages of middle-class students. During the same timeframe, low SES students saw a decrease in college enrollment from 65.2% in 2008 to 63.8% in 2015. As the percentage of low SES students pursuing post-secondary education decreased, the overall national high school graduation rate was on the rise (Hartle & Nellum, 2015).

College persistence is another challenge is facing the low SES population. There are several documented reasons behind the lack of persistence and retention of low SES students that enroll in two-year and four-year colleges and universities. For many students, the financial burden is too hard to overcome. Another factor is low-income students often settle for colleges with low graduation rates (Bjorklund-Young, 2016). These students lacked the necessary background information to make the best decision about post-secondary education. Often the necessary background information should be

obtained while in high school. Students from low SES backgrounds do not have the same network and support of individuals to help them as students from higher income levels (Bjorklund-Young, 2016).

### **Problem Statement**

In our current educational system, students of low SES do not attend college at the same rate as more affluent students their same age. Also, the college persistence rate of low SES students is significantly lower than that of higher income students. A possible cause of this problem is the lack of college-level advising for all high school students, but more specifically high-poverty students.

### **Purpose of the Study**

The purpose of this study was to examine the effects of college-level advising on admittance to, and persistence in, post-secondary education of low socioeconomic high school students. There are four high schools in the state of Arkansas that currently offer college-level advising to their students. The schools are Cross County New Tech High School, KIPP Delta Collegiate High School, KIPP Blytheville College Prep, and Helena-West Helena Central High School. Collectively, these districts have formed the Delta College Attainment Network (DCAN or Delta CAN). Prior to the implementation of DCAN, the Cross County and KIPP Delta high schools offered this type of specialized advising starting the 2014-2015 school year. From the 2014-2015 to the 2016-2017 school years, the data from KIPP Delta and Cross County High School were examined to determine if the schools from those two groups were placing their high-poverty students into college at a higher rate, as compared to the other high-poverty schools in the state during the same timeframe. Data from Cross County and KIPP Delta were added to the

DCAN school for the 2017-2018 school year, data were examined to determine if these schools were placing students in college at a higher rate, as compared to the other high-poverty schools in the state of Arkansas during the same time period.

The vision of the DCAN was to partner with the Arkansas Delta to provide sustainable post-secondary attainment and completion systems to transform and uplift communities (Brown, 2017). Students from the DCAN schools place an emphasis on college as early as seventh grade. These students also start college visits in the seventh grade. Students will make at least two college visits per year until their senior year of high school. One of the pillars of the DCAN Dozen was to provide consistent opportunities to all students and expose them to college-level opportunities (Brown, 2017). By the time the students are in their second semester of their junior year, the advisor's set up more individualized college visits for students. Students in these small rural communities quite often do not have the opportunities to visit various colleges and universities afforded through DCAN. College visits allow students to see a more culturally diverse area of the state and region that they may not have experienced before. As with any internship or visit into a different and uncomfortable area, students begin to process and visualize themselves into a college setting.

At least two college advisors are available to these students during their junior and senior year of high school. These advisors are a part of DCAN but are located on each high school campus within the consortium. The DCAN advisors provide all students individualized college and career counseling including all aspects of preparation for and applying to multiple colleges. Before this happens, the advisors spend time with each student as they begin the college institution selection and matching process to

determine the best fit for each individual student. This could be a financial fit, or one that meets their academic needs. The first training students receive is about the application process to post-secondary institutions. Students are advised with the college advisor to make a list of possible institutions for which the student might be qualified, or even where the student may want to go. The list of possible institutions is the beginning of the college matching process. Academic matching is the process in which a student's college selection is compared to the academic ability and the abilities of the student to succeed.

The DCAN advisors and the school also involve the parents of students throughout the entire process. There is a Free Application for Federal Student Aid (FAFSA) night for student and parents to learn how to complete financial aid paperwork. This can often be a daunting task for parents, especially for parents of first-generation students who are the first in their family to attend college. DCAN schools ensure that 100.0% of its students complete the FAFSA. Advisors also help students with the process of applying for scholarships (DCAN Dozen, 2018).

### **Research Hypotheses**

The following are the research study null hypotheses:

1. There is no significant difference between the ACT scores of the Cross County New Tech High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18.
2. There is no significant difference between the ACT scores of the KIPP Delta Collegiate High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18.

3. There is no significant difference between the combined ACT scores of the Cross County New Tech High School and KIPP Delta Collegiate High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-2018.
4. There is no significant difference between the combined ACT scores of the DCAN schools and other Arkansas public and charter schools with similar SES characteristics for the school year 2017-18.
5. There is no significant difference between the ACT scores of the DCAN schools for the school year 2017-18.
6. There is no significant difference between the college matriculation rates of the Cross County New Tech High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18.
7. There is no significant difference between the college matriculation rates of KIPP Delta Collegiate High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18.
8. There is no significant difference between the combined college matriculation rates of the Cross County New Tech High School and KIPP Delta Collegiate High School and other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-2018.
9. There is no significant difference between the combined college matriculation rates of the DCAN schools and other Arkansas public and charter schools with similar SES characteristics for the school year 2017-18.

10. There is no significant difference between the college matriculation rates of the DCAN schools for the school year 2017-18.

### **Research Questions**

The research questions for this study are as follows:

1. How do the ACT scores and college matriculation rates of the Cross County New Tech High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
2. How do the ACT scores and college matriculation rates of the KIPP Delta Collegiate High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
3. How do the combined ACT scores and college matriculation rates of the Cross County New Tech High School and KIPP Delta Collegiate High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2016-18?
4. How do the combined ACT scores and college matriculation rates of the DCAN schools compare with other Arkansas public and charter schools with similar SES characteristics for the school year 2017-18?
5. How do the combined ACT scores and college matriculation rates of the DCAN schools compare to each other for the school year 2017-18?

### **Significance of the Study**

The research study topic is important to many entities, including the Arkansas Department of Education (ADE), Arkansas Department of Higher Education (ADHE), Arkansas school districts, the Arkansas State Legislature, and the Walton Foundation.

The results of the study could have a profound effect in the way high school students are prepped, encouraged, and counseled for acceptance into post-secondary education.

The ADE and all Arkansas school districts should utilize this information to help shape curriculum, so all students in the state are better served and meet their post-secondary potential. If early college-level advising is effective in high schools, meaning more students enroll in college, then decisions to place resources into those areas should be a decision made by school leaders and legislators. School leaders look for stronger ways to keep students interested in school. This is especially true in high-poverty schools, where dropout rates can be as much as five times higher than in less poverty-stricken districts (Rumberger, 2013). Schools that implement early college advising with students may concentrate on more frequent conversations with students about their post-secondary future.

The ADHE will be interested in the data results, so they can help prepare post-secondary schools for the increased number of students that may begin enrolling into Arkansas colleges and universities. Not only will early college advising programs possibly lead to an increase in college ready students, but these programs could also lead to greater retention rates in colleges and universities. Therefore, increasing retention rates, could drive the current increase in enrollment of state colleges and universities.

The Arkansas State Legislature and the Governor of Arkansas may find this study useful after a few more years into the program. More college students are entering and persisting in college will yield more college graduates who will be ready for professional jobs. The legislature and the governor's office often seek to bring in more jobs to the state. These stakeholders need to become more strategic regarding the type of jobs



created to better equate the types of graduates that the state produces. Many of these jobs do not require advanced degrees and are held by workers from lower SES backgrounds. As more of these students enter and complete a college degree, the need for advanced degree jobs will be in-demand.

The Walton Family Foundation is currently funding half of the DCAN program. It is a dollar-for-dollar match, meaning whatever each school gives, the Walton Family Foundation matches. The Foundation may be able to utilize the data from this study to evaluate the effectiveness of the program for low SES students; thus, allowing them to determine if the DCAN program is a worthy investment in rural communities with higher amounts of poverty. With its anticipated effectiveness, the Walton Family Foundation may want to continue this investment into even more rural high-poverty high schools.

### **Scope of the Study**

This quantitative research involved a comparative analysis using college entrance exams from schools in the DCAN consortium and compared them to other high-poverty public high schools and public charter schools in the state of Arkansas. The comparison was made by examining the American College Test (ACT) scores of these two groups. The researcher also compared the college matriculation rate of students from the same groups of schools during the same timeframe. The participants were students from high-poverty Arkansas high schools and public charter schools from 2015-2018. The scores from Cross County New Tech High School and KIPP Delta Collegiate High School were separated from the other high-poverty school averages. This data was archived with the Arkansas Department of Education (ADE), Office of Educational Policy (OEP), and the Arkansas Department of Higher Education (ADHE).

For this study, data was collected from the DCAN schools. It was also collected from the ADE, ADHE, and archived data with the OEP from the University of Arkansas. The data for DCAN was obtained for the 2017-2018 school year. The data from Cross County New Tech High School and KIPP Delta Collegiate High School was tracked from the 2014-2015 school year through the 2017-2018 school year.

### **Limitations**

The most significant limitation to this study was that the DCAN consortium is in its infancy stage. The schools that make up DCAN only formed prior to the 2017-2018 school year. Therefore, this study will only have one year of combined data consisting of KIPP Delta and Cross County New Tech High School with KIPP Blytheville College Prep and Central High School. The data from DCAN were the college entrance exams for the 2018 seniors and the college matriculation rate of the 2018 senior class. During spring 2019, the researcher completed this study since it was the only data available from DCAN.

Another limitation to this study lay within the comparison group. The researcher explained what the DCAN group does to encourage their students to pursue a college education but could not do the same to the comparison group. The researcher does not know what the other high-poverty high schools and public charter schools in the control group do to advance student college acceptance and college retention rates. There are over 60 schools in the state of Arkansas that are considered high-poverty for this study (University of Arkansas Office of Educational Policy, 2018). The time required to research each comparison school and understand the way in which the students prepared for college did not fit within the available timeframe of this study.

This study focused on high-poverty schools. Within each school, there are certainly students that do not live in poverty. This specific student population was not excluded from this study. Most students who live in poverty within these schools are going to be first-generation college students. Students who do not live in poverty have a higher percentage of a going-to-college rate, regardless of the type of programs that are offered at a given high school.

### **Delimitations**

The researcher studied Arkansas public high schools and public charter schools that are at, or over 70% free and reduced lunch numbers. All members of DCAN and the comparison group are above 70%. Schools in the state with 70% free and reduced lunch status are considered high-poverty. The state of Arkansas funds the total percentage of students in poverty through the National School Lunch Act (Arkansas Department of Education, n.d.).

The last delimitation pertains to the college matriculation data. For this study, the researcher only utilized the college matriculation rate to Arkansas colleges and universities. The researcher was not able to obtain out-of-state colleges and universities data for the DCAN schools. ADHE, ADE, or OEP track the number of students that enrolled in college and universities outside of Arkansas. The researcher used the most recent matriculation rate data within the state.

### **Definitions**

**ACT test.** The ACT is a national college entrance test that measures high school students' abilities and capabilities to complete college work. The multiple-choice test is broken down into four separate tested areas. These separate test areas include math,

science, reading, and English. The composite score is an average of the four tested areas. The composite score is widely used as a measure for college entrance and numerous levels of scholarships within colleges and universities (American College Test, n.d.). In the state of Arkansas, every high school junior is able to take the test free of charge.

**Delta College Attainment Network (DCAN).** DCAN is a consortium of high-poverty high schools in the Arkansas Delta that have a vision to provide sustainable post-secondary attainment for its students. DCAN schools, through alumni advisors, help its graduates develop into college completers and career starters.

**High-poverty high schools.** In the state of Arkansas, National School Lunch (NSL) funding for schools is based on the percentage of students that qualify for free and/or reduced meals. A school that has under 70% free and reduced student numbers are funded \$526 per student. A school that has 70% to 89% free and reduced numbers is funded \$1,051 per student. Lastly, schools with a free and reduced student count that is above 90% is allocated \$1,576 per student (Arkansas Department of Education, n.d.). For this study, high-poverty high schools were schools that have a percentage of free and reduced students with 70% and above.

**Office of Education Policy.** The Office of Education Policy (OEP) was formed at the University of Arkansas in 2003. The idea behind the OEP was to serve as a resource for lawmakers and educational leaders alike to help with data and research-based decisions made in the state (University of Arkansas Office for Education Policy, 2018). Each year, the OEP produces a wide variety of research data based on each school in the state of Arkansas.

**Post-secondary education.** For this study, post-secondary education was defined as institutions that are two-year or four-year colleges and universities.

### **Summary**

This dissertation is divided into five chapters. In Chapter One, the researcher introduced the study, discussed the problem, and the significance of studying the college entrance scores and college matriculation rates for high-poverty high schools in Arkansas. Chapter Two included a detailed review of the literature, as it pertains to advising and college matching for high school students in their preparations for post-secondary education. Chapter Three discusses the methodology and research designs used to complete the study along with participant and instrumentation details. Chapter Four provides the results of the data collection and analysis. Chapter Five includes a detailed summary of the research findings and overall conclusions.

## **Chapter II: Review of the Literature**

This literature review focused on the effects of college advising on admittance and persistence of high-poverty high school students. This research study investigated the early advising for high school students and the positive impact it had on high-poverty students and their attempts to attend and be successful in college. This research could offer valuable insight to Arkansas schools as they attempt to better serve low socioeconomic status (SES) students, especially those in rural communities where the nearest two-year or four-year school might be 30 to 40 miles away. After an introduction to primary statistical data, this literature review will concentrate on three specific areas including early advising and counseling programs for high school students, college advising, and college retention and persistence of high-poverty students.

### **Statistical Background**

In 2015, there were a total of 3,000,000 high school graduates. Of those students, 2.1 million, or 69%, enrolled in either a two or four-year college (United States Department of Education, n.d.). Students enrolling in college immediately upon graduation from high school has increased from 63% to 69% from 2000-2015. In the fall of 2015, 72.1% of the prior year's high school graduates persisted at a two-year or four-year colleges and universities. The rate of persistence at colleges and universities was nearly 11% higher than the retention rate from 2000-2015 (National Student Clearinghouse Research Center, n.d.). The National Student Clearinghouse Center defines college retention as an individual who stays continuously enrolled in the same college or university. However, persistence is defined as the continuous enrollment

in any college or university (National Student Clearinghouse Research Center, n.d.).

Although, in some cases, these terms are viewed as interchangeable.

The number of students who pursued post-secondary education were of significant interest for public school districts (Venezia & Jaeger, 2013). The percentage of students a high school enrolled in college can be one measurement of its success. In 2015, only 51% of the 30,370 Arkansas graduates attended a two-year, four-year, or private institution within the state of Arkansas (Arkansas Department of Higher Education, n.d.). Comparatively, the percentage of Arkansas high school graduates is lower than the national average of 69% for the same year (United States Department of Education, n.d.). There is a significant gap between the number of students attending college and the number of low SES students attending. The college enrollment gap between low SES students and high SES students is greatly different, but what is more significant is the gap between persistence and retention of those students through the completion of their post-secondary education (Bjorklund-Young, 2016; Tinto, 2006).

### **Early Advising and Counseling in High School**

A long-term goal for many high schools has been trying to prepare students for college. Throughout the years, many programs have tried to help with this type of preparation. The challenge of these programs, among others, has been to impact the readiness of underserved students. In 2002, a program funded by the Bill and Melinda Gates Foundation addressed these student needs. The Early College High School Initiative (ECHSI) was formed to increase graduation rates and college preparedness for low SES African American and Hispanic students (Oliver, Ricard, Witt, Alvarado, & Hill, 2010). The type of early college preparation and advising produced by ECHSIs was

found to be very beneficial to high school students, especially those in situations where education was not a priority in the home, or in a case where the student was not predisposed to pursuing any education beyond high school. The whole basis of ECHSIs was to create partnerships between high schools and colleges because many problems can exist for students when it comes to adjusting to college, staying motivated, and overall success (Oliver et al., 2010).

In 2011, a six-year study was completed that tested the effects of ECHSIs. The foundation of the study was to calculate the graduation rates and college enrollment, and then degree attainment of the participants. During the time of the study, the high school graduation rate of the ECHSI students was 88%, and the college enrollment of those graduates was 80.9% (Haxton et al., 2016). These high schools worked to create an environment where students were expected to go to college. The school leaders and teachers communicated with their students about college and provided information about different college institutions to them. The school leaders and teachers also advised each student in a personalized manner that supported their students both academically and socially (Haxton et al., 2016). The results of this connection led ECHSI students to have a different perspective in their first year of post-secondary education as compared to non-ECHSI students. This could include having the ability to change, be flexible, and adapt when the students enter college (Oliver et al., 2010).

A different early advising initiative was formed on the campus of the University of Virginia in 2005. Dr. Nicole Hurd founded the National College Advising Corp, now known as the College Advising Corps (CAC) with the help of a grant from the Jack Kent Cooke Foundation. Over a decade later, the CAC now has over 700 advisors and has



served over 848,000 students (College Advising Corps, n.d.). The CAC is headquartered at the University of North Carolina at Chapel Hill. Since 2007, CAC has partnered with 24 universities in 14 states (Lederman, 2018). The mission of the CAC is: “College Advising Corps works to increase the number of low-income, first generation college, and underrepresented high school students who enter and complete higher education” (College Advising Corps, n.d., p. 1). Through Hurd's vision, the CAC hired graduates from partnering universities to join as college advisors in rural, suburban, and specifically low SES public schools. During the spring of their senior year, the advisors were selected and began serving in the fall (Morris, 2009). These advisors were paid by the university, not by the high school. Their primary job was to work hard and become a member of the school community and culture. In a way, these advisors were part of the school culture, the same as teachers, staff, and counselors, promoting the pursuit of post-secondary education (College Advising Corps, n.d.). Therefore, the advisors spent their time working with students to prepare them to be college ready and not completing other duties that fall upon school counselors. Overall, the host school has the autonomy to make the advising program fit and meet the needs to best help their students and parents (Hornig et al., 2013).

CAC advisors concentrate their efforts into helping students in several different areas. One of the most important services provided is assisting with the many problems associated with financial aid. FASFA paperwork can be a daunting task for any student and family, but much more for first-generation college students. CAC advisors also worked with students to find the right college fit. The work of the advisors also involves

assisting with the application process to the admissions paperwork required to apply for colleges and universities (Lederman, 2018).

The CAC program is evaluated annually. The reports are prepared by Evaluation and Assessment Solutions for Education at Stanford University. Both qualitative and quantitative analysis of the total program is conducted through surveys around the country to assess the various programs. Throughout the country, there were two major takeaways found through the cumulative survey results. First, students identified a high-level of trust with their teachers; and second, the need for more involvement of parents in the college planning process. These findings led the CAC to encourage advisors at their partner schools to train classroom teachers on the importance they play in the college planning process for their students. The CAC encourages more one-on-one parent meetings, rather than relying only on group FASFA nights (Horng et al., 2013).

The data-driven annual evaluations provide the CAC significant statistical information that is used to shape the program. The CAC developed a list of key performance indicators (KPIs), which are used to determine the success of the programs. KPIs are used primarily at the national level, but also at the state and local levels (Horng et al., 2013). The College Advising Corps website lists eight KPIs that drive the program from the training and evaluation standpoint. The KPIs include campus visits, college representative visits, college fairs, SAT/ACT registration, college workshops, college application submissions, FAFSA completion, scholarship dollar awards, and parent engagement (College Advising Corps, n.d.). The results of the 2016 – 2017 survey indicated positive effects the CAC advisors had on students within their partner schools.

- 30.0% more likely to apply to a college or university
- 24.0% more likely to be accepted to a college or university
- 13.0% more likely to take the SAT or ACT
- 24.0% more likely to apply to three or more colleges
- 26.0% more likely to apply for a scholarship
- 27.0% more likely to submit the FAFSA

*Figure 1. Importance of CAC Advising.* Percentages compared students who met with a CAC advisor to those that did not meet with a CAC advisor (College Advising Corps, n.d.).

The state of Arkansas enacted an advising initiative at the direction of past Governor Mike Beebe in 2010. The original program was called Arkansas Works and piloted in 21 Arkansas counties. The basis for the program was to increase post-secondary opportunities and career training for students in high poverty. Career Coaches were assigned to mostly rural counties who helped with college and career selection, by advising and supporting students to increase the college-going rate as well as career and technical information. Career Coaches worked with the career orientation teacher, school counselor, and administration to provide job shadowing opportunities, transitional assistance to post-secondary education, financial aid information for students (Arkansas Department of Career Education, 2018).

In more recent years, through Act 1285 of 2013 and Act 960 of 2015 in the Arkansas legislature, the program was renamed the Arkansas College and Career Coach Program. This program was open up to all schools in the state that wanted to apply for funding (Arkansas Department of Career Education, 2018). According to an executive summary produced by the Arkansas Department of Career Education, only 34 of the 75 counties participated in the program as of 2016 (Arkansas Department of Career Education, 2016). The program was originally funded through grants from the Winthrop

Rockefeller Foundation and federal grants. Schools have the ability to use some state categorical funding to pay for of the cost for a career coach. Participating schools currently partner with a local community college or educational cooperative to partially fund the coach. The career coach is an employee of the community college or educational cooperative (Arkansas Department of Career Education, 2018).

The College and Career Coach Program is based on four components. The components are the college and coach program, ACT academies, career cluster camps, and the Arkansas college application campaign (Arkansas Department of Career Education, 2016). ACT academies were designed to help students increase their test scores. Often these programs are offered after school or during the summer (Gewertz, 2017). Career cluster camps were designed to give students exposure to various career fields that were of interest to the student. Per terms of the grant, coaches were required to make certain face-to-face benchmarks. This starts with 80% contact with seventh and eighth graders, and 100% for 12th graders. In the first semester of the 2015-2016 school year, coaches were able to contact with 72.2% of the available students (Arkansas Department of Career Education, 2016).

The College and Career Coach program used a career and education software called Kuder. This program helped students with college and career choices. Performance measures were put in place to check on the positive work of the program. There was a goal for the college-going rate to increase by 10% from when the program started. Between the years 2009 – 2015, the growth was 22% for schools in the career coaching program (Gewertz, 2017). Another important component was to increase the number of FAFSA applications completed by students. The goal of the program was to

increase the completion of financial aid applications by 10%. During the years 2009-2015, the number of completed financial aid applications increased 32.3% among the program schools (Arkansas Department of Career Education, 2016). There was one discouraging figure of the career coach program: Students were encouraged to apply to only one college or university (Arkansas Department of Career Education, 2016).

### **Counseling in High School**

The role of the high school counselor revolves around advising students on the transition to college. States differ on the requirements of the counselor-to-student ratio. However, the American School Counselor Association recommends 250:1 counselor-to-student ratio. Shockingly, the national counselor-to-student ratio was 482:1 in 2015 (National Association for College Admission and Counseling, n.d.). Most students start their dreams and aspirations for college while in high school, but it is often several years before they would be enrolling in college (Woods & Domina, 2014). Woods and Domina (2014) investigated the relationships between the counselor caseload and the enrollment into college from the students. The data results demonstrated a direct correlation of the lower caseload-per-counselor with a higher rate of high school students enrolling in college. Woods and Domina (2014) also ascertained that lower the ratios of counselor-to-students increased high school-to-college pipelines. Smaller caseloads allowed the counselor/student relationship to develop more, and greater time was spent on advising. When Woods and Domina (2014) examined the data, they found a problem. Most schools with a higher caseload for the school counselor also had a higher number of minority and high-poverty students. The schools with smaller caseloads were often located in more affluent areas, where the students' parents were college graduates (Woods

& Domina, 2014). Due to the low number of counselors-to-student ratios, public school counselors were only able to spend 22% of their time on college counseling (Murphy, 2016).

A 2016 Phi Delta Kappan survey found only 6% of 1,221 individuals felt school counselors should be the first line item to receive a money increase if local taxes were raised. In the survey, teachers were rated first with 34% of the survey responses indicating if local taxes were raised, they should be first in line for a money increase (Richardson, 2016). In a 2016 article in *The Atlantic*, Murphy (2016) noted, “David Hawkins of the National Association of College Admissions Counselors identifies counseling as the third most-neglected component of increasing access to college alongside financial support and equitable access to a challenging school curriculum” (p. 2).

One reason some people view the role of the counselor as less vital is due to the non-profit advising movement. Currently, the country has several non-profit advising groups. In addition to ECHSI and CAC, there are others including College Possible, Strive for College, and the College Ambition Program. In each of these advising corps, there are a few common denominators. First, they generally have younger advisors on campus. Second, they are primarily located in areas of high-poverty with most students being first-generation college students. Third, non-profit advising groups are supported by wealthy foundations and families who have the financial means to provide these type of services (Murphy, 2016).

In areas where needed advising initiatives are not financially feasible, counselors must continue to meet the needs of the students. One way to overcome financial

obstacles is to use educational technology to help with college access for students (Steele, Jacokes, & Stone, 2015). Naviance is one of the most prevalent college advising programs that is available completely online. According to the website, "Naviance is a comprehensive college and career readiness solution that helps districts and schools align student strengths and interests to post-secondary goals, improving student outcomes and connecting learning to life" (Naviance by Hobsons, n.d., para. 1). The Naviance software is designed to store student information such as personal data, college entrance data, and individualized personal graduation plans (PGP). School counselors can then use the PGP to better align the student's goals and help with their post-secondary and career plans (Christian, Lawrence, & Dampman, 2017). This software can be used at any time, which allows students to have real-time, self-service access to their future planning (Naviance by Hobson, n.d.).

A 2017 study focused on determining the impact the use of the Naviance software had on four consecutive years of high school graduates (Christian et al., 2017). The study participants were from a large suburban, public high school. The study followed the graduating class of 2013 for one year, class of 2014 for two years, class of 2015 for three years, and the class of 2016 for four years. The class of 2016 was the only class able to use the software for four full years. The high school counselors used Naviance to plan meetings, increase exposure for college and career decisions, and as a warehouse to keep all critical information (Christian et al., 2017). As some of the first students studied utilizing Naviance, the researchers wanted to determine the influence that the program had on college access development with the study participants (Christian et al., 2017). For the study, six predictor variables were used to predict the college application rate.

The predictors were gender, socioeconomic status, grade point average (GPA), years using Naviance, and average annual logins on Naviance. A regression analysis determined the average annual logins to Naviance was the best predictor of the number of college applications completed, which was followed by student GPA (Christian et al., 2017). Research showed the more college applications students completed, the more likely they were to enroll into a four-year college or university (Roderick, Coca, & Nagoako, 2011).

As previously described, Naviance is a self-guided tool that can help students. Counselors can view the time and outcomes students worked with the program without having to be hands-on with the student. This flexibility could be a significant help for counselors in schools that have heavy caseloads, which places a substantial burden on their time.

### **College Matching**

College matching is the comparison of a student's college selection to the academic ability of the student. Therefore, academic undermatch occurs when a student has the required test scores, high school GPA, and ability to gain entrance into colleges with high entrance standards but chooses to enroll in an institution that may not fit the students' academic standards; therefore, the student could be overqualified (Ovink, Kalogrides, Nanney, & Delaney, 2018; Smith, Pender, Howell, & Hurwitz, 2012). Previous research indicated low SES students who are high achievers were less likely to apply to a selective college, were likely to undermatch, and choose not to apply at all (Hoxby & Avery, 2013; Smith et al., 2012). Studies indicated that many low SES students who are high achieving do not apply to colleges in the same numbers as high



achieving, higher income students even though high-poverty students often have fewer fees associated with the applications (Hoxby & Turner, 2013; Smith et al., 2012).

There are several reasons why low SES students tend to undermatch when, or if they select a college. Geographic location can be a significant problem for high school seniors when searching for a college. Specifically, low income high achieving students will likely not have a match college to choose from near their home. Approximately 46% of the most selective colleges are in the northeast, but only around 12% of high achieving low SES students live in the same area (Griffith & Rothstein, 2009; Ovink et al., 2018). Students often choose a local college near home; therefore, it is easier to attend college out of convenience. If there is not a match college within the area near a student's home, this leads to undermatching for students (Ovink, 2013; Ovink et al., 2018). Likewise, a local college or university may partner with a student's high school, and those students considering higher education may feel most familiar with partner higher education institutions when considering where to attend college (Ovink, 2013). In relation to undermatching and geographic location, students who chose to enroll in a college close to home may be for other reasons such as cultural beliefs or the emotional security of being close to family and friends during a big life transition. For example, Ovink (2013) discussed the traditions of some Latin American families that prefer adult children to remain living at home, help care for younger children at home, or provide financially for the family (Ovink, 2013).

The potential financial burden of attending a higher selective college or university is another reason for undermatching. Low SES students tend to undermatch more often than their more affluent peers (Ovink et al., 2018). One reason this occurs is students can

obtain financial aid funds at colleges and universities that are an undermatch to them. For these students that undermatch, universities could have lower college entrance scores and high school GPAs; therefore, exceeding the academic criteria and credentials for the universities. The financial aid package offered could help students remain enrolled and on track for degree completion. Higher education institutions welcome undermatched students not only because they raise admissions goals, but they also improve the academic profile of the college. (Gansemer-Topf, Downey, & Genschel, 2018).

Perhaps the most substantial reason high school students undermatch into secondary education is the lack of working knowledge about the overall college process, or as Ovink et al. (2018) referred to as “information deficit” (p. 556). Often students do not receive the necessary information about college from their school, counselor, or at home. Unfortunately, this lack of information is often the case for many first-generation college students. The lack of information and needed assistance with the college application and search process causes considerable constraint when searching and trying to fund the proper college fit (Hoxby & Avery, 2013; Roderick et al., 2011). The college advising services provided at school could be changed and improved to help students. However, many of these low-income, high-achieving students face a more significant challenge, since many low SES parents have not been to college and have trouble assisting their children through the process (Tough, 2014).

In recent years, there was a significant amount of research focused on various aspects of college undermatching. Several studies used the Educational Longitudinal Study of 2002 (ELS:2002) and Barron's Admissions Competitive Index (Barron's Index) (Gansemer-Topf et al., 2018; Ovink et al., 2018; & Roderick et al., 2011). The ELS:2002

is a national data set that included more than 15,000 students from 750 public and private schools. In 2002, the study started when the students were sophomores in high school. The study used surveys completed by both parents and students to collect academic and demographic data. Follow up surveys were sent in 2004, during the student's senior year; in 2006, two years after graduation; and, for the last time, in 2012, eight years after high school graduation. In this study, many variables that impacted college undermatching were observed including high school GPA, high school coursework, parents' education level, college attended, proximity to college, financial aid, college persistence and retention, career status, and family income. (Gansemer-Topf et al., 2018; Ovink et al., 2018; Roderick et al., 2011).

Barron's Index categorized colleges and universities into seven different categories. The categories were most competitive, highly competitive, very competitive, competitive, less competitive, noncompetitive, and special. Institutions were placed in categories based on entrance exam test scores of admitted students, acceptance rate, high school GPA, and class rank were required to be admitted (Gansemer-Topf et al., 2018; Hoxby & Avery, 2013; Hoxby & Turner, 2013; & Ovink et al., 2018).

Multiple studies used a combination of the ELS:2002 and Barron's Index data sets to identify if a student undermatched, matched, or overmatched with their college selection. Researchers also attempted to understand what factors influenced decision-making and impacted college outcomes (Gansemer-Topf et al., 2018; Hoxby & Avery, 2013; Hoxby & Turner, 2013; & Ovink et al., 2018).

Gansemer-Topf et al. (2018) used both the ELS:2002 and the Barron's Index to examine the factors that influenced degree attainment for undermatched students in a

research study. The researchers examined the following variables: student demographics, high school achievement, family background, social integration, academic integration, and if the first school a student attended was a two-year or four-year institution. The highest level of math coursework completed was used to represent high school achievement, and the highest level of education of parents was used to represent family background. Social and academic integration were based on campus involvement, once the student had completed one year of coursework. One critical finding from the study was 71.7% of the students who graduated undermatched by one level on the Barron's Index. However, a student who undermatched more than one level only graduated 49% of the time. In addition, 70% of undermatched students who started at a four-year school completed their degree within six years, but only 31% of students who undermatched at a two-year school graduated within six years. Based on research findings, the following characteristics increased the likelihood of student graduation rates including being female, having parents with a college degree, starting post-secondary education at a four-year institution, taking pre-Calculus or a higher math courses in high school, and being academic and socially integrated into the college environment (Gansemer-Topf et al., 2018).

Ovink, et al. (2018) used both ELS: 2002 and Barron's Index to explore how college proximity and students' preferences influenced college matching. The study included information on graduation rates and post-graduate outcomes for mismatched students. In this survey, the results indicated that 39% of the students undermatched. Undermatching was 6% lower for students who lived within 50 miles of a match school, then students without a match school nearby. Data showed undermatched students were

18% less likely to complete their degree, 3% less likely to be employed full-time, and earned approximately \$3,000 less annually. Another significant result was students whose family income was less than \$50,000 annually were 20% more likely to undermatch, compared to students whose family income was greater than \$100,000 per year (Ovink et al., 2018).

To decrease undermatching in low-income, high achieving students, Hoxby and Turner (2013) implemented the Expanding Colleges Opportunities Comprehensive (ECO-C) Intervention in their 2011 – 2012 study. The ECO-C Intervention provided 12,000 low-income, high-achieving students and their families various types of information about college matching. Some of the information included application strategies, assistance with application fee waivers, and supplemental materials such as graduation rates and net costs of the colleges (Hoxby & Turner, 2013). Hoxby and Turner (2013) discovered that students who participated in the ECO-C Intervention were 19.0% more likely to apply to a peer public college. The researchers defined peer colleges as those, "...whose curriculum is most geared toward students with their level of preparation" (p. 1). In this same study, the low-SES, high-achieving students were 17% more likely to apply to peer private colleges, and 15% were more likely to apply to peer liberal arts colleges. Overall, these students were admitted to 12% more colleges, and 31% were more likely to be admitted into a peer college (Hoxby & Turner, 2013).

### **College Advising**

The lack of persistence in college students could be attributed to the lack of quality academic advising provided by institutions (Light, 2001; Young-Jones, Burt, Dixon, & Hawthorne, 2013). Students have a basic need to feel supported, and often

advising sessions are the only place that students receive that type of support. In a 2013 study at Missouri State University, researchers evaluated the expectations associated with academic advising to determine if student advising needs were being met. A total of 611 students were surveyed and answered questions regarding their experience with academic advising. In this study, one finding pertained to the accountability of the advisor during an advising meeting. The study also revealed more positive and frequent advising led to more in-depth academic support and strategies for student success (Young-Jones et al., 2013).

At Morningside College in Sioux City, Iowa, academic advisement was transformed into a mentoring program. During the transformation, Morningside College named a vice-president for academic advising, and the freshmen advisors became known as academic mentors. These academic mentors met regularly with the freshmen classes, while often only listening to them. However, this added work from the academic mentors helped during the transitional year. After the freshman year, students were then placed back with regular faculty advisors for each subsequent year (DiMaria, 2016). The Pathways to Success program at Louisiana State University at Eunice (LSU-Eunice) is a college-wide program built to help students transition and help them persist in college. LSU-Eunice is a small two-year college with approximately 4,000 enrolled students. The Pathways to Success is built on strengthening attendance, tutoring, and advising (Fowler, 2007). In the advisement piece of the pathway, students meet with academic advisors at least three times a month. Individuals in the advising center also make calls to students and check their class attendance. If a student misses too many classes within the first few weeks of the term, staff members will setup a time to meet face-to-face with students.

The goal of these advisors is to keep freshmen students enrolled, which is critically important as many freshmen are first-generation college students. First-generation college students often need extra support as they transition from high school students to college freshmen (Young-Jones et al., 2013).

Researchers from a small mid-western university led a study focused on persistence to determine why some students are not successful during the first year of college. A sample group of students was broken down between non-persisters and students who persisted through one year. The groups were broken down further between those below and above a 2.0 GPA. The group of non-persisters that did not make a 2.0 GPA cited personal and financial reasons for leaving. Other reasons cited were instructors did not care, the need for better seating, and problems with the finance office (Thorngren, Nelson, Baker, Zuck, & Koltz, 2013). The non-persisters who finished the year above a 2.0 GPA still had a reason for leaving the college. In this study, the students wanted to have teachers and faculty communicate with them more. This group was outspoken on the amount of interpersonal interactions and the extent of academic advising (Thorngren et al., 2013). First-year college students were less likely to have or develop a bad attitude if the level of advising and interaction was a positive experience. Students also felt more comfortable when they could speak to the teacher outside of class (Oliver et al., 2010). Those type of conversations added another level of comfort for students.

### **College Persistence and Retention of High-Poverty Students**

Retention and persistence of college students has long been an area of great interest for members of the higher education community (Osegura & Rhee,

2009). Colleges and universities use retention data to determine the types of students they will target for enrollment. Osegura and Rhee (2009) examined student retention from multiple levels and different data sets. Using information from databases, the researcher differentiated between student-level and institutional-level factors that influenced student retention. From a student-level, the data revealed several variables were associated with persistence. The main factors that impacted persistence were high school GPA, SES, student housing, and peer institutional retention climate. For every increased unit in high school GPA, a student's likelihood of persistence increased by approximately 6.0%. Also, the researchers found a positive correlation between persistence and SES, meaning as SES increased, then the level of persistence also increased (Osegura & Rhee, 2009). Students living on-campus demonstrated a significantly higher level of persistence as compared to their counterparts living off campus. Peer institutional retention climate, defined as students self-reported likelihood to drop out, take time off, or transfer, was found to be related to persistence. The probability of persistence decreased with student intention who transferred or dropped out but increased when student intention was taking time off (Osegura & Rhee, 2009). The institutional factors studied were selectivity and faculty perceived campus climate environments. Within institutional selectivity, students whose peers had higher GPAs were 7.6% more likely to persist, and those enrolled in more selective colleges were 4.8% more likely to persist. The faculty perceived campus climates were found to be insignificant regarding student persistence (Osegura & Rhee, 2009). The factors that were found to be the most influential were student level, except for institutional selectivity, which related to the broad issue of college matching. However, a study by



Gansemer-Topf et al. (2018) revealed that proper academic support and sound college experience could have a stronger influence on undermatched students than their secondary or pre-collegiate, academic success or failures might have impacted them.

Kim (2015) focused his study on determining the indicators that affected retention at a four-year, public, Midwestern university. The researcher chose this specific university for the continued support of special admission students and other institutional support services. Special admission (SA), defined as students that are admitted based on other standards that are not necessarily regular admissions criteria (Kim, 2015; Potts & Schultz, 2008). Often these standards can be low SES, low GPA, or low ACT. There were two main results found in the study. First, "...academic performance is one indicator of college retention" and "findings also suggest the need to consider using weighted criteria for admission" (Kim, 2015, p. 60). The researcher also discovered that high school grade point average and ACT scores were predictors for first-year college GPA. Since college GPA was an indicator of retention, the study proved colleges and universities can use high schools as predictors of retention (Kim, 2015).

### **Summary**

Throughout the literature review, it is evident early college advising has a positive effect on the college enrollment rate of students. Early college advising is more crucial for low SES students because the only advisement this student population receives is from their high school teachers or counselors (McDonough, 2005). Outside mentors for low SES students typically lack the knowledge to assist the students with college decisions that best fit the needs of the student. This lack of knowledge is more reason to form a college-going culture built around the encouragement, and attainability to help

students receive guidance from school personnel (Christin et al., 2017; Roderick et al., 2011). All students should have similar experiences within all institutions, no matter the SES status of the students. When student experiences from all SES levels are not similar, there is an inherent difference society declares on social mobility (Warpole, 2003).

### **Chapter III: Methodology**

In this chapter, the researcher discusses the research design, methods, and participants used to complete the study. This study focuses on college entrance (ACT) scores from students in Arkansas high-poverty schools. The researcher examines the college matriculation rates of students who attended the same Arkansas high-poverty high schools and enrolled in two-year and four-year colleges and universities. Today's society shows that students in poverty continue to attend college at a lower rate than their counterparts that are not in poverty. Students in poverty are more likely to drop out of college, as compared to those from more affluent incomes. High-poverty school districts in the state of Arkansas could potentially use the results of this study to better prepare their students to enroll and persist in post-secondary education. School districts will also be able to use this data to better prepare their students to persist in post-secondary education.

Prior to any data collection, the researcher received permission from all four schools that make up the DCAN partnership. Consent was sought so the schools could be identified by name. The leadership of these schools provided written documentation for the research. After obtaining the approval, but before beginning any data collection, the researcher received permission from the Arkansas Tech University (ATU) Institutional Review Board (IRB). All ethical guidelines were followed as it pertained to subjects. Complete confidentiality was ensured, so no individual could be identified as data was collected throughout the research study.

#### **Research Questions**

The following five research questions were addressed in this study:

1. How do the ACT scores and college matriculation rates of the Cross County New Tech High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
2. How do the ACT scores and college matriculation rates of the KIPP Delta School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
3. How do the combined ACT scores and college matriculation rates of the Cross County New Tech High School and KIPP Delta School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-2018?
4. How do the combined ACT scores and college matriculation rates of the DCAN schools compare with other Arkansas public and charter schools with similar SES characteristics for the school year 2017-18?
5. How do the combined ACT scores and college matriculation rates of the DCAN schools compare to each other for the school year 2017-18?

### **Literature Review Process**

For this study, the researcher conducted a literature review through a variety of different sources. The Arkansas Tech University library was the primary source to research previously published literature. The researcher mainly accessed the ProQuest Research Library. Other prominent search engines used were the Educational Resources Information Center (ERIC) and Google Scholar. Also, the full text of different theses and dissertation from related studies were used in Chapter Two. For editing and review

purposes of the literature review, the researcher used the Publication Manual of the American Psychological Association (APA), Sixth Edition.

### **Participants and Sample**

In 2017, the DCAN consortium was formed with partner schools in the Arkansas Delta that were committed to “...provide sustainable post-secondary attainment and completion systems to transform lives and uplift communities” (Brown, 2017, slide 17). For many years, KIPP Delta Collegiate High School used a program entitled KIPP Through College. In the 2014 – 2015 school year, Cross County High School added a program entitled C3 (CollegeXCareerXChoice). These two programs were the basis for the creation of DCAN. The researcher used the data from 2014 – 2015 through 2017 – 2018 for KIPP Delta and Cross County. The first three years of data were prior to the formation of DCAN. The 2017 – 2018 data used for not only KIPP Delta and Cross County, but the other DCAN schools were added as well.

Of the schools that make up the DCAN consortium, Cross County New Tech High School was the only school considered low in minority students. Cross County New Tech High School, a 7-12 campus, with 275 students, and of those students 88% were white and 8% were African American, for the 2017 – 2018 school year. At the other three high schools, student enrollment was above 85% African American. KIPP Blytheville Collegiate, a 7-12 campus, with 217 students, and of those students 86% were African American and 7% were white. KIPP Delta Collegiate (Helena), a 9-12 campus, with 246 students, and of those students 96% were African American and 3% were white. Of the group, Central High School has the largest school population with 633 students, and of those students 97% were African American and 3% were white on a 7-12 campus.

All statistics were from the 2017-2018 school year. The free and reduced lunch rate were as follows: Cross County 72.8%, KIPP Delta 87.9%, KIPP Blytheville 85.9%, and Central High 95% (University of Arkansas Office for Education Policy, 2018).

The control group for this research study were high schools in the state of Arkansas considered high-poverty. For this study, a school must be at, or above a 70% free and reduced lunch rate to be regarded as high-poverty. During the 2017 – 2018 school year, there were 80 public schools and public charter schools that were at and above 70% free and reduced lunch (University of Arkansas Office for Education Policy, 2018). Each academic year, the researcher used the correct number of high-poverty schools for each year of the study. In 2018, there were 80 high-poverty schools; however, this was not the case for the prior three academic years that the researcher studied.

### **Instruments**

For this study, the researcher used the results of previous ACT scores from the DCAN schools and other high-poverty high schools in Arkansas. For official DCAN data, the researcher only used the 2017 – 2018 ACT data and the first year of DCAN. However, for the previous three academic years, Cross County New Tech High School and KIPP Delta Collegiate High School created their own college preparation programs. The data from Cross County and KIPP Delta from the 2014 – 2015 to 2016 - 2017 were compared to the other high-poverty public schools and public charter schools in Arkansas from those school years. During the three school years prior to the school year 2017 - 2018, the researcher utilized the data from the OEP. The schools considered high-poverty have changed in the prior three years; therefore, those scores from schools at, or

above 70.0% during that school year will be used in the study. There are many ways in which to break down and measure the ACT. However, for this study, the researcher completed the analysis by comparing the ACT composite scores from the DCAN schools to other high-poverty schools in the state of Arkansas. The ACT composite score is made up of the four tested areas sub scores and averaged together. The four test areas are English, mathematics, reading, and science. The average ACT composite score is also rounded to the nearest whole number (American College Test, n.d.).

The instrumentation used to answer the second part of the research questions were also found in the archived data. The researcher compared the college matriculation rates of the four DCAN schools to the college matriculation rates of high school graduates from other Arkansas high-poverty high schools and public charter schools. The information instrumentation data used was from the ADHE, ADE, and the OEP.

### **Design and Data Collection Procedures**

During December 2018 and January 2019, the data for this study was archived and collected with approval from the ATU IRB. The approved study was completed by obtaining the ACT scores of KIPP Delta Collegiate High School and Cross County New Tech High School from the school's years 2015-2016 through 2017-2018. The scores for KIPP Blytheville and Central High School were added to the 2017-2018 school year. Beginning in 2015, the control group for the study is the Arkansas high schools that are at, or above 70% free and reduced lunch for the same period. As previously mentioned, the archived data from the control group were from the Office of Education Policy at the University of Arkansas.

After the ACT composite score data were retrieved, the researcher gathered data on the matriculation rates of high school students from the same low-SES schools in the state that attended Arkansas two-year and four-year colleges and universities during the same period. The 2018 matriculation data from the DCAN schools were obtained through the DCAN office with KIPP Delta. To be able to use the data and analyze each member of DCAN, a letter explaining the study and asking for permission was written to the superintendents of each of the participating schools in November 2018. Upon completion of the study, the results were shared with each school. In the case of the Cross County School District, the researcher also serves as the superintendent, and he received permission from the president of the Cross County School District Board of Education. This permission was sought before obtaining approval from the Arkansas Tech University IRB.

### **Data Analysis**

To test the null hypotheses and answer the research questions one through four, a one sample t-test was ran using SPSS Version 24. The ACT composite scores and the matriculation rate from Cross County New Tech High School were compared to the other high-poverty public and public charter schools in the state for the previous four years to answer the first research question. To answer the second research question, the same information from KIPP Delta High School was compared to the other high-poverty public and public charter schools for the same timeframe. For the third research question, the ACT composite scores and matriculation rates of Cross County New Tech High School were combined with the same data from KIPP Delta High School and compared to the other high-poverty public and public charter schools. To address research question four,



the ACT composite scores and matriculation rates from the four DCAN scores were compared to the other high-poverty public and public charter schools for the 2017-2018 school year. Research question five was answered by examining the ACT composite scores and matriculation rates of each of the four DCAN schools to one another for the 2017-2018 school year.

The researcher created a histogram of the data to check for distribution and ensure there were no outliers. This histogram provided the mean of the dataset. The one sample t-test was run for each research question as stated above. According to Kent State University Libraries (n.d.), the test statistic for a one sample t-test is denoted by  $t$ , which was calculated using the following formula:

$$t = \frac{\bar{x} - \mu}{s_x}$$

Where:

$$s_x = \frac{s}{\sqrt{n}}$$

Where:

$\mu$  = Proposed constant for the population mean

$\bar{x}$  = Sample mean

$n$  = Sample size (i.e., number of observations)

$s$  = Sample standard deviation

$s_x$  = Estimated standard error of the mean ( $s/\sqrt{n}$ )

*Figure 2. One Sample T-Test.* The figure demonstrates the equation to calculate a one sample t-test (Kent State University Libraries, n.d.)

The calculated  $t$  value was compared to the critical  $t$  value from the  $t$  distribution table with degrees of freedom  $df = n - 1$  and chosen confidence level. If the calculated  $t$  value  $>$  critical  $t$  value, then the null hypothesis is rejected. An alpha level of .05 is used to determine significance.

Research question five was answered by comparing the ACT scores and matriculation rates of each of the four DCAN schools to one another for the 2017-2018 school year. The researcher also added the matriculation rates of students who attended schools out of state. This added data made the complete matriculation rate for each DCAN school.

### **Summary**

This chapter provided a thorough examination of the research study including the design to execute the research study. In this study, the variable was ACT composite scores for KIPP Delta Collegiate High School and Cross County New Tech High School since 2015. The scores of other DCAN schools, Central High School, and KIPP Blytheville Collegiate High School were added from the 2017 – 2018 school year. Together, these schools formed a consortium that was focused on early college counseling, college matching, and college preparedness. These schools had at, or above 70% of students on free or reduced during the school year; therefore, these schools were considered high-poverty schools. The control for this study was the college entrance scores from the other high schools in the state of Arkansas that were regarded as high-poverty. During the same timeframe, the matriculation rate of students from the schools were examined in this study. The researcher compared the matriculation rates of students from those schools enrolled in a college or university within the state of Arkansas. This quantitative study required that data were acquired in December 2018 and January 2019. During the same period, the data were archived and ascertained.

## **Chapter Four: Results**

The motivation for this research was to determine if early college advising and college matching had a positive impact on ACT scores and post-secondary matriculation. The purpose was to compare the ACT scores and post-secondary matriculation rates between the DCAN schools and the other high-poverty Arkansas high schools and public charter schools from 2015-2018. The following questions were used to guide the research:

1. How do the ACT scores and college matriculation rates of the Cross County New Tech High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
2. How do the ACT scores and college matriculation rates of the KIPP Delta Collegiate High School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-18?
3. How do the combined ACT scores and college matriculation rates of the Cross County New Tech High School and KIPP Delta School compare with other Arkansas public and charter schools with similar SES characteristics for the school years 2014-15 through 2017-2018?
4. How do the combined ACT scores and college matriculation rates of the DCAN schools compare with other Arkansas public and charter schools with similar SES characteristics for the school year 2017-18?
5. How do the combined ACT scores and college matriculation rates of the DCAN schools compare to each other for the school year 2017-18?

To address the research questions, the researcher used archived data from Arkansas high-poverty high schools and public charter schools from 2015-2018. The data included composite ACT scores and average scores from each section of the ACT. Each section includes reading, English, math, and science scores. The data also included post-secondary matriculation rates for high-poverty schools but was limited to graduates who enrolled in Arkansas colleges and universities.

The data was imported from the OEP, ADE, and ADHE in Excel and converted to SPSS version 24 for analysis. One sample t-tests were used to analyze data the first four research questions. The fifth research question was answered by comparing the results of the DCAN schools ACT scores and the matriculation rates with one another. The matriculation rates of all students, not only high school graduates that attended Arkansas schools were used to answer the fifth research question. If a comparison had statistical significance, the researcher computed Cohen's *D* to determine the effect size.

### **Cross County New Tech High School ACT Scores**

The ACT scores from Cross County were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 1, Cross County New Tech High School's mean scores were higher as compared to the other 62 schools in the test group in all categories, including composite score. There was a statistically significant difference in reading, English, and composite scores. Further, Cohen's effect size values suggested a high practical significance for reading ( $d = .85$ ) and English ( $d = .68$ ) but a small to medium practical significance between the composite scores ( $d = .29$ ).

Table 1

*Cross County High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

ACT	Cross County High School	Test Group ( $n = 62$ )	$SD$	$p$	Cohen's $d$
Reading	20.51	18.49	2.374	.000	.85
English	18.57	16.94	2.383	.000	.68
Math	18.37	17.97	1.617	.056	
Science	18.69	18.45	2.029	.355	
Composite Score	19.17	18.13	2.004	.032	.29

The ACT scores from Cross County were compared to Arkansas high schools of a similar SES structure in the 2015 – 2016 school year. As shown in Table 2, Cross County New Tech High School's mean scores were higher as compared to the other 70 schools in the test group in all categories, including the composite score. However, there was only a statistically significant difference in math and science scores. Further, Cohen's effect size value suggested a medium to high practical significance for math ( $d = .58$ ) and a small to medium practical significance for science ( $d = .34$ ).

Table 2

*Cross County High School ACT Scores Compared to Arkansas Public and public Charter High Schools with Similar SES Characteristics 2015-2016*

ACT	Cross County High School	Test Group ( $n = 70$ )	$SD$	$p$	Cohen's $d$
Reading	19.40	18.92	2.239	.077	
English	17.60	17.38	2.213	.401	
Math	18.93	17.98	1.637	.000	.58
Science	19.33	18.67	1.915	.005	.34
Composite Score	18.95	18.39	1.921	.018	

The ACT scores from Cross County were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 3, Cross County New Tech High School's ( $M = 16.97$ ,  $SD = 2.017$ ) were higher as compared to the other 76 schools in the test group ( $M = 16.71$ ,  $SD = 2.017$ ) in English, but not statistically significantly higher ( $p = .259$ ). The test group scored higher in reading, math, science, and composite score. However, there was only a statistically significant difference in the math scores ( $p < .001$ ). Further, Cohen's effect size value suggested a medium practical significance for math ( $d = .47$ ).

Table 3

*Cross County High School ACT Scores Compared to Arkansas Public and Public**Charter High Schools with Similar SES Characteristics 2016-2017*

ACT	Cross County High School	Test Group ( <i>n</i> = 76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	18.06	18.07	1.935	.949	
English	16.97	16.71	2.017	.259	
Math	16.79	17.46	1.413	.000	.47
Science	18.00	18.20	1.597	.270	
Composite Score	17.59	17.77	1.662	.343	

The ACT scores from Cross County were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018 school year. As shown in Table 4, Cross County New Tech High School's mean scores were higher as compared to the other 76 schools in the test group in all categories. There was a statistically significant difference in all categories. Further, Cohen's effect size value suggested a high practical significance for science ( $d = .87$ ). The effect size value suggests a medium significance in reading ( $d = .47$ ), math ( $d = .47$ ), math ( $d = .58$ ), and the composite score ( $d = .55$ ). There was a small effect with the English score ( $d = .29$ ).

Table 4

*Cross County High School ACT Scores Compared to Arkansas Public and Public*

*Charter High Schools with Similar SES Characteristics 2017-2018*

ACT	Cross County High School	Test Group ( $n = 76$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	19.11	18.21	1.900	.000	.47
English	17.74	17.21	1.813	.012	.29
Math	18.24	17.50	1.276	.000	.58
Science	19.34	18.15	1.338	.000	.87
Composite Score	18.74	17.92	1.498	.000	.55

#### **KIPP Delta Collegiate High School ACT Scores**

The ACT scores from KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 5, KIPP Delta Collegiate High School's mean scores were higher as compared to the other 62 schools in the test group in all categories, including composite score. There was a statistically significant difference in English, math, science, and composite scores. Further, Cohen's effect size values suggested a very high practical significance for math ( $d = 1.02$ ) and high practical significance for English ( $d = .66$ ) but a small to medium practical significance between science ( $d = .27$ ) and composite score ( $d = .50$ ).



Table 5

*KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

ACT	KIPP Delta High School	Test Group ( $n = 62$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	18.77	18.49	2.374	.360	
English	18.51	16.94	2.383	.000	.66
Math	19.62	17.97	1.617	.000	1.02
Science	19.00	18.45	2.029	.037	.27
Composite Score	19.13	18.13	2.004	.000	.50

The ACT scores KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2015 – 2016 school year. As shown in Table 6, KIPP Delta Collegiate High School's mean scores were higher as compared to the other 70 schools in the test group in all categories, including the composite score. There was a statistically significant difference in English, math, and composite scores. Further, Cohen's effect size value suggested a very high practical significance for math ( $d = .98$ ) and a high practical significance for English ( $d = .74$ ). The composite score ( $d = .48$ ) suggested a medium practical significance.

Table 6

*KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2015-2016*

ACT	KIPP Delta High School	Test Group ( $n = 70$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	19.39	18.92	2.239	.083	
English	19.02	17.38	2.213	.000	.74
Math	19.59	17.98	1.637	.000	.98
Science	18.71	18.67	1.915	.848	
Composite Score	19.32	18.39	1.921	.000	.48

The ACT scores from KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 7, KIPP Delta Collegiate High School's mean scores were higher as compared to the other 76 schools in the test group in all categories, including the composite score. There were statistically significant differences in all five categories. Further, Cohen's effect size value suggested a very high practical significance for English ( $d = 1.42$ ), math ( $d = 1.08$ ), and the composite score ( $d = .99$ ). The reading scores ( $d = .64$ ) and science scores ( $d = .44$ ) suggested a medium to high practical significance.

Table 7

*KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2016-2017*

ACT	KIPP Delta High School	Test Group ( <i>n</i> = 76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	19.31	18.07	1.935	.000	.64
English	19.58	16.71	2.017	.000	1.42
Math	18.98	17.46	1.413	.000	1.08
Science	18.91	18.20	1.597	.000	.44
Composite Score	19.42	17.77	1.662	.000	.99

The ACT scores from KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018 school year. As shown in Table 8, KIPP Delta Collegiate High School's mean scores were higher as compared to the other 76 schools in the test group in reading, English, math, and the composite score. There were statistically significant differences in those four categories. Further, Cohen's effect size value suggested a very high practical significance for English ( $d = 1.15$ ), a medium practical significance for reading ( $d = .34$ ), math ( $d = .45$ ), and the composite score ( $d = .43$ ). The test group outscored KIPP Delta Collegiate in science; however, further Cohen's effect size value suggested a small to medium practical significance.

Table 8

*KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

ACT	KIPP Delta High School	Test Group ( <i>n</i> = 76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	18.85	18.21	1.900	.004	.34
English	19.29	17.21	1.813	.000	1.15
Math	18.07	17.50	1.276	.000	.45
Science	17.71	18.15	1.338	.005	.33
Composite Score	18.56	17.92	1.498	.000	.43

**Cross County New Tech High School and KIPP Delta Collegiate High School ACT Scores**

The ACT scores from Cross County and KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 9, Cross County New Tech High School's and KIPP Delta Collegiate High School's mean scores were higher as compared to the other 62 schools in the test group in all categories, including composite score. There were statistically significant differences in reading, English, math, and composite scores. Further, Cohen's effect size values suggested a high practical significance for English ( $d = .67$ ) and math ( $d = .64$ ). However, the practical significance was medium for reading ( $d = .48$ ) and the composite score ( $d = .51$ ).

Table 9

*Cross County High School and KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

ACT	Cross County and KIPP Delta High School	Test Group ( <i>n</i> = 62)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	19.64	18.49	2.374	.000	.48
English	18.54	16.94	2.383	.000	.67
Math	19.00	17.97	1.617	.000	.64
Science	18.85	18.45	2.029	.126	
Composite Score	19.15	18.13	2.004	.000	.51

The ACT scores Cross County and KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2015 – 2016 school year. As shown in Table 10, Cross County New Tech High School's and KIPP Delta Collegiate High School's mean scores were higher as compared to the other 70 schools in the test group in all categories, including the composite score. There were statistically significant differences in English, math, and composite score. Further, Cohen's effect size value suggested a high practical significance for math ( $d = .78$ ) and a medium practical significance for both English ( $d = .42$ ) and the composite score ( $d = .39$ ).

Table 10

*Cross County High School and KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2015-2016*

ACT	Cross County & KIPP Delta High School	Test Group ( <i>n</i> = 70)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	19.40	18.92	2.239	.077	
English	18.31	17.38	2.213	.001	.42
Math	19.26	17.98	1.637	.000	.78
Science	19.02	18.67	1.915	.127	
Composite Score	19.14	18.39	1.921	.002	.39

The ACT scores from Cross County and KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 11, Cross County New Tech High School's and KIPP Delta Collegiate High School's mean scores were higher as compared to the other 76 schools in the test group in all categories, including the composite score. There were statistically significant differences in reading, English, math, and composite score. Further, Cohen's effect size value suggested a high practical significance for English ( $d = .78$ ) and a small to medium practical significance in reading ( $d = .32$ ), math ( $d = .30$ ), and composite score ( $d = .44$ ).

Table 11

*Cross County High School and KIPP Delta High School ACT Scores compared to Arkansas public & public charter high schools with similar SES characteristics 2016-2017*

ACT	Cross County & KIPP Delta High School	Test Group ( <i>n</i> = 76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	18.69	18.07	1.935	.007	.32
English	18.28	16.71	2.017	.000	.78
Math	17.89	17.46	1.413	.010	.30
Science	18.46	18.20	1.597	.166	
Composite Score	18.51	17.77	1.662	.000	.44

The ACT scores from Cross County and KIPP Delta were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018 school year. As shown in Table 12, Cross County New Tech High School's and KIPP Delta Collegiate High School's mean scores were higher as compared to the other 76 schools in the test group in all categories. There were statistically significant differences in all categories. Further, Cohen's effect size value suggested a high practical significance for English ( $d = .72$ ), a medium practical significance for math ( $d = .52$ ), reading ( $d = .41$ ), and the composite score ( $d = .49$ ). There was a small practical effect for the science score ( $d = .58$ ).

Table 12

*Cross County High School and KIPP Delta High School ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

ACT	Cross County & KIPP Delta High School	Test Group ( $n = 76$ )	$SD$	$p$	Cohen's $d$
Reading	18.98	18.21	1.900	.001	.41
English	18.52	17.21	1.813	.000	.72
Math	18.16	17.50	1.276	.000	.52
Science	18.53	18.15	1.338	.017	.28
Composite Score	18.65	17.92	1.498	.000	.49

### **DCAN ACT Scores**

The ACT scores from the DCAN schools were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018 school year. As shown in Table 13, DCAN ( $M = 17.54$ ,  $SD = 1.276$ ) were higher as compared to the other 76 schools in the test group ( $M = 17.50$ ,  $SD = 1.302$ ) in math, but not statistically significantly higher ( $p = .763$ ). The test group scored higher in reading, English, science, and the composite score. However, there was only a statistically significant difference in the science scores ( $p = .009$ ). Further, Cohen's effect size value suggested a small to medium practical significance for reading ( $d = .31$ ).



Table 13

*DCAN ACT Scores Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

ACT	DCAN High Schools	Test Group ( <i>n</i> = 76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Reading	17.69	18.21	1.900	.519	
English	17.19	17.21	1.813	.934	
Math	17.54	17.50	1.276	.763	
Science	17.74	18.15	1.338	.009	.31
Composite Score	17.65	17.92	1.498	.116	

### **Cross County New Tech High School Matriculation Rates**

The college matriculation rates for Cross County New Tech High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 14, Cross County New Tech High School's ( $M = 66.67\%$ ) was higher as compared to the other 59 schools in the test group ( $M = 49.96\%$ ). There was a statistically significant difference in the matriculation rate ( $p < .001$ ). Further, Cohen's effect size value suggested a very high practical significance ( $d = 1.29$ ).

Table 14

*Cross County High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

	Cross County High School	Test Group (n=59)	SD	p	Cohen's d
Avg. Matriculation	66.67%	49.96%	12.976	.000	1.29

The college matriculation rates for Cross County New Tech High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2015 – 2016 school year. As shown in Table 15, Cross County New Tech High School's ( $M = 47.50\%$ ) was higher as compared to the other 68 schools in the test group ( $M = 46.58\%$ ). However, the difference was not statistically significant ( $p = .639$ ).

Table 15

*Cross County High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2015-2016*

	Cross County High School	Test Group (n=68)	SD	p	Cohen's d
Avg. Matriculation	47.50%	46.58%	16.008	.639	

The college matriculation rates for Cross County New Tech High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 16, Cross County New Tech High School's ( $M = 45.95\%$ ) was higher as compared to the other 68 schools in the

test group ( $M = 43.74\%$ ). However, the difference was not statistically significantly higher ( $p = .210$ ).

Table 16

*Cross County High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2016-2017*

	Cross County High School	Test Group ( $n = 68$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	45.95%	43.74%	14.406	.210	

The college matriculation rates for Cross County New Tech High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018 school year. As shown in Table 17, Cross County New Tech High School's ( $M = 39.29\%$ ) was higher as compared to the other 76 schools in the test group ( $M = 36.29\%$ ). There was a statistically significantly difference in the matriculation rate ( $p = .046$ ). Further Cohen's effect size value suggested a small practical significance ( $d = .23$ ).

Table 17

*Cross County High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

	Cross County High School	Test Group ( $n = 76$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	39.29%	36.29%	12.893	.046	.23

### KIPP Delta Collegiate High School Matriculation Rates

The college matriculation rates for KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 18, KIPP Delta Collegiate High School's ( $M = 77.14\%$ ) was higher as compared to the other 59 schools in the test group ( $M = 49.96\%$ ). There was a statistically significant difference in the matriculation rate ( $p < .001$ ). Further, Cohen's effect size value suggested an extremely high practical significance ( $d = 2.09$ ).

Table 18

*KIPP Delta High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

	KIPP Delta High School	Test Group ( $n = 59$ )	$SD$	$p$	Cohen's $d$
Avg. Matriculation	77.14%	49.96%	12.976	.000	2.09

The college matriculation rates for KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 19, KIPP Delta Collegiate High School's ( $M = 76.92\%$ ) was higher as compared to the other 68 schools in the test group ( $M = 46.58\%$ ). There was a statistically significant difference in the matriculation rate ( $p < .001$ ). Further, Cohen's effect size value suggested an extremely high practical significance ( $d = 1.90$ ).

Table 19

*KIPP Delta High School Matriculation Rate in Arkansas Colleges and Universities  
Compared to Arkansas Public and Public Charter High Schools with Similar SES  
Characteristics 2015-2016*

	KIPP Delta High School	Test Group ( <i>n</i> =68)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	76.92%	46.58%	16.008	.000	1.90

The college matriculation rates for KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 20, KIPP Delta Collegiate High School's ( $M = 50.00\%$ ) was higher as compared to the other 68 schools in the test group ( $M = 43.74\%$ ). There was a statistically significant difference in the matriculation rate. Further, Cohen's effect size value suggested a medium practical significance ( $d = .43$ ).

Table 20

*Cross County High School Matriculation Rate in Arkansas Colleges and Universities  
Compared to Arkansas Public and Public Charter High Schools with Similar SES  
Characteristics 2016-2017*

	KIPP Delta High School	Test Group ( <i>n</i> =68)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	50.00%	43.74%	14.406	.001	.43

The college matriculation rates for KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2017 – 2018s school year. As shown in Table 21, KIPP Delta

Collegiate High School's ( $M = 42.37\%$ ) was higher as compared to the other 76 schools in the test group ( $M = 36.29\%$ ). There was a statistically significant difference in the matriculation rate ( $p = .000$ ). Further Cohen's effect size value suggested a medium practical significance ( $d = .47$ ).

Table 21

*KIPP Delta Collegiate High School Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

	KIPP Delta High School	Test Group ( $n = 76$ )	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	42.37%	36.29%	12.893	.000	.47

### **Cross County New Tech High School and KIPP Delta Collegiate High School**

#### **Matriculation Rates**

The college matriculation rates for Cross County New Tech High School and KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2014 – 2015 school year. As shown in Table 22, Cross County New Tech High School's and KIPP Delta Collegiate High School's ( $M = 71.91\%$ ) was higher as compared to the other 59 schools in the test group ( $M = 49.96\%$ ). There was a statistically significant difference in the matriculation rate ( $p < .001$ ). Further, Cohen's effect size value suggested an extremely high practical significance ( $d = 1.69$ ).

Table 22

*Cross County High School and KIPP Delta High School Average Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2014-2015*

	Cross County & KIPP Delta High School	Test Group ( <i>n</i> =59)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	71.91%	49.96%	12.976	.000	1.69

The college matriculation rates for Cross County New Tech High School and KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2015 – 2016 school year. As shown in Table 23, Cross County New Tech High School's and KIPP Delta Collegiate High School's ( $M = 62.21\%$ ) was higher as compared to the other 68 schools in the test group ( $M = 46.58\%$ ). There was a statistically significant difference in the matriculation rate. Further, Cohen's effect size value suggested a very high practical significance ( $d = .98$ ).

Table 23

*Cross County New Tech High School and KIPP Delta Collegiate High Schools Average Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2015-2016*

	Cross County & KIPP Delta High School	Test Group ( <i>n</i> =68)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	62.21%	46.58%	16.008	.000	.98

The college matriculation rates for Cross County New Tech High School and KIPP Delta Collegiate High School graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2016 – 2017 school year. As shown in Table 24, Cross County New Tech High School's and KIPP Delta Collegiate High School's ( $M = 47.98\%$ ) was higher as compared to the other 68 schools in the test group ( $M = 43.74\%$ ). There was a statistically significant difference in the matriculation rate. Further, Cohen's effect size value suggested a small practical significance ( $d = .29$ ).

Table 24

*Cross County New Tech High School and KIPP Delta Collegiate High Schools Average Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2016-2017*

	Cross County & KIPP Delta High School	Test Group ( $n = 68$ )	$SD$	$p$	Cohen's $d$
Avg. Matriculation	47.98%	43.74%	14.406	.018	.29

The college matriculation rates for Cross County New Tech High School and KIPP Delta Collegiate High Schools graduates in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2017-2018 school year. As shown in Table 25, Cross County New Tech High School and KIPP Delta Collegiate High School's ( $M = 40.83\%$ ) was higher as compared to the other 76 schools in the test group ( $M = 36.29\%$ ). There was a statistically significantly difference in the matriculation rate ( $p = .003$ ). Further Cohen's effect size value suggested a medium practical significance ( $d = .35$ ).



Table 25

*Cross County New Tech High School and KIPP Delta Collegiate High Schools Average Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

	Cross County &KIPP Delta High School	Test Group ( <i>n</i> =76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	40.83%	36.29%	12.893	.003	.35

### **DCAN Matriculation Rates**

The college matriculation rates for DCAN schools in Arkansas colleges and universities, were compared to Arkansas high schools of a similar SES structure in the 2017-2018 school year. As shown in Table 26, DCAN high school's ( $M = 44.86\%$ ) was higher as compared to the other 76 schools in the test group ( $M = 36.29\%$ ). There was a statistically significantly difference in the matriculation rate ( $p = .000$ ). Further Cohen's effect size value suggested a medium to high practical significance ( $d = .66$ ).

Table 26

*DCAN High Schools' Average Matriculation Rate in Arkansas Colleges and Universities Compared to Arkansas Public and Public Charter High Schools with Similar SES Characteristics 2017-2018*

	DCAN	Test Group ( <i>n</i> =76)	<i>SD</i>	<i>p</i>	Cohen's <i>d</i>
Avg. Matriculation	44.86%	36.29%	12.893	.000	.66

## Comparison of DCAN Schools

The ACT scores, college matriculation rates in Arkansas schools, and the overall matriculation rates from DCAN schools for the class of 2018 are presented in Table 27.

In the first year of the DCAN program Central High School had an Arkansas matriculation rate of 55.93%, despite having an average composite ACT score of 15.28%. KIPP Delta and KIPP Blytheville both had a matriculation rate of 80% or higher.

Table 27

*DCAN High Schools' Composite ACT Scores, Matriculation Rate in Arkansas Colleges and Universities, and Matriculation Rate to All Colleges and Universities for 2017-2018*

DCAN Schools	ACT Composite Score	Matriculation to Arkansas Institutions	Matriculation Rate to All Institutions	Number of Graduates
Cross County	18.74%	39.29%	74%	38
KIPP Delta	18.56%	42.37%	80%	40
KIPP Blytheville	18.00%	41.86%	89%	36
Central High School	15.28%	55.93%	73%	95

## **Chapter V: Summary, Discussion, and Recommendations**

During the past two decades, students' preparedness, college-going rate, persistence, and retention in college have been a recent focus in our educational system. There were several studies that examined the matriculation rates of students from various SES backgrounds (Christian et al, 2017; Gansener-Topf et al, 2018; Haxton et al, 2016; Horng et al, 2013; Hoxby & Turner, 2013; Ovink et al, 2018; Roderick et al, 2011; Smith et al, 2018; Woods & Domina, 2014). As discussed in Chapter One, during the past fifteen years, the college-going rate of students not living in poverty has been on the rise, which is not true of the students from low-SES situations.

This study compared the college entrance test (ACT) and matriculation rate to in-state colleges and universities of high-poverty Arkansas high schools. Specifically, ACT scores and matriculation rates from Cross County New Tech High School and KIPP Delta Collegiate High School were compared to that of other Arkansas high-poverty high schools from 2014-2018. The Cross County and KIPP Delta data were used from the 2014-2015 school year because that is the year in which they started a partnership of collaboration to track student college-going rates. Central High School and KIPP Blytheville Collegiate High School were added as members of DCAN in the 2017-2018 school year. As defined in Chapter One, DCAN is a consortium of Cross County New Tech High School, KIPP Delta Collegiate, Central High School, and KIPP Blytheville Collegiate High School that formed prior to the 2017-2018 school year. This consortium shares ideas and staff that help students navigate the challenges, and often road blocks, associated with the preparation for college while in high school by providing college advising and college matching, and other college planning opportunities. DCAN also

provides advising to its students once they have matriculated to college. Finally, a comparison of the DCAN schools was examined for the 2017-2018 school year.

This chapter discusses the key findings from the research and the conclusions from the research questions. Also, implications of practice and implications for future studies are discussed.

### **Summary of Results**

**ACT scores of high-poverty schools.** ACT scores of Cross County New Tech High School and KIPP Delta Collegiate High School were compared to the ACT scores of other high-poverty Arkansas public high schools and public charter high schools from the 2014-2015 to the 2017-2018 school year. These two schools were making common prolusions for students to prepare and enter college during these years. In all years except the 2016-2017 school year, Cross County New Tech High School scored higher in all tested areas and composite scores than the high-poverty schools in the comparison group. Excluding the 2016-2017 school year, of the 15 sets of data that were examined, Cross County outscored the comparison group in all categories. Of those 15, there were 10 that had a significant statistical difference in the comparison. By examining Cohen's *d*, it revealed four of the 10 had a high practical significant difference. During the 2017-2018 school year, an interesting finding was the Cross County New Tech High School scores in all four tested areas, as well as the composite scores, were all significantly higher statistically than that of the comparison group. Although, only the science score suggested a high practical significance. All of the scores were higher than the previous year in which the comparison group had performed better.

During the same time span, KIPP Delta Collegiate High School scored better compared to the mean scores of other high-poverty high schools and public charter high schools in the state of Arkansas. During the four years from 2014-2015 to 2017-2018, there were 20 sets of data. Every year, each dataset included the average of the English, math, reading, science and the composite scores. Of the 20 sets of data, KIPP Delta Collegiate scored higher on all but one set, the 2017-2018 science average. Furthermore, in 17 out of the 20 sets of data, KIPP Delta had an average score that was statistically significantly higher than that of the comparison group. During this time, KIPP Delta outperformed the comparison group on the English, Math, and composite scores. On the English test, all four years had either a high, or very high practical significance. The math test showed high, or very high practical significance on three of the four years of the test. The composite scores of KIPP Delta also were statistically more significant than those of the comparison group for all four years. However, three of the four years, the Cohen's effect size indicated a medium practical significance.

Beginning the 2017-2018 school year, Central High School and KIPP Blytheville Collegiate High School were added to KIPP Delta Collegiate and Cross County New Tech to form the DCAN consortium. The 2017-2018 ACT scores for the DCAN schools were lower than those of schools with similar SES at other Arkansas high schools and public charter high schools in four of the five datasets: reading, English, science, and the composite score. There was even a statistically significant difference with the science score of the comparison group outscoring the DCAN group. The reason for the lower scores from the DCAN schools were both Central and KIPP Blytheville scores were well below both Cross County and KIPP Delta. It can be deduced that in year one, the DCAN

schools combined scores were not at the state average. However, the KIPP Delta and Cross County mean scores alone were significantly higher than the comparison group.

**College matriculation rates of high-poverty schools.** The second part of the research questions for this study pertained to the college matriculation rate of Cross County New Tech High School and KIPP Delta Collegiate High School compared to those of Arkansas high schools and public charter schools of similar SES from 2014-2015 until the 2017-2018 school year. The matriculation rates of KIPP Delta and Cross County were then combined with Central High School and KIPP Blytheville Collegiate, and then compared to the other similar SES school for the 2017-2018 school year. All four years of data indicated that the Cross County New Tech High School had a matriculation rate above the state average of Arkansas high schools enrolling into Arkansas two-year or four-year college or university. The 2014-2015 school year had the largest significant difference between the two scores. In that year, Cross County students matriculated to Arkansas colleges and universities at a rate of 66.67% compared to the state average of 49.96%.

The college matriculation rate of KIPP Delta Collegiate for the years 2014-2015 through 2017-2018 was higher than the average of the other Arkansas schools of similar SES in all four years. Not only did these schools score higher, but the statistical comparison revealed the difference was quite large. In fact, KIPP Delta had a matriculation rate over 25.0% higher, than the average Arkansas schools with similar SES in the 2014-2015 and 2015-2016 school years.

The DCAN scores were available for comparison to the Arkansas public high schools and public charter high schools for the 2017-2018 school year. The matriculation

rate of the combined DCAN schools was 44.86%, which was significantly higher than the comparison group's rate of 36.29%. The effect size suggested a medium to high practical significance. Central High School had an in-state matriculation rate of 55.93%, which was not only significantly higher than the comparison group's rate, but the effect size was very high.

**Discussion.** Based on the findings from the data, the researcher concluded there was a significant impact on ACT scores by attending KIPP Delta Collegiate. KIPP Delta Collegiate consistently outperformed on the ACT compared to other Arkansas high schools of similar SES. Seventeen of the 20 sets of data produced a significant statistical difference.

The Cross County ACT scores were also greater than the scores of the comparison group in three of the four years. However, the same level of statistical significance was not found in the Cross County scores, as there was in the KIPP Delta scores. After running Cohen's test on the data, the researcher found there were only three instances that the results suggested a high practical significance. In fact, during the 2016-2017 school year, the comparison group outperformed Cross County in all areas except English.

One reason for this low scoring year was going into the 2016-2017 school year, Cross County New Tech High School had over a 40.0% turnover in staff. During most years, the Cross County High School has between 21 and 25 certified teachers. When there is a large turnover in a small school staff, the amount of student success can be negatively impacted. For the turnover was very low going into the 2017-2018 school year, and the mean scores elevated above those of the comparison group.

The research questions also asked about the college matriculation rates comparing Cross County, KIPP Delta, and the DCAN schools. The matriculation data of the aforementioned groups was significantly higher than the state average of the college-going rate to in-state two and four-year schools. In the school years 2014-2015 and 2015-2016, the practical significance was very high. During the first year of the DCAN consortium, the DCAN schools had a significantly higher matriculation rate than the 76 schools in the comparison group. The researcher believed that this was due to the high levels of college advising and matching that was implemented within the DCAN program, which did not take place at other high-poverty high schools in the state.

An interesting discovery of the matriculation data was that during all four years, the rate of matriculation dropped. This happened with KIPP Delta Collegiate, Cross County New Tech, and the Arkansas high schools and public charter schools of similar SES. The KIPP Delta rate dropped from 77.14 % in 2014-2015 to 42.37% in 2017-2018. Cross County averages dropped from 66.67% in 2014-2015 to 39.29% in 2017-2018. The comparison group dropped from 49.96% in 2014-2015 to 36.29% in 2017-2018.

The number of schools in the comparison group fluctuated from the schools 2014-2015 to 2017-2018. During this time period, the number of high SES schools rose from 59 schools in 2014-2015 to 76 schools 2017-2018. This change in the number of schools in-and-out of poverty could certainly factor into the reason for the decrease in the matriculation rate to in-state institutions.

One reason for the decline in the number of in-state institution enrollees for KIPP Delta and Cross County High Schools was that more students chose to attend an out-of-state institution as compared to previous years. In 2017-2018, the fourth overall year of



college advising and college matching, Cross County students overall matriculation rate was 74.0% and KIPP Delta's matriculation rate was 80.0%. As the program developed and the level of advising, scholarship opportunities, and college matching increased, so did the exposure to out of state colleges and universities.

### **Implications of Practice**

The DCAN consortium was in its second year of existence when this study was conducted. However, Cross County New Tech High School and KIPP Delta Collegiate had similar programs such as the CollegeXCareerXChoice and KIPP Through College which has been available for a longer time. The components of the DCAN program and the building of the consortium have likely made all of these schools stronger. The DCAN schools are serving students better in the quest for college acceptance, matriculation, and college persistence in post-secondary education. Even in these early, formative years, this consortium is happening because of the commitment to the DCAN Dozen. The DCAN Dozen is the document of principles which guide the program. Despite the program being in its infancy stages, future data may influence new practices within the state.

The implications of practice for the future is hoping that more Arkansas schools will see the need to implement a structure like the DCAN Dozen plan and provides it in their school. The governor, elected officials, and the Arkansas Department of Education often speak about students being college ready. The DCAN program appears to be making that happen at a higher rate with its students in rural, high-poverty areas. However, a goal of the program is not only for students to be ready for college but be more prepared for the right college. This approach happens through proper college

matching. Currently, there are no other programs in high-poverty schools in the state of Arkansas that use the resources to college-match students the way the DCAN schools do, and that includes the College and Career Coach Program. The College and Career Coach Program discussed in Chapter Two does not have the same set of metrics and program outcomes. For instance, the College and Career Coach Program only has students apply to at least one college or university. DCAN schools have students apply to at least six college institutions. In years to come, the shift in the College and Career Coach Program could turn more towards the DCAN model.

The Arkansas Department of Higher Education (ADHE) may want to use the data from a continued study of this program which will benefit in-state colleges and universities in several different areas. One area of focus is to increase enrollment into post-secondary education in the state of Arkansas. If these four DCAN schools continue enrolling more-and-more students as compared to other high schools in the state, then the ADHE may push for similar programs to be incorporated into more Arkansas high schools.

The ADHE and in-state post-secondary institutions may be quite interested in the college matching information. The DCAN advisors use information to match students to colleges. If a student is not a good match to a college, then the advisor will provide that data and information to the students and parents. Each college institution graduates different populations at different rates. Some examples of different populations include: African American males, females from low SES households, or maybe students with learning disabilities. Therefore, if more high schools began using a college matching program for its students, then those institutions that do not graduate or accommodate to

these different populations, might see a decrease in enrollment. When this happens over time, the institutions may become more aware, and begin making strides to develop areas of change while being more welcoming to different populations.

### **Recommendations for Future Research**

As discussed in this research study, there were many programs around the country that emphasized the preparations of high-poverty high school students matriculating to post-secondary education. Much of the literature concentrated on programs from non-profit organizations that helped this high-poverty population, often times, it was targeted to first generation students pursue post-secondary education opportunities. Although in its infancy stages, the DCAN consortium is one such program. The research in this study utilized one full year of DCAN data. After years of developing, the DCAN consortium should continue to grow and strengthen as it is offered for years to come. The researcher recommends that the study should be duplicated in five and ten years, which will allow the program more time to develop.

The schools that make up DCAN are small rural schools in what is considered the Arkansas Delta. Cross County is above 90.0% Caucasian. However, the other three schools are higher than 90.0% African-American. A possible future study would be to compare the DCAN schools to high-poverty schools concentrated in other areas within the state. For instance, DCAN could be compared to high-poverty schools in north central Arkansas. Those schools would have a population that is predominately Caucasian. The same could be completed by comparing DCAN to high-poverty schools in only southwest Arkansas. There would be a different ratio of ethnicities among those students.

A comparative study between the DCAN schools and other schools with similar SES, and focusing on the college matriculation rate to all two and four-year institutions would be a beneficial future research project. This study was conducted by using matriculation rates to two and four-year colleges and universities within the state of Arkansas. There was no data was available for the comparison group if students enrolled in an out-of-state institution. The researcher was able to ascertain the overall matriculation rate of all DCAN schools. Once that number was added, Cross County New Tech High School had a 74.0% college-going rate. KIPP Delta and KIPP Blytheville had 80.0%, and 89.0%, respectively. While Central High School had the highest in-state matriculation rate (55.93%) of the four DCAN schools, they had the lowest (73.0%) of the four DCAN schools after including the out-of-state enrollees.

Through extensive college matching, the DCAN schools provide options to students outside the state boundaries of Arkansas. All four DCAN schools have students who attend school out-of-state. Three of the DCAN schools are a ten-minute drive to another state. The Cross County School District is approximately one hour from Memphis, Tennessee which has numerous colleges available to the students. Students of schools in the comparison group also attend out-of-state colleges and universities. Often colleges in bordering areas will waive out-of-state tuition costs for students that are within a certain distance to the post-secondary institution. There are probably instances in border areas where as many students attend an out-of-state institution, as there are those that choose to attend an in-state institution.

Another future research project that stems from this research would be to research the DCAN schools and compare them with Arkansas schools that utilize the College and

Career Coach Program. The College and Career Coach Program was designed to help students with college and career choices, while providing services such as helping with the college application process or hosting FAFSA parent nights. The College and Career Coach Program is certainly an improved program as compared to Arkansas high schools that only provide an overworked counselor who might also be the testing coordinator as well. However, program data revealed that the DCAN consortium has more stringent program metrics, requirements, and outcomes compared to the College and Career Coach Program. The College and Career Coach Program is not limited to only high-poverty schools. During the beginning of the program, it was only offered at high-poverty schools in poor Arkansas counties, but that policy has changed in recent years.

The comparison group of this study included some schools in the state that utilize the College and Career Coach Program because they are in high-poverty schools. However, a study comparing only those schools' ACT scores and matriculation rates to the DCAN schools would be a beneficial study as well. This research should benefit the school leaders of DCAN schools and College and Career Coach schools. Leaders use district funding for parts of both programs. This future study could justify the expenditures based on adequate results, or the data could indicate the lack of adequate results compared with the other program. This would actually involve students that were not from similar SES backgrounds, but more of a comparison of the programs.

As previously mentioned, the DCAN consortium uses tools such as early advising and college matching to help its students to not only enroll into college, but also the consortium is designed to prepare the students up for success through persistence and retention at their chosen college or university. There are three alumni advisors in the

DCAN program that are tasked with counseling, advising, and helping the high school graduates of the DCAN schools once they are enrolled in college. They follow-up through weekly emails, texts, and campus visits. The researcher feels the most important future study that could evolve from this study and the DCAN program is to compare the persistence and retention rates of the DCAN graduates with other students from similar SES high schools in the state of Arkansas. Currently, the first high school graduates in the DCAN program are in their first year of college. Although, the alumni advisors did work with college students during the 2017-2018 academic year that had graduated from the four DCAN school. The first group of high school graduates should be completing college in three more years. Obviously not all students will graduate in four years, but there will be enough data to determine the significance of the program as compared to other college preparation programs in the state. The study of persistence and retention, and the significance of the assistance from the alumni advisors are a key DCAN component.

After the next three years of continuous data from the DCAN program, the amount of research and analysis is limitless. As the program continues to develop, the researcher believes that the data can, and should be compared to not only schools of similar SES status, but to schools with higher SES students' percentages, and with other programs designed to help students throughout the state.

### **Final Summary**

Educators and school districts have an obligation to help its students obtain the necessary tools and information to reach their future potential. If that future potential involves post-secondary education, then schools have the responsibility to not only help

them achieve that status, but also guide students and parents to make the best-informed decisions possible. Most school districts do not have programs in place that help during this stressful process. This is especially true in high-poverty schools, as data showed that high-poverty students matriculate and achieve degrees at a lower rate, as compared to students from more affluent SES status. The DCAN program was designed to help with this chronic issue. Often, students in the four DCAN schools are first-generation college students, students of poverty in rural areas, and minority students. Unfortunately, these are the labels that many DCAN students wear each day.

In the coming years, with the continued growth of the DCAN program and potential growth into more schools, the narrative of students in poverty not having success in post-secondary education can, and will change. The research data presented in this study will hopefully allow educational leaders to take a different look into how we prepare, inform, and guide students toward the most important decision of their young lives.

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## Appendix A

### School Permission to Conduct Research

#### Appendix A

#### SCHOOL PERMISSION TO CONDUCT RESEARCH

Dear Institutional Review Board:

The purpose of this letter is to inform you that I give *Nathan Morris* permission to conduct the research titled *Improving College Matriculation in High Poverty Arkansas High Schools through Early Advising and College Matching*. This also serves as assurance that this school complies with requirements of the Family Educational Rights and Privacy Act (FERPA) and the Protection of Pupil Rights Amendment (PPRA) (see back for specific requirements) and will ensure that these requirements are followed in the conduct of this research.

Sincerely,



Scott Shirey  
Executive Director, KIPP Delta Public Schools



- The right of a parent of a student to inspect, upon the request of the parent, a survey created by a third party before the survey is administered or distributed by a school to a student. Any applicable procedures for granting a request by a parent for reasonable access to such survey within a reasonable period of time after the request is received.
- Arrangements to protect student privacy that are provided by the agency in the event of the administration or distribution of a survey to a student containing one or more of the following items (including the right of a parent of a student to inspect, upon the request of the parent, any survey containing one or more of such items): Political affiliations or beliefs of the student or the student's parent. Mental or psychological problems of the student or the student's family. Sex behavior or attitudes. Illegal, anti-social, self-incriminating, or demeaning behavior. Critical appraisals of other individuals with whom respondents have close family relationships. Legally recognized privileged or analogous relationships, such as those of lawyers, physicians, and ministers. Religious practices, affiliations, or beliefs of the student or the student's parent. Income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program).
- The right of a parent of a student to inspect, upon the request of the parent, any instructional material used as part of the educational curriculum for the student. Any applicable procedures for granting a request by a parent for reasonable access to instructional material received.
- The administration of physical examinations or screenings that the school or agency may administer to a student.
- The collection, disclosure, or use of personal information collected from students for the purpose of marketing or for selling that information (or otherwise providing that information to others for that purpose), including arrangements to protect student privacy that are provided by the agency in the event of such collection, disclosure, or use.
- The right of a parent of a student to inspect, upon the request of the parent, any instrument used in the collection of personal information before the instrument is administered or distributed to a student. Any applicable procedures for granting a request by a parent for reasonable access to such instrument within a reasonable period of time after the request is received.

## Appendix B

## School Permission to Conduct Research

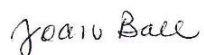
## Appendix B

## SCHOOL PERMISSION TO CONDUCT RESEARCH

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Sincerely,



Joan Ball  
President of Board of Education  
Cross County School District

- The right of a parent of a student to inspect, upon the request of the parent, a survey created by a third party before the survey is administered or distributed by a school to a student. Any applicable procedures for granting a request by a parent for reasonable access to such survey within a reasonable period of time after the request is received.
- Arrangements to protect student privacy that are provided by the agency in the event of the administration or distribution of a survey to a student containing one or more of the following items (including the right of a parent of a student to inspect, upon the request of the parent, any survey containing one or more of such items): Political affiliations or beliefs of the student or the student's parent. Mental or psychological problems of the student or the student's family. Sex behavior or attitudes. Illegal, anti-social, self-incriminating, or demeaning behavior. Critical appraisals of other individuals with whom respondents have close family relationships. Legally recognized privileged or analogous relationships, such as those of lawyers, physicians, and ministers. Religious practices, affiliations, or beliefs of the student or the student's parent. Income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program).
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## Appendix C

## School Permission to Conduct Research

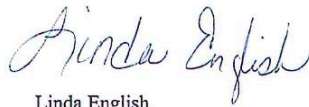
## Appendix C

## SCHOOL PERMISSION TO CONDUCT RESEARCH

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Sincerely,

A handwritten signature in cursive script that reads "Linda English".

Linda English  
Superintendent of Schools  
Helena-West Helena School District

- The right of a parent of a student to inspect, upon the request of the parent, a survey created by a third party before the survey is administered or distributed by a school to a student. Any applicable procedures for granting a request by a parent for reasonable access to such survey within a reasonable period of time after the request is received.
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