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ARKANSAS CAREER AND TECHNICAL EDUCATION FACILITATORS AND
CAREER TRANSITIONS: THE PERCEPTIONS OF STUDENTS

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 Center for Leadership and Learning
of the College of Education

May 2018

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Program: School Leadership

Degree: Doctor of Education

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Signature

Date

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Acknowledgments

Upon entering the education profession, a career as an educational leader was something that never entered my mind. I wanted to coach and work with children. My coaches made a major impact on me throughout my youth. Looking back on my education, without coaches and participation in school athletics, I do not believe I would have finished; I would have been another “drop-out.” I thought being a coach would give me the ability to work with children who had similar interests and backgrounds; furthermore, it would allow me to return the favor to other young children. However, once I became a teacher, I realized that the number of children who needed help, support, and guidance far exceeded those involved in afterschool sports. I began to see that my impact on students expanded beyond the walls of the gym and the football field.

I was never an exceptional student, nor did I ever enjoy the educational process. As I progressed in my career, I saw the importance of continuing my education and pursuing advanced degrees to show my children and the students I worked with that they could accomplish their goals and dreams.

I would like to acknowledge and thank my friend and mother, Marguerite McDonald Hansen, for all always being there for me, for your sacrifices in raising me, and for always believing in me. Most of all, thank you for being you. I would like to thank my father, whom throughout all of our challenges has set the standard for the man I strive to be, and has always been there for me when I needed him the most, thank you! I would like to acknowledge my family, my wife Lisa, and my children Alexis and Hunter. First, I would like to thank you for all the sacrifices you have made as the family members of a coach, and for your willingness to continue as I continued my educational

journey. I hope I have made you proud; I love you! Lastly, I would like to thank the members of my dissertation committee for guiding me through this process. I greatly appreciate Dr. Freeman, Dr. Nichols, and Dr. Owen for their suggestions and ideas which guided me throughout this process and always encouraged me as an educational leader to think about the “bigger picture.”

Abstract

The purpose of this study was to gauge the effectiveness of the Arkansas Department of Career and Technical Education (ACTE) College and Career Coaches, also referred to as, College and Career Facilitators. The focus of these Facilitators is to specifically target middle and high school students who are most in need of college and career planning services (Arkansas Department of Career Education, 2016a). This study focused on investigating the impact CTE Facilitators were having on increasing CTE program Completer numbers and helping the students to develop a path to pursue upon graduation by analyzing the perceptions of students. The student population engaged in this research study was comprised of program Completers and high school graduates from the 2017 school year who have received CTE counseling from grades eight through 12. The location of the study was an urban school district in Arkansas. The school district is comprised of 26 schools: 19 elementary schools, four middle schools, and two high schools, totaling 14,341 students. The two high schools within the district had a combined enrollment of 3,228 students and produced a combined 906 graduates, in the 2017 school year. Using archived data and a survey instrument, the researcher sought to answer three questions: What are the similarities and differences in CTE Completers? What are the students' perceptions of CTE Facilitators and the assistance and support they provide them to become program Completers? What are the students' perceptions of their CTE Facilitators and the assistance and support they provide them to develop a career path, or interest, to pursue upon graduation? The archived data was collected from the district of study's CTE director. Using "Descriptive Data Analysis," the researcher compared the school year 2011 (the last year prior to the CTE Facilitators

implementation) and the school year 2017 (the first graduating class to complete the entire CTE Facilitator program). The qualitative survey data were analyzed using the Constant-Comparative Method to determine if themes arose related to the students' perceptions of their CTE Facilitators.

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Chapter I: Introduction

Background of the Study

The first form of vocational education in America was an apprenticeship, the rudimentary method by which American youth prepared for the workplace with some level of professional competency (Gordon, 2008). Historically, apprenticeship was viewed as a master-servant relationship. Douglas (1921) wrote, “It is essentially a combination of education and industry, in which the teacher shared knowledge with the servant, typically a minor” (p. 11).

The minor was taught the trade through the act of doing and in return paid for the education by work done on items destined for the master’s consumption, use, or sale (Douglas, 1921). At some point in the relationship, the minor was deemed knowledgeable enough to perform the task without the master’s supervision; this was typically when the work had gone from educational to the mundane. Apprenticeship declined as the primary source of education and training, as the Industrial Revolution brought new needs, demands, and training opportunities for workers. The demand for manufactured goods was met by machine operators who did not require long apprenticeship programs (Douglas, 1921; Gordon, 2008).

In the early to mid-1800s, Jacksonian Democracy began the rise of a viable middle class that came to value education as a means for social advancement, and a number of private colleges were founded (Dotzler, 2003). The Illinois Legislature adopted a resolution, drafted by Jonathan Baldwin Turner, calling for the Illinois congressional delegation to work to enact a Land-Grant bill to fund a system of industrial colleges, one in each state. Senator Lyman Trumbull of Illinois supported the

bill and advocated for its introduction to the House of Representatives. The bill was then submitted by Representative Justin Smith Morrill of Vermont (1890 Land Grant Universities, 2015; Gordon, 2008). The Second Morrill Act clarified the expectation of how states should use the funds allocated to them. This included specific consideration of the availability of funds for the education of African American students (1890 Land Grant Universities, 2015; Rojewski, 2002; U.S. Department of Education, 2016). The Second Morrill Act gave the then-named Office of Education responsibility for administering support for the original system of Land-Grant colleges and universities.

The federal government has increased its participation in education to ensure equality for all citizens; it is important to note educating America's youth had been assigned to local and state governments (U.S. Department of Education, 2016). Since the passage of the Morrill Act in 1862, the federal government has played a significant role influencing the direction of vocational education (Rojewski, 2002; U.S. Department of Education, 2016).

Current CTE Legislation in Arkansas

An example of the increased involvement by the federal government in state and local education is the introduction of legislation promoting Career and Technical Education (CTE). In response, states like Arkansas used the force of this legislation to address its own educational needs. The goal of CTE is simply to connect students with growing industries to provide a skilled workforce and career opportunities for graduates (Dougherty, 2016). In the report from the Thomas B. Fordham Institute, Dougherty (2016) identified that Arkansas overhauled its state policies to improve career readiness and align CTE programs with the state's labor needs. Beginning with the class of 2014,

the Arkansas state legislature made it a requirement for all high school students to complete six units of career coursework to graduate. This requirement can be met through CTE courses. Dougherty (2016) notes, “Arkansas is one of the few states that have linked K-12, postsecondary, and workforce data long enough so that questions about the efficacy of secondary CTE can be addressed” (p. 4). Data suggest that students who take a concentrated approach to CTE are more likely to graduate from high school, 1% more likely to be employed after high school, and 1.3% more likely to enroll in a two-year college (Camera, 2016). This data reflects the incremental value of CTE in advancing students in the educational system and preparing them for viable careers.

With the support of Arkansas Governor Asa Hutchinson in 2015, Arkansas lawmakers approved HB-1183, making computer science a required course for all public schools beginning in the 2015-2016 academic year (Association of Career and Technical Educators, 2015).

The Association of Career and Technical Educators’ (2015) report also addresses additional legislation passed by the state legislature in 2015. SB371 allows school districts to use certain funds for partnerships with state-supported higher education and technical institutions to offer concurrent courses and other CTE options for students. SB791 aligns existing state laws to the newly passed Federal Workforce Innovation and Opportunity Act (WIOA). SB891 creates the Workforce Initiative Act of 2015 Fund, to provide planning and implementation grants to support the development of local career pathways. HB1600 aims to promote efficiency in reporting, by a school district or public school, and HB1895 expands the state’s College and Career Coaches program to be accessible to all middle and high schools. The College and Career Coaches program

assists students in preparing for postsecondary education or careers (Association of Career and Technical Educators, 2015).

Problem Statement

Dougherty (2016) stated that the goal of today's CTE is to "connect students with growing industries in the American economy and to give them the skills and training required for long-term success" (p. 4). When CTE programs of study are strategically designed, and the associated curriculum is delivered efficiently, secondary CTE programs provide preparation and skill building for careers in fields such as information technology, health services, and advanced manufacturing. As stated previously, Dougherty (2016) noted that Arkansas is a leader in the CTE movement and is one of the few states that has linked kindergarten through 12th grade, postsecondary, and workforce data long enough to answer questions about the efficacy of secondary CTE programs.

Dougherty (2016) also suggests that policymakers and educational leaders nationwide should invest heavily in high school CTE programs. Doing so could mean implementing many of the programs and initiatives currently being used in Arkansas. The Arkansas Department of Career and Technical Education (ACTE) has adopted a bold new national vision for CTE. This concept was developed by the National Association of State Directors of the Career and Technical Education Consortium (NASDCTEC) to emphasize the vital role CTE plays in our nation's educational advancement and economic competitiveness (Arkansas Department of Career Education, 2016a).

As a result of ACTE's vision for CTE, they have supported and implemented CTE's four goals:

Goal 1: Improve CTE Curricula Frameworks through professional development and collaboration.

Goal 2: Improve and Support Program Development through funding priorities and partnerships with stakeholders.

Goal 3: Improve College and Career Readiness for Secondary CTE Students.

Goal 4: Improve Support Services for CTE Students.

To ensure ACTE is meeting their third goal, "CTE prepares students to succeed in further education and careers" (Arkansas Department of Workforce Education, 2018, p.1).

ACTE created College and Career Coaches, also referred to as College and Career Facilitators. The focus of these Facilitators is to specifically target middle and high school students who are most in need of college and career planning services (Arkansas Department of Career Education, 2016a).

As shared earlier, data suggest that students who take a concentrated approach to CTE are more likely to graduate from high school, 1% more likely to be employed after high school, and 1.3% more likely to enroll in a two-year college (Camera, 2016). The problem is, although ACTE has created College and Career Facilitators, the data suggest they have a favorable impact. Only 35% of Arkansas high school graduates will not attend any college or tech training upon graduation. "Although 65% of high school graduates will attend college, 74% of students attending two-year colleges and 33% of students attending four-year colleges require remediation" (ForwARd Arkansas Steering Committee, 2015, p. 20). Unfortunately, Arkansas's college graduation rate was 39%,

compared to 57% nationally in 2012 (ForwARd Arkansas Steering Committee, 2015).

To date, there has been little, if any, formal evaluation of Arkansas College and Career Coaches, referred to by many as “CTE Facilitators.”

This study was conducted to gauge CTE Facilitators and their effectiveness in helping students transition into postsecondary education or career development programs, and to compare CTE Completers before and after the application of CTE Facilitators. An analysis of student perceptions of the impact CTE Facilitators are having on assisting them in choosing a career path and transitioning into post-secondary education will provide feedback on the efficacy and utility of this program. This would demonstrate whether ACTE is meeting its third goal: “CTE prepares students to succeed in further education and careers” (Arkansas Department of Workforce Education, 2018, p.1).

Purpose of the Study

The purpose of this study was to gauge students’ perceptions of the effectiveness of Career Development Facilitators in helping them to develop a career path that leads them to post-secondary education or a career trade school. The study also analyzed the effect Career Development Facilitators have on increasing CTE program Completers in an urban school district in Arkansas. The study used a mixed-methods design, to compare student perceptions of the Facilitators and the effect the Facilitators have on the number of Completers within the district.

Significance of the Study

As our society and advancement in technology grow, the need for a skilled workforce in technology and the fields focused under Career and Technology Education (CTE) will continue to increase (Camera, 2016; Dougherty, 2016). American College

Testing (ACT 2015) reported that one-third of high school graduates are not meeting college-readiness benchmarks in math, science, English, and reading. Industry needs workers with a higher level of job readiness and skills required to solve problems and the ability to communicate effectively (Lippman, Ryberg, Carney, & Moore, 2015). With CTE programs placing a greater emphasis on math, computer, and critical thinking skills the exposure of all students to more career opportunities through CTE is crucial to the future development of a skilled workforce (Bevins, Carter, Jones, More & Ritz, 2012; Lear, 2011).

Nationally, governors agree on the above point as they emphasize education as a critical strategic concern. The National Governors Association (NGA) reports a concern and an interest in improving and further developing kindergarten through 12th-grade education. They are calling for a new emphasis on CTE to prepare today's students for career readiness (Lewis, 2007).

Many policymakers and leaders in the field of career preparation and the influence of evolving technology have voiced their concerns that the United States faces a shortage of high-tech workers (Duhigg, 2012). In 2011, Apple CEO Steve Jobs told President Obama that Apple could have created 700,000 manufacturing jobs in the United States instead of China if it were able to find a sufficiently skilled workforce in the United States. The Apple jobs, on average, would have paid \$42,000, generating \$29.4 billion to the U.S economy (Duhigg, 2012). The U.S. Chamber of Commerce recently noted in that 3.8 million jobs are vacant because U.S businesses cannot find qualified workers (Collins, 2015).

The difficulty for American companies to find quality well-trained employees has government and business leaders thinking that it is the responsibility of education to prepare students to transition into the workforce. Economic strength depends on a nation's ability to compete in the world marketplace (Lewis, 2007). Business leaders state that America's younger generation is less educated and less prepared to secure a well-paying profession than its parents (Bevins et al., 2012).

It is important to note that the Bush administration in its implementation of No Child Left Behind (NCLB) remark that CTE programs were a major catalyst for the preparation of students for college and to encourage school restructuring. Since 1987, High Schools That Work (HSTW) have implemented reforms that helped address the needs of "At Risk" students. Initiatives have focused on replacing generalized high school curriculum with rigorous academic courses paired with CTE classes. HSTW undertook a study to validate the approach and found students participating in the HSTW study showed overall gains in academic achievement. The study attributed the student success to a streamlined strategic process in which lower level courses were eliminated and the curriculum was aligned with the goal of academically preparing students for college (Dare, 2006).

CTE programs become more significant and influential when addressing the needs of socio-economically challenged students. To a great extent, schools predominantly attended by socio-economically challenged students face funding problems. This is due to a small tax base, and low property value in the communities where the schools are located. This condition all too often causes students from low economic environments to have lower income expectations, limited goals for education

or training after high school, and in return compact occupational choices (Hardre, 2007).

It is important to note that for many students of poverty, school becomes an extended family. While at school, these students experience structure and exposure to different skills and possibilities that they would not otherwise experience. For these children to be successful in the workplace they must gain experience in the professional skills required by employers (Fagan, 2002).

A 2005 report by the National Research Center for Career and Technical Education found that a ratio of one CTE class for every two academic classes significantly minimized the risk of students dropping out of school (Advance CTE: State Leaders Connecting Learning to Work, 2017). CTE students are 10% to 15% more likely to be in the workforce and earning 8% to 9% more than graduates from general academic programs (Cohen & Besharov, 2002). This study is needed to gauge the effectiveness of Career and Technology Education (CTE) Facilitators in supporting the core goals of CTE to prepare students to transition into post-secondary education or the workforce.

Significance of the Study for Arkansas

This research study provided information on the effectiveness of Career and Technical Education (CTE) Facilitators in helping students select career paths that lead to post-secondary education, career training, or employment. The results of this study will hopefully ensure Arkansas CTE is distributing funding in a way that will help reduce future unemployment rates and will contribute to the production of a skilled workforce meeting the demands of U.S. and Arkansas employers. This study may also assist the Arkansas Department of Education in continuing its focus on CTE and contributing to future CTE legislation within the state.

This study may demonstrate to the ACTE the importance of the Facilitator position and could lead to extending the grant program or making the position required by all school districts within the state. For future researchers, this study builds upon previous studies that have shown CTE to be effective in increasing high school graduation rates (Shadden, 2011). This study also provides insight into how CTE supports students when selecting career paths and bridging the gap between CTE and future needs of U.S. and Arkansas employers.

Delimitations of the Study

For the purpose of this study, subjects were selected from high school students who graduated from an Arkansas high school in the 2017 school year. The students were Career and Technical Education (CTE) Completers who also received counseling from an Arkansas CTE Coach or Facilitator. This study was delimited in that it is specific to the participating school system and may not be generalizable to other populations or other school systems. Further delimitations included geographical exclusions, as the study will only include graduates from one state and graduates from one portion of the state. Only two Facilitators were included in the study. Their personal effectiveness as a Facilitator may play a role in the study's results but was not a variable that was controlled in the design.

Research Questions

The research questions in this study were designed to measure 12th-grade Career and Technical Education (CTE) students and gather the students' perceptions of the assistance they received from CTE Facilitators in becoming program Completers and choosing or discovering a career path to pursue upon graduation.

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

Research Question 2. What are the students' perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?

Research Question 3. What are the students' perceptions of their CTE Facilitators and the assistance and support they received from them in developing a career path, or interest, to pursue upon graduation?

Definitions

Career and Technical Education (CTE): Secondary courses that were formerly known as vocational education or technical education that are based on 16 federally recognized Career Clusters and 79 plus pathways (Arkansas Department of Career Education, 2016b).

Career Clusters: Sixteen federal Career Clusters or broad programs of study that are designed to provide an organizational framework and consist of:

Agriculture, Food and Natural Resources, Architecture & Construction Arts, A/V Technology and Communications, Business, Management, and Administration Education and Training, Finance, Government and Public Administration, Health Science Hospitality and Tourism, Human Services, Information Technology, Law, Public Safety, Corrections and Security, Manufacturing, Marketing, Sales and Service, Science, Technology, Engineering and Math, Transportation, Distribution & Logistics (Association of Career and Technical Educators, 2015).

CTE Facilitator or Coach/Counselor: A person assigned to help work with students' grades seven through 12 to develop and implement a career path to pursue through high school and upon graduation.

Career Pathways: Alternative paths within the 16 Career Clusters for students to become a program of study Completer (Hutchinson & Childers, 2017)

Career and Technical Education (CTE) Completer: The term used in Arkansas to identify a student who has completed three or more classes in a specific area related to CTE education (Hutchinson & Childers, 2017).

Career and Technical Education (CTE) Concentrator: The term used by some states outside of Arkansas for a student who has completed three or more courses in a CTE program of study (Shadden, 2011; Tennessee Department of Education, 2016).

Free or Reduced Lunch: A term used in education to help gauge concentrations of poverty (Huntsberry, 2015).

School Year: From the fall of the current year up to and into June of the following year. The 2016-2017 school year is referred to throughout this study as the school year 2017.

Chapter Summary

Chapter I contains an introduction, including a description and statement of the relevance of the study, a purpose, a statement of the problem, the research questions, and a statement of the significance and limitations of the study itself. Chapter II provides a review of the literature. This includes the history of Career and Technical Education (CTE), and consideration of recent state legislation impacting CTE in Arkansas and the Arkansas College and Career Coach Program (formerly known as Arkansas Works). The study will focus primarily on the program's second component "College and Career

Coach Program.” This component focuses on the creation of the Career Facilitator; which is designed to encourage and support Arkansas students to transition into college and career training programs. Specifically, the study focuses on the portion of the component that addresses the Facilitators work with students in the seventh through 12th grades, in the development of college and career plans (Arkansas Department of Career Education, 2017).

Chapter II will discuss the history of Career and Technical Education and available literature relevant to the study. Chapter III addresses the research methodology used as a lens for reviewing the data collected in the study. It also includes the population selected for the study, the manner in which they were selected, the research questions, the research procedures, the data collection, a summary of the current Facilitator program framework, and the procedures and methodology used for data analysis. Chapter IV offers an analysis of the data. Chapter V provides the study summary, the conclusion, and recommendations for further research opportunities.

Chapter II: Literature Review

History of Vocational Education

With the increasing changes in laws and funding, as well as the federal government's role in vocational education, it is important to understand the evaluation of vocational education in America. The first form of vocational education in America was an apprenticeship. Apprenticeship was the rudimentary method by which American youth prepared for the workplace with some level of occupational competency (Gordon, 2008). Historically, apprenticeship was viewed as a master-servant relationship. Douglas (1921) wrote, "It is essentially a combination education and industry, in which the teacher shared knowledge with the servant, typically a minor" (p. 11).

The minor was taught the trade through the act of doing and in return paid for the education by work done on items destined for the master's consumption, use, or sale (Douglas, 1921). At some point in the relationship, the minor was deemed knowledgeable enough to perform the task without the master's supervision; this was typically when the work had gone from educational to the mundane. Apprenticeship declined as the primary source of education and training, as the Industrial Revolution brought new needs, demands, and training opportunities for workers. The demand for manufactured goods was met by machine operators who did not require long apprenticeship programs (Douglas, 1921; Gordon, 2008).

In the early to mid-1800s, Jacksonian Democracy began the rise of a viable middle class that came to value education as a means for social advancement, and a number of private colleges were founded (Dotzler, 2003). The Illinois Legislature adopted a resolution, drafted by Jonathan Baldwin Turner, calling for the

Illinois congressional delegation to work to enact a Land-Grant bill to fund a system of industrial colleges, one in each state. Senator Lyman Trumbull of Illinois supported the bill and advocated for its introduction to the House of Representatives by an eastern congressman. The bill was then submitted by Representative Justin Smith Morrill of Vermont (1890 Land Grant Universities, 2015; Gordon, 2008). The Second Morrill Act in 1890 clarified the expectation of how states should use the funds allocated to them, specifically the availability of funds for the education of African Americans students (1890 Land Grant Universities, 2015; Rojewski, 2002; U.S. Department of Education, 2016). The Second Morrill Act gave the then-named Office of Education responsibility for administering support for the original system of Land-Grant colleges and universities.

The federal government has increased its participation in education to ensure equality for all citizens; it is important to note educating America's youth has been assigned to local and State governments (U.S. Department of Education, 2016). Since the passage of the Morrill Act in 1862, the federal government has played a significant role influencing the direction of vocational education (Rojewski, 2002; U.S. Department of Education, 2016).

This literature review covers the historical events impacting vocational education. It will detail the importance the federal government has placed on the education of our nation's students, particularly its focus on vocational education now referred to as Career and Technical Education (CTE). This focus by the federal government was first seen in the Morrill Act of 1862.

Vocational Education Legislation

Morrill Act of 1862. Prior to the passage of the Morrill Act of 1862, vocational education in the United States consisted primarily of apprenticeships or of families simply passing down trades or farming skills from generation to generation (Gordon, 2008). With the passage of the Morrill Act, the federal government officially began its involvement in vocational education at the post-secondary level (1890 Land Grant Universities, 2015; Duemer, 1996; National Association of State Universities and Land-Grant Colleges, 1995; U.S. Department of Education, 2016). Since 1862, the Land-Grant Acts have provided some level of federal funding and support for state-provided vocational education. The Morrill Act of 1862 was first introduced by a Vermont congressman, Justin Smith Morrill. His legislation was an attempt to provide all young Americans an opportunity for higher education. This act is considered the foundation of vocational education programs in the United States (U.S. Department of Education, 2016). The Morrill Act provided each state 30,000 acres of federal land for each senator and representative in Congress according to the 1860 census. States were to use the awarded land to support and maintain at least one Land-Grant college in each state (1890 Land Grant Universities, 2015; Duemer, 1996).

As American culture modernized during the Industrial Revolution, the population migrated from farms to urban areas to pursue wealth and careers in factories. This brought awareness that classical curriculum alone no longer responded to the needs of citizens and expectations of industrialized citizens and burgeoning industry. The Morrill Act was intended to meet these evolving national needs by establishing Land-Grant

colleges focused on teaching agriculture and mechanics to promote the industrial classes (Duemer, 1996).

The Morrill Act of 1862 set the foundation for a national system of state colleges and universities. Altogether, 69 Land-Grant colleges and universities were funded as a result of the Morrill Acts. Some states utilized the funds for new schools; some utilized the monies to improve existing state or private schools and to create schools of agriculture and mechanics. Many of these schools came to be known as Agricultural and Mechanical colleges (1890 Land Grant Universities, 2015; Duemer, 1996; National Association of State Universities and Land-Grant Colleges, 1995; Neyland, 1990).

The Second Morrill Act of 1890. The principal objective of the Land-Grant system of 1862 was effective in initiating vocational education programs at the postsecondary level across the United States. However, in the South, Blacks were not allowed to attend the original Land-Grant institutions. From the inception of the Morrill Act, there seemed to be confusion and misunderstanding around it. When Morrill was questioned about the intent of the bill, he stated:

I wished the bill to be broad enough so that the several states might use it to the best advantage; and that for the best use of this fund there must be much variety allowed to the details, although all the colleges should be the same in spirit, and essentially of the same grade, that is, colleges in which science and not classics should be the leading idea. He strongly contended that he did not intend for the Act to emphasize agricultural and industrial education to the exclusion of scientific and literary education and that it, never was intended to force the boys of farmers going into these institutions so to study that they should all come out

farmers. It was merely intended to give the man opportunity to do so and to do so with the advantages if they saw fit. (as cited in Neyland, 1990, p. 2)

While there were no specific provisions made for Blacks in the Morrill Act of 1862, four Black Land-Grant universities received funding under the grant. They were Alcorn State University in Mississippi, Claflin University in South Carolina, Hampton University in Virginia, and Kentucky State University in Kentucky (Neyland, 1990). It is important to note that Justin Smith Morrill spoke on the importance of admitting free slaves into the Land-Grant universities established in 1862 when he said:

Having emancipated a whole race, shall it be said that there our duty ends, leaving the race as cumberers of the ground, to live or to wilt and perish, as the case may be? They are members of the American family, and their advancement concerns us all. While swiftly forgetting all they ever knew as slaves, shall they have no opportunity to learn anything as freemen? (1890 Land Grant Universities, 2015, p. 1)

Congress approved the Second Morrill Act for the establishment of Black institutions for the teaching of agriculture and the mechanic arts. In order to receive the funds from the Land-Grants, states had to show that race was not a factor in admission, or else designate a separate Land-Grant school for Blacks (National Association of State Universities and Land-Grant Colleges, 1995). States that accepted the provision were to receive an initial \$15,000 and an annual increase of \$1,000 over the previous year for 10 consecutive years. After the ten-year period, states received \$25,000 every year after that (National Association of State Universities and Land-Grant Colleges, 1995; Neyland, 1990). In the South, this led to a group of 17 colleges that bordered the southern states

to be created and named the “Negro Land-Grant Colleges and known today as the 1890 Land-Grant Universities” (1890 Land Grant Universities, 2015, p. 1).

History of Land-Grant universities in Arkansas. The Land-Grant colleges originally started as agricultural and technical schools, and many grew into public universities. The Land-Grants were created to battle elitism and to offer a superior level of education. Before the creation of Land-Grant universities, higher education was only provided to the upper class (Schuh, 1986). Over the years, the establishment of Land-Grant universities has helped educate millions of American citizens who otherwise may not have been able to afford college (Brunner, 1966).

In 1864, Arkansas State legislature accepted 150,000 acres of land script under the First Morrill Act. Because of conditions caused by the war, another act of the legislature was required before the land script could be issued. In 1871, the State legislature was able to accept the conditions of the 1862 Morrill Act and organize a college, the Arkansas Industrial University at Fayetteville. In 1872, the Arkansas Industrial University opened its doors to its first students. This university was open to all students regardless of race. The first class consisted of eight students—seven boys and one girl. Also, in this first class was the university’s first student of African American ancestry (1890 Land Grant Universities, 2015; Brunner, 1966; University of Arkansas, n.d.). In 1873, a return to a democratic majority in the State legislature ended the university’s acceptance and enrollment of African American ancestry. This prohibition persisted until 1948 (University of Arkansas, n.d.).

The State legislature authorized a second Land-Grant college in 1873. In 1875, the Arkansas Industrial University Board of Trustees approved the creation of Branch

Normal School in Pine Bluff, Arkansas to train African American students to become teachers (Neyland, 1990; University of Arkansas, .n.d.). With the state's appropriation of \$25,000, the school began in a rented, frame building. In 1891, the state legislature accepted the provisions of the Second Morrill Act. As a provision of the act, the state was required to make an equitable division of funds for both Black and White students (1890 Land Grant Universities, 2015; Committee of Agriculture at the Land Grant Universities, 1995; Neyland, 1990). "The State of Arkansas divided the provisions as follows: eight-elevenths for the University of Arkansas Fayetteville and three-elevenths for the University of Arkansas-Pine Bluff (UAPB)" (Neyland, 1990, p. 31).

With the funds from the Second Morrill Act, UAPB purchased a 50-acre plot of land. It operated mainly as an elementary school and high school in its early years converting to a junior college in 1894. Its School of Mechanical Arts came into existence in 1892. Although the Land-Grant funds were allocated in 1891, the school placed no importance on an agriculture department during the early 1890's (Neyland, 1990).

The Morrill Act is considered the first federal act impacting vocational education. The funding of the Land-Grant universities opened higher education to the general public regardless of any individual's socio-economic status. In addition, the Morrill Acts allowed universities to integrate classical studies, language, and mathematics, with the industrial courses of agriculture and science (Miller, 1993).

At the turn of the century, vocational education was developed at the secondary level in grades nine through 12. With the introduction of the Smith-Hughes Act of 1917, the education system streamlined its then current multiple approaches of mathematics,

language, and vocational education to a single focus of vocational education (Hillison, 2015).

Smith-Hughes Act of 1917. In the early 20th century, supporters of vocational education began to advocate more systematic programs to improve American progress and global competitiveness. As they did so, they voiced the need for public funding for vocational education. In 1905, the Massachusetts State legislature appointed the Massachusetts Commission on Industrial and Technical Education, also known as the Douglas Commission. In its final report, the Douglas Commission recommended that Massachusetts expand technical and industrial training. During the next decade, Massachusetts played a vital role in the creation of the Commission on National Aid to Vocational Education (Steffies, 2014).

In 1907, President Theodore Roosevelt made a speech at the Semi-Centennial Celebration on the funding of agricultural colleges. He spoke of the weaknesses he saw in the educational system and the importance of expanding vocational education (Roosevelt, 1907). In his speech, Roosevelt notes the success that public education has been for American citizens; however, he stated that it was severely lacking in the areas of industrial education:

This is a most serious lack, for no one can look at the peoples of mankind as they stand presently without realizing that industrial training is one of the most potent factors in national development. We of the United States must develop a system under which the individual citizen shall be trained so as to be an effective individually as an economic unit, and fit to be organized with his fellows so that they can work in effective fashion together. (Roosevelt, 1907, p. 1)

This increased national focus led the United States Congress, in January of 1914, to authorize President Woodrow Wilson to appoint a nine-member commission charged with submitting a report to Congress that included recommendations for the study of federal aid and the distribution of federal aid to the states' vocational education programs. Senator Hoke Smith of Georgia was appointed the chairperson of the committee (Barlow, 1992).

The focus created by the 1914 Commission on National Aid to Vocational Education caused its' chairman, Senator Hoke Smith of Georgia, to introduce on December 7, 1915, SB703 to promote vocational education and "to cooperate with the states in promotion of such education in agriculture, trades, and industries and in promotion of preparation of teachers in vocational subjects; and to appropriate and regulate its expenditures" (Lehman, 1931, p. 87). The bill soon followed in the House of Representatives on February 10, 1916. Representative Dudley M. Hughes of Georgia, also a member of the commission, introduced similar legislation in HB11250. The House Committee on Education promptly approved it. President Woodrow Wilson signed the Smith-Hughes Vocational Education Act into law on February 23, 1917 (Lehman, 1931).

The focus on incorporating secondary vocational education into the Smith-Hughes Act resulted from the 1914 Commission on National Aid to Vocational Education advocating for vocational education to be added to high school curriculum (Friedel, 2011). The commission noted that vocational education needed to meet the individual needs of students for a meaningful curriculum, provide an opportunity for all students to prepare for life and work, help to foster teaching and

learning process-learning by doing, and introduce the idea of utility into education (Scott & Sarkees-Warcenski, 2004).

The Smith-Hughes Act was an attempt by Congress to answer the nation's outcry for support of vocational education. Congress passed the bill, it was voted into law on February 23, 1917, and President Wilson signed the act providing federal aid to secondary vocational education (Barlow, 1992; Smith-Hughes Act, 1917).

The Smith-Hughes Act provided federal funds for three areas of vocational education: agriculture, trade and industry, and home economics. The act's funds were to be divided up into four specific areas. The act's major provisions stipulated the creation of a federal board for vocational education; acceptance of the provisions by the states required that the states match the aid provided by the federal government for teacher salaries in vocational education and associated departments created to support it. That is, the funds were to be matched by either state or local funds.

The vocational education courses were to be provided in public schools and be at a lower level than those provided by colleges or universities. The classes were to be designed for students of 14 years and older. The classes were provided at both full and part-time schools and were to be designed for students preparing to enter a trade or industrial career path (Barlow, 1992; Lehman, 1931; Smith-Hughes Act, 1917). The act also required each state board of education to submit an annual report showing how it planned to use the allotted funds for purchasing equipment, training qualified teachers, and improving vocational education (Lehman, 1931). The Smith-Hughes Act established and provided continuous funding for secondary programs in agriculture, home economics, and industry. The act also provided adult education courses in agriculture

and home economics, as well as, specifically requiring secondary agricultural education (Friedel, 2011).

The funds and provisions provided by the Smith-Hughes Act created a foundation for separate boards for each of the following: vocational education, vocational funds, segregation of classical curriculum and vocational curriculum, teacher training, professional development, and student organizations, all of which would play pivotal roles in future legislation and educational reforms (Barlow, 1992; Friedel, 2011).

The George Acts. Over the next 30 years (1929-1963), the George Acts played a vital role in vocational education and were used to enhance the original Smith-Hughes Act. The George-Reed Act of 1929, PL 70-702, expanded funding for education in agriculture and home economics by \$1 million annually from 1930-1934 (Friedel, 2011). The George-Ellzey Act, PL 73-245, passed in 1934 as a temporary measure authorizing \$3 million annually for the next three years (Friedel, 2011). In 1936, the George-Deen Act, PL 74-763, authorized \$14 million a year for vocational education related to agriculture, home economics, trades, and industry. It was later expanded to include funding for marketing education (Barlow, 1992; Fagan 2002; Friedel, 2011). The George-Deen Act also required that Congress review annually the amount apportioned for vocational education each year (Friedel, 2011).

George-Barden Act of 1946, PL 79-586, strengthened federal support for all vocational education (Friedel, 2011). The act required home economics be separate from trades and industry and receive a larger share of federal funding. The act also specified that federal funds could be utilized for the administration of vocational programs, youth programs, and teacher preparation and training (Friedel, 2011). The George-Deen Act

was the first federal law that authorized funding of vocational student organizations (VSO's). It was used by Congress to incorporate the Future Farmers of American (Friedel, 2011). The act set a precedent for the United States Department of Education, acknowledging VSO's as fundamental to quality vocational education programs (Friedel, 2011).

Vocational Education Act of 1963. Continuing to demonstrate the extent of the federal government's involvement in every states' provision of vocational education, the Vocational Act of 1963 voiced the federal government's concern for providing vocational opportunities for all students. The act emphasized a focus on the poor and handicapped while still addressing the economic and social needs of America (Gordon, 2008). The act was the federal government's effort to continue to improve vocational education programs and expand the federal government's influence over state programs in large part through "set-asides" (Hayward & Benson, 1993; Lynch, 2000, p. 9).

The Vocational Education Act of 1963 was amended in 1968 and then again in 1976. The 1968 Public Law amendments of Congress (90-576) specified what funds could be used for:

High school and postsecondary students, students that had completed or left high school, individuals in the labor market in need of retraining, individuals with academic, socioeconomic, or other obstacles, individuals that were considered mentally retarded, deaf, construction of area vocational schools facilities, vocational guidance, training and ancillary services such as program evaluations and teacher education. (Gordon, 2008, p. 92)

The 1976 Amendments PL 94-482 added additional funding to the act of 1963 and the Amendments of 1968. The major attention of the 1978 Amendment was to provide additional funding “to extend, and where necessary improve existing programs of vocational education” (Gordon, 2008, p. 93). The Amendment also addressed the importance of the creation of new programs and provided part-time employment opportunities for youths who needed additional income while completing training for full-time employment (Gordon, 2008). Calhoun and Finch (1982) suggested that this was the first federal legislation that placed the growth of students first rather than the labor needs of the nation, and it ensured that every child left secondary school prepared to be a productive employee or seek additional education. Calhoun and Finch (1982) stated that “this period of Federal legislation can be characterized by a total commitment of the Federal government to vocational education” (p. 49).

An important addition to the 1976 Amendment was the National Assessment of Vocational Education (NAVE). The National Institute of Education was required to complete this assessment in the final years of the acts’ five-year cycle (Hayward & Benson, 1993). The assessment, as it was conducted and reported, provided concerning information on the performance of proceeding vocational legislation. The historical distribution of funds did not address the intended energies of the legislation. Hayward and Benson (1993) wrote: “Intended, efforts to help disadvantaged students had served to segregate such persons into training for dead-end occupations, planning processes had been weak, funds intended for program improvement had been diverted to other uses” (p.13).

Carl D. Perkins Act. The NAVE assessment that was required by the 1976 Amendments identified three main areas of concern for congressional leaders. First, the current legislation was poorly drafted and did not ensure funds would be distributed appropriately. Second, “the federal government was trying to do too much with too little; given the modest size of federal grants, the federal government’s objectives were spread over too vast a ground” (Hayward & Benson, 1993, p. 14). Finally, the actual population that was deemed to have the greatest positive benefits from vocational education were underrepresented in programs that offered participants good career options upon program completion (Hayward & Benson, 1993).

Congress responded to the problems identified in the NAVE findings by implementing The Carl D. Perkins Vocational Education and Applied Technology Act of 1984. Carl D. Perkins, a Democrat, was the representative for Kentucky’s 7th congressional district from 1949 to 1984. He was a strong supporter of vocational education and introduced the act to amend the Vocational Education Act of 1963, which helped to extend and revise the Vocational Education Act programs and to establish programs emphasizing the acquisition of job skills through technical, as well as vocational, education (Perkins Collaborative Resource Network, 2016). The Perkins Act, now in its fourth reauthorization, serves as the principal source of federal funding for states to provide vocational education (Perkins Collaborative Resource Network, 2016). The Perkins Act of 1984 was passed with two primary objectives. First, to improve and modernize existing Career and Technical Education (CTE) programs to meet the needs of the nation. Second, to ensure that those served by CTE programs were having their needs met. The latter specifically referred to the disadvantaged and individuals with special

needs and disabilities at the secondary and post-secondary levels (Employment Preparation Committee, 1987; Hayward & Benson, 1993; Lynch, 2000). Lynch (2000) noted that “the original Perkins Act set aside 57 percent of the federal grants to states for disadvantaged groups of one form or another and 43 percent for something called program improvements” (p. 9).

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (PL 101-392), also known as Perkins II, represented a paramount shift in vocational education. Perkins II was created in the belief that Americans were losing their competitive and technological advantage in the global marketplace. American jobs were going overseas, and schools were not producing students who could lead in the global marketplace (Friedel, 2011; Threeton, 2007). The Perkins II bill eliminated the “set-asides” (Friedel, 2011, p. 44) from the original Perkins Act. While Perkins II did call for the creation of new programs, more importantly, it addressed the importance of strengthening existing programs and integrating academics into the vocational curriculum (Friedel, 2011; Gordon, 2008; Threeton, 2007). Perkins II also focused on the importance of creating avenues for students to progress from secondary to the post-secondary levels, as well as, developing content standards of performance measures for vocational education (Friedel, 2011).

Friedel (2011) notes that the second area of focus created by Perkins II was the School-to-Work Opportunities Act of 1994 (PL 103-239). This act allowed federal funding to be used to address America’s skills deficit with hopes of helping youth make a smooth transition from school to work or from school to community college or trade schools to develop a specific career choice (Threeton, 2007).

The School-to-Work Opportunities Act created programs of study that became known as “Tech Prep” (Friedel, 2011, p. 20). The Tech Prep curriculum was designed to meet the nations’ overwhelming need to produce graduates prepared to enter the workforce. Specifically, Tech Prep legislation was designed to meet the needs of students who would not traditionally attend colleges or universities upon graduation. It created what became known as the “2+2 program” (Bragg, 2000, p. 1). Curriculum for secondary school was designed for seamless integration into community colleges and technical schools (Bragg, 2000; Friedel, 2011; Gordon, 2008; Lynch, 2000). Wesson-Hampton (1993) wrote:

In fact, of the 1 million students who will begin high school each year, less than half will go on to college. This neglected majority represents an untapped potential whose creative energies we need if we are to be competitive in the global economy of the twenty-first century; in the 2000 52 percent of all jobs will require a high-level of skill rather than a college degree. (p. 197)

Although some traditional educators argued that Tech Prep devalued the importance of higher education, it was clearly the federal government’s attempt to meet the needs of all students while addressing the concerns of the nation (Hayward & Benson, 1993; Lehman, 1931; Wesson-Hampton, 1993).

The Carl D. Perkins Vocational and Technical Education Act of 1998 PL 105-332, is also known as Perkins III. Perkins III continued the work set out by Perkins II and included many improvements for vocational programs initially established in Perkins I (Lynch, 2000). Perkins III eliminated clauses that set aside a specific amount of funds

to deal with the disadvantaged population. The states were still required to provide high-quality vocational programs for all individuals, but the federal government no longer required a specific amount of funds to be set aside to address these services or directly specify what services were to be provided (Lynch, 2000; Veir, 1989)).

Perkins III, however, did address four new indicators for secondary vocational education. These were:

(1) attainment of challenging, state-established academic, vocational/technical proficiencies; (2) attainment of a secondary degree or General Education Development certificate proficiency credential in conjunction with a secondary diploma, and a postsecondary degree or credential; (3) placement in, retention in, and completion of postsecondary education or advanced training, placement in military service, or placement and retention in employment; and (4) participation in and completion of programs that lead to nontraditional training and employment. (Lynch, 2000, p.18)

The Final Report to Congress by the U.S. Department of Education also addresses the higher stakes accountability system (Silverberg, Warner, Fong, & Goodwin, 2004, p.2). Perkins III imposed requirements for a states' reporting of educational information to the U.S. Department of Education including disaggregated data on special populations. It also introduced potential rewards and consequences for states that do and do not improve student performance.

No Child Left Behind Act of 2001. No Child Left Behind of 2001 (NCLB; PL107-110) was signed into law in January of 2002. NCLB legislation renamed and reauthorized the Elementary and Secondary Education Acts (ESEA) of 1965. NCLB

represented a radical shift in the United States education focus (Daly et al., 2006). NCLB brought about heightened expectations for student performance, parental control and involvement, teacher accountability, and a focus on instructional curriculum that meets the needs of all learners (Daly et al., 2006).

The NCLB Act established major markers designed to gauge student achievement; it set enormous contingency programs for schools that do not make Annual Yearly Progress (AYP), especially for public schools with high numbers or percentages of poor children. The intention was to ensure that all children meet challenging state academic content and student academic achievement standards. These schools are classified as Title I schools (Daly et al., 2006; Fletcher, 2006; National Center for Educational Statistics, 2016).

Many would believe that the focus NCLB brought unto core content curriculum would have little impact on CTE. Career and Technical Educators were faced with the battle of convincing policymakers, elected officials, administrators, teachers, and students of a dual mission for CTE. Once considered as a program to assist students who were disadvantaged or non-college bound transition into occupations, Career and Technical Education prepared students for their future aspirations, regardless of the path they chose after secondary school (Fletcher, 2006).

Carl D Perkins Act of 2006. The Bush Administration in Budget Year 2003 attempted to zero-out federal funds to career and technical education, arguing that career and technical education had failed to demonstrate its effectiveness in improving the academic achievement of high school students, then the national focus of NCLB legislation (Friedel, 2011).

Congress rejected the Bush Administration's proposal and demonstrated its support for CTE. Friedel (2011) noted that Representative Howard "Buck" McKeon (R-CA), Chair of the Education and Workforce Committee stated:

...we're maintaining a focus on rigorous student academic and technical achievement; we're protecting the role of states and local communities and asking for results in exchange for the money we are already spending at the federal level; and we are seeking more opportunities for coordination between secondary and postsecondary career and technical education... (as cited in Friedel, 2011, p. 48)

After enormous support for vocational education from both the Senate and the House of Representatives, President Bush signed PL (109-270), Perkins IV on August 12, 2006. Perkins IV was authorized for six years through 2012. Friedel (2011) noted that Representative Michael Enzi (R-WY) said:

This legislation is important for three reasons. The first...is the added emphasis on academic achievement...the second reason is important because it will help ensure we are preparing students for tomorrow's workforce...the final reason that this legislation is important because it provides a foundation for the redesign of federal education policies. We need to structure federal education policies that provide students and adult learners access to lifelong education opportunities.... (as cited in Friedel, 2011, p. 49)

The Perkins IV Act officially changed the name of Vocational Education to Career and Technical Education (CTE). The law introduced more than just a name

change; it was created to help structure and align core content curriculum and CTE curriculum, holding CTE programs more accountable integrating academic standards into the technical curriculum, helping to align CTE curriculum with NCLB mandates (Friedel, 2011; Threeton, 2007).

Current CTE Legislation

As of the time of this study (Spring 2018), the Perkins Act has not been reauthorized since 2006. However, the proposed reauthorization of the Strengthening CTE for the 21st Century Act H.R. 5587 (Reed, 2016) makes several notable changes to existing law. Ujifusa (2016) noted that among the notable changes proposed are:

- There's a new definition of which students can be classified as "concentrators" in career and technical education. The bill defines a concentrator as a secondary student who has "completed three or more career and technical education courses or completed at least two courses in [a] single career and technical education program or program of study.
- States would be able to withhold a greater share of their Federal CTE funding under Perkins, for their own, competitive grants or formulas.
- A new grant program, overseen by the education secretary, would award money to programs that align CTE with states' workforce needs.
- Schools are supposed to get less paperwork dumped on them when it comes to CTE. (p. 1)

The current bill was co-authored by Representative Katherine Clark, D-MA., and Representative Glenn Thompson, R-PA. Ujifusa (2016) noted that before the vote Rep.

Thompson said that “the bill reduces Washington's role in CTE: By streamlining performance measures, the bill empowers state and local leaders rather than the Federal government” (p. 1). Representative Clark also noted that “this legislation will comprehensively update the program, overhauling how government invests in our workforce and strengthens American competitiveness and jobs training” (Ujifusa, 2016, p. 1). Reed (2016) noted in his article, *Perkins Career and Technical Education Act reauthorization passes House*, that Senator Tim Kaine of Virginia and co-founder of the Career and Technical Education Caucus in the Senate said:

To grow the most talented workforce in the world, we need to equip students with the skills to succeed in the 21st-century economy. A high school education should prepare students for any pathway they choose, whether that’s attending a four-year university, earning credentials from a community college program or getting a high-skilled job after graduation. (as cited in Reed, 2016, p. 1)

In July of 2016, The House Committee passed the bill by a vote of 37-0 (Ujifusa, 2016).

Current CTE Legislation in Arkansas

The goal of CTE is simply to connect students with growing industries and to provide a skilled workforce and career opportunities for graduates (Dougherty, 2016). In a report from the Thomas B. Fordham Institute, Dougherty (2016) documented that Arkansas overhauled its state policies to improve career readiness and align CTE programs with the state's labor needs. Beginning with the class of 2014, the state legislature has made it a requirement for all high school students to take six units of career coursework to graduate. This requirement can be met through CTE courses.

Dougherty (2016) also notes that “Arkansas is one of the few states that have linked K-12, postsecondary, and workforce data for long enough so that questions about the efficacy of secondary CTE can be addressed” (p. 4). Data suggest that students who take a concentrated approach to CTE are more likely to graduate, 1% more likely to be employed after high school, and 1.3% more likely to be enrolled in two-year college (Camera, 2016).

With the support of Arkansas Governor Asa Hutchinson in 2015, Arkansas lawmakers approved HB-1183 making computer science a required course for all public schools beginning in the 2016 school year (Association of Career and Technical Educators, 2015). By passing the bill, Arkansas assured itself to meet and exceed the majority of national high school computer science recommendations established by Code.org. Also, Arkansas is progressing towards being able to equip students with the skills they need to compete tomorrow in the global workforce (Hutchinson, 2016).

The Association of Career and Technical Educators’ (2015) report also addresses additional legislation passed by the State legislature in 2015. SB371 allows school districts to use categorical funds for partnerships with state-supported higher education and technical institutions to offer concurrent courses and other CTE options for students. SB791 aligns existing state laws to the newly passed Federal Workforce Innovation and Opportunity Act (WIOA). SB891 creates the Workforce Initiative Act of 2015 Fund, to provide planning and implementation grants to support the development of local career pathways. HB1600 aims to promote efficiency in reporting by a school district or public school, and HB1895 expands the state’s College and Career Coaches program to be accessible to all middle and high schools. The College and Career Coaches program

assists students in preparing for postsecondary education or careers (Association of Career and Technical Educators, 2015).

CTE's Impact on Student Motivation

Abraham Maslow in 1943 developed his motivational theory based on the “Hierarchy of Needs.” Maslow’s Hierarchy of Needs is a five-tier model that is divided into deficiency needs, basic needs, and growth needs or psychological needs, and self-fulfillment (McLeod, 2017). Maslow analyzed how the basic needs would always be a person’s priority and that they had to be met before an individual could expend energy meeting their psychological needs. Analyzing the perspectives of educational theorists is important because the motivation of the student and the educator has played a major role in the development of modern education and education-related policy. Ormrod (2014), noted that “virtually all students are motivated in one way or another” (p. 384). He also noted that, as educators, it is our responsibility to determine what motivates students and to use that awareness to promote the immediate productivity and long-term success of students.

CTE's Impact on Students in Poverty

Career and Technical Education (CTE) has, at various times throughout its’ history, been seen as a dumping ground for underperforming students and socioeconomically challenged students (Gordon, 2008). Unfortunately, all too often, underperforming students have a direct correlation with lower socio-economic status. High poverty students face challenges in their communities that impact their education. Often, these students live in neighborhoods that believe that education can only do so much to change their lives or their environment. Moreover, the social context in which

schools operate is equally deprived. Many students from poverty do not have high-quality role models that provide life experience related to job skills and college admittance (Association for Career and Technical Education, 2012). Lower socioeconomic students face an immense number of challenges related to academic, financial, and social issues. These issues can make it problematic for them to see the applicability of education. Career and Technical Education (CTE), immediately makes curriculum relevant to students (Association for Career and Technical Education, 2012).

Feeney (2014) discussed the impact that CTE high schools in New York were having on graduation rates for all students. In the article, data showed that “black and Latino males, who have a 52% graduation rate in regular high schools, have 63% and 66% graduation rates, respectively, in career and technical (CTE) schools” (Feeney, 2014, p. 1). However, with these improvements noted by New York City CTE high schools, the article noted that the negative is that only 8% of the city's high schools were fully devoted CTE schools.

CTE’s Impact on Graduation Rates

The United States is experiencing a major “drop-out crisis” among high school students. Annually, more than a million students drop-out of school; one out of four Americans or four out of 10 minorities will not graduate on time with their peers (Balfanz, Bridgeland, Bruce, & Fox, 2012). High school drop-outs have a direct impact on the economy. On average, high school graduates will earn more than \$130,000 in their lifetime than persons who did not graduate. Drop-outs from the 2011 graduating class year “would have generated up to \$154 billion additional dollars in their lifetimes” if they had remained in school and

were graduated (Balfanz et al., 2012, p. 5). President Obama, while speaking to students at Miami Central High School, also addressed the drop-out crisis facing the nation noting that typically schools in urban metro areas with high poverty rates and a large number of minority students were responsible for half of the nation's drop-outs (Phillips, 2011). Grad Nation (2017), a national campaign and organization focused on improving the on-time graduation rate for U.S. schools, established the 2010 national graduation rate for high school at 83.2%, with 25 states currently below the national average.

These numbers are alarming and become even more alarming when we look at specific subpopulations; in 48 states, Blacks/African Americans perform below national graduation average, with 25 of those states reporting below 75%. When looking at low-income students, 40 states are below the national average. English Language Learners are below the national average in 47 states (Grad Nation, 2017). Career and Technical (CTE) education becomes even more influential when looking at high poverty communities.

Career and Technical Education is proven to decrease drop-out rates and improve academic performance. Ross and DeRenzi (2007) noted that a major factor influencing poverty in Washington, DC was the lack of a skilled workforce. In noting this problem, their recommendation directly stated that Washington, DC needed to:

Strengthen career and technical education in the public school system.

The District of Columbia Public Schools should carry out its plan to implement Career Academics in high schools, which give graduates strong options for employment, continued education, or apprenticeships.

Chartered schools should also be included in this plan. (Ross & DeRenzis, 2007, p. 7)

To continue to reduce unemployment rates and increase overall employment numbers, industry in the United States needs workers with a higher level of job readiness and skills to solve problems and communicate effectively (Lippman et al., 2015). With a greater emphasis on math, computers, and critical thinking skills in CTE programs today, the exposure of all students to career opportunities in CTE is crucial to the future development of a skilled workforce (Bevins et al., 2012; Hodge & Lear, 2011).

In an attempt to battle the drop-out crisis, numerous studies have been conducted to analyze factors contributing to the epidemic. Stareshina (2011) noted two primary factors that predicted which students would drop-out of school. The first factor was quality of life in family and school of those who failed to graduate. Students who lived in poverty or who attended schools located in high-poverty communities had an increased likelihood of dropping out. The second factor was found in the characteristics of the non-graduating students themselves. Studies showed that students who dropped out of school listed classes not being interesting or relevant to their lives and boredom as primary reasons for dropping out (America's Promise Alliance, 2017; Association for Career and Technical Education, 2007; Gould & Wellar, 2015; Stareshina, 2011).

It has been established that Career and Technical Education (CTE) helps to decrease students' boredom and helps to intrinsically motivate students through broadening the curriculum and by providing a variety of learning opportunities

meeting the different learning styles of students (Plank, Deluca, & Estacion, 2005). Smirk (2001) identified five potential benefits of CTE for students classified as being at risk of not graduating:

- enhancing students' motivation and academic achievement
- increasing personal and social competence related to work in general
- gaining a broad understanding of an occupation or industry
- providing career exploration and planning
- acquiring knowledge or skill related to employment in particular occupations or more generic work competencies. (p. 164)

The Association for Career and Technical Education (2017) reported that “81% of drop-outs cited that real-world learning opportunities incorporated into their high school coursework would have kept them in school” (p.1). Also, the Association shared that the national graduation rate for CTE concentrators was 93% in 2016 compared to the national average for freshman which is 80%. Studies have repeatedly demonstrated that students who are involved in Career and Technical Education (CTE) are more likely to graduate than students who take no CTE courses.

Dougherty (2016) identified that students in Arkansas who took one CTE class above the state average were 3% more likely to graduate from high school. Also noted were CTE students who were considered concentrators (taking three or more classes in a single program of study) were 21% percent more likely to graduate from high school. Shadden (2011) conducted a study of CTE concentrators in Tennessee. The study reported that CTE concentrators in

Tennessee were 11.14% more likely to graduate than non-CTE concentrators. These results have led many states to offer CTE endorsements or even separate CTE diplomas with 23 states having made adjustments or modifications to their graduation requirements with some direct reference to a requirement for CTE course taking.

Nearly all states have some graduation requirements related to CTE coursework. However, many have now made it a requirement to have courses that are focused and aligned with student post-graduation plans (National Association of State Directors of Career Technical Education Consortium, 2015). This increased focus is designed to battle the nation's drop-out crisis and help produce a skilled workforce designed to meet the growing needs of American business.

Arkansas Career Coach Program

The Arkansas College and Career Coach Program (formerly known as Arkansas Works) initially began as a trial program in January 2010. The Arkansas Department of Career Education (2016a) noted that the program was a “collaborative effort among members of the Governor’s Workforce Cabinet: Arkansas Department of Career Education, Arkansas Department of Education, Arkansas Department of Higher Education, Association of Two-Year Colleges, and Arkansas Department of Workforce Services” (p. 1). The program was designed to provide college and career planning to middle/high school students. The pilot program began in the 21 most economically challenged counties in Arkansas. In the pilot phase, the program consisted of three components. One component was an “Online Based Internet Tool powered by Kuder,”

which is an assessment tool that can be used to identify areas of interest, skills, and values, identifying for students possible career paths and areas of study. The other two components are Career Coaches and American College Testing (ACT) Academies. The Career Coach component focuses on analysis and academic planning for students, while ACT Academies are used to help prepare students for the ACT exam. The ACT is the primary assessment exam used by colleges and universities for admittance. These Academies occur both in the summer and during the academic year (Arkansas Department of Career Education, 2016a, p. 1).

The pilot program was considered a success due to the results, which produced an increase of students going to college, an increase in ACT exam scores, an increase in applications for Student Financial Aid, and a decrease in the number of students entering college who needed remediation (Arkansas Department of Career Education, 2016d). In the 2013 General Legislative Session Act, HB1285 sponsored by Arkansas Rep. Andy Mayberry and co-sponsored by Rep. David Branscum was passed. Act HB 1285 expanded the pilot initiative and created a grant program that allowed school districts throughout the state to apply and participate in the program.

In a further sign of support for the program, Senator Jane English sponsored legislation to create “The Office of Skills Development within the Arkansas Department of Career Education, which included appropriations to support the Arkansas Career Coach Program” (Arkansas Department of Career Education, 2016c, p. 1). The initial program was also adapted to become a five-component model the first three “Online Based Internet Tool powered by Kuder” Career Coaches, and ACT Academies adding

Career Cluster Camps, and the Arkansas College Application Campaign (Arkansas Department of Career Education, 2016a).

As of the 2015 school year, the program has produced substantially positive results. In its *2016 October CCC Flyer*, the Arkansas Department of Career Education reported that the program to date had increased students related college enrollments 22.15%, ACT exam scores by 1.58%, applications for financial aid by 32.3%, and it has appeared to decrease the number of students entering college needing remediation by 15.7% (Arkansas Department of Career Education, 2016d, p. 3). Also, in the same timeframe, the program grew to include 34 counties across the state and 48 school districts (Arkansas Department of Career Education, 2016c)

Chapter Summary

Career and Technical Education (CTE) has grown immensely from its origin of apprenticeship. CTE is now seen as a tool to motivate students, battle the increasing number of high school drop-outs and prepare high school graduates to meet the ever-changing needs and demands of American businesses.

The research literature reviewed in this section covered the origins of CTE along with the federal programs and funding that have enabled its growth. Also, the literature review covered the focus the Arkansas Department of Education has placed on cultivating CTE within the state, and ultimately the creation of the CTE Facilitator or Coach Position. From the research covered in this section, the researcher was able to conclude that becoming a CTE Completer has had a positive impact on improving high school graduation rates. Research has also shown CTE to have benefits in improving the academic performance of students from socio-economically challenged backgrounds.

Chapter III will discuss the methodology for the study. It includes the research design and data analysis for the study.

Chapter III: Methodology

This chapter addresses the research methodology used as a lens to review the data collected in this study. It includes a brief description of the framework in which the Career and Technical Education (CTE) Facilitator is currently being used within the district of study. Also reviewed in Chapter III is the population selected for the study, the manner of their selection, research questions, procedures, data collection, and methodology used for data analysis.

At the time of this study, a limited amount of research had been conducted on Career and Technical Education (CTE). In the body of available research on the history of CTE legislation and funding, only a small amount of research addressed the impact the CTE program had on “Completers” (12th-grade students who have completed at least three vocational courses in the same area of study). Multiple studies have reported a positive impact on student retention and graduation rates (Camera, 2016; Dougherty, 2016; Grad Nation, 2017; Shadden, 2011). However, a major focus of CTE is to help prepare students for immediate employment upon graduation or to transition into post-secondary education, in pursuit of a career of personal interest. This study examined students’ perceptions relative to the impact of Arkansas Career and Technical Education Facilitators on supporting students to become CTE “Completers” and their further impact on developing a student’s post-high school graduation career path. The study was primarily focused on the program's second component, the “College and Career Coach Program.” This component focuses on the creation of the Career Facilitator. The Arkansas Department of Career Education’s (2016a) Operational Guide describes Component Two, saying:

The College and Career Coach Component is designed to motivate and support Arkansas students and adults achieve their goals as it relates to college and career planning through intensive hands-on, programs and services. College and Career Coaches work with students in the 7th-12th grade. In the middle and high schools, Career Coaches work in partnership with the Career Development Instructors and School Counselors to assist with the development and revision of college and career plans for their students. The Arkansas Career Coach program provides assistance and information for resources in the areas of: academic tutoring, career counseling, college preparation and admission, financial aid guidance, mentoring, and other supports necessary for postsecondary education/training access, retention, and success. (p. 1)

Background of the Problem

Data suggest that students who take a concentrated approach to CTE are more likely to graduate from high school, 1% more likely to be employed after high school, and 1.3% more likely to enroll in a two-year college (Camera, 2016). The problem is, although ACTE has created College and Career Facilitators, 35% of Arkansas graduates will not attend college or tech training upon graduation. Although 65% of high school graduates will attend college or receive technical training, 74% of students attending two-year colleges and 33% of students attending four-year colleges require remediation. For 2012, Arkansas' college graduation rate was 39%, compared to 57% nationally (ForwARd Arkansas Steering Committee, 2015). To date, there has been little, if any,

formal evaluation of Arkansas College and Career Coaches, referred to by many as “CTE Facilitators.”

Gauging Career and Technical Education (CTE) Facilitators’ effectiveness in helping students transition into postsecondary education or career development program requires a mixed methods study to compare the number and character of CTE Completers produced before and after the implementation of CTE Facilitators. The study gauges whether there has been an increase or decrease in program Completers since the introduction of CTE Facilitators. This study analyzed student perceptions of CTE Facilitators’ impact on students choosing a career path to transition into post-secondary education. Finally, this study addressed the question of whether or not ACTE is meeting its third goal: “CTE prepares students to succeed in further education and careers” (Arkansas Department of Workforce Education, 2018, p. 1).

Current CTE Facilitator Framework

The school district analyzed for this study is comprised of 26 schools: 19 elementary schools, four junior high schools, and two high schools, totaling 14,341 students. The district currently has two Career and Tech Facilitators. Each of the Facilitators is responsible for the student population of one high school and two junior high schools. The student and Facilitator relationship begins in the students’ eighth-grade year. During the students’ required “Career Development” class, the CTE Facilitator completes a three to five-day mini-lesson on career planning. During this lesson, the “Kuder” assessment tool is introduced. This tool is used to measure the career interests, skills, and work values of students and to help Facilitators guide them toward appropriate curricula and career-oriented instruction.

Before students enroll in their ninth-grade classes, the Facilitators support students in selecting classes that are aligned with their personal career goals and post-secondary interest. This process results in a “working document” that students are free to change as their interests change. During their ninth-grade year, the Facilitators take their students on a tour of a local university. The tour exposes students to college and possible post-secondary careers. Also, during the ninth-grade year, the Facilitators hold an “I Can Career Expo.” At the Expo, 50 to 60 local businesses introduce students to possible local employment opportunities and career paths. In addition, in ninth-grade, the students’ career path document becomes a little bit more official, as the facilitators work with each involved student to outline a path of interest supporting their effort to become program Completers and in identifying a career for them to pursue upon graduation.

A brief lesson is conducted with each student before his or her 10th-grade registration. The Facilitators review the document created in eighth-grade and answer any questions the students may have. After ninth-grade, the Facilitators have limited contact with students, typically only meeting with students prior to course registration. They may create a tour or field trip if they find an event they believe will be beneficial for students. The Facilitators are also available should the principal of their school request a special event.

Methods

This study was based on the Correspondence Perspective of the positivist and realist approach (Patton, 2002). It analyzes what is going on in the “real world,” and it also analyzes the plausible explanations for variable patterns. In addition, it addresses the question: “What’s the truth insofar as we can get to it?” (Patton, 2002, p. 132). The study

executes a mixed methods design to examine student perceptions of CTE Facilitators and their ability to meet the needs of students as identified in Component Two “College and Career Coach Program” (Arkansas Department of Career Education, 2016a). This study used survey research methods to collect qualitative data that supports exploration of CTE Completers’ perceptions of their relationships with CTE Facilitators.

Research Questions

The research questions in this study were designed to measure 12th-grade Career and Technical Education (CTE) students by gathering data regarding the student’s perceptions of the assistance received from CTE Facilitators in becoming program Completers and enabling them to choose or discover a career path to pursue upon graduation.

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

Research Question 2. What are the students’ perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?

Research Question 3. What are the students’ perceptions of their CTE Facilitators and the assistance and support they received from them in developing a career path, or interest, to pursue upon graduation?

Assumptions

Entering into this study the researcher believed that students would perceive their Career and Technical Education (CTE) Facilitator as helping them to become a CTE Completer. However, students would also perceive their CTE Facilitator as having a

limited impact on helping students to develop a career path to pursue upon graduation. The researcher believed the amount of time and emphasis spent with students during course registration would help to drive an increase in CTE Completers. However, that the current program structure would not allow enough time or development of student interest to help develop a program of study or a career path to pursue upon graduation.

The need for students to develop a career path or program of study to pursue upon graduation is the primary focus of CTE (Association for Career and Technical Education, 2007). This becomes more important when looking at students living and studying in an environment of financial and/or social poverty. These students usually struggle with motivation and belief that they can achieve in the traditional college setting, or that they can improve their job choices (Hardre, 2007).

Setting

The location of this study's survey population was an urban school district in Arkansas. The school district is comprised of 26 schools: 19 elementary schools, four junior high schools, and two high schools. The student population totals 14,341. The two high schools within the district had a combined enrollment of 3,228.

Participants

For the quantitative portion of the study, two high schools were selected and the number of high school graduates in the school years 2011 and 2017 who were Career and Technical Education Completers were used to analyze the growth in the program. In the school year 2011, School A provided 371 graduates, 44.5% of whom were male and 55.5% of whom were female. The student populations' ethnic profile was: 19.1% Black, 30.2% White, 9.4% Asian, 35.6% Latino, and 5.7% Native American. In this study, 81%

of the student population were classified as receiving Free or Reduced Lunch. For the school year 2011, 33.4% percent of the graduates were CTE Completers. School B provided 451 graduates, 50.5% were male and 49.5% were female. The student population was 6% Black, 80.3% White, 6.2% Asian, 4.4% Latino, and 3.1% Native American. Thirty-five percent of the student population was classified as receiving Free or Reduced Lunch. For the school year 2011, 17.3% percent of the graduates were CTE Completers.

The participants for the school year 2017 were composed of the following: School A provided 487 graduates, 45.5% of whom were male and 54.5% of whom were female. The student populations' ethnic profile was 19.9% Black, 0% of two or more races, 22.4% White, 7.8% Asian, 47.0% Latino, and 2.9% Native American. Eighty-two percent (82%) of the student population was classified as receiving Free or Reduced Lunch. For the school year 2017, 66.5% percent of the graduates were CTE Completers.

School B provided 434 graduates, 52.5% of whom were male and 47.5% of whom were female. The student populations' ethnic profile was: 6.2% Black, 7.8% were of 2 or more races, 60.8% White, 10.4% Asian, 13.4% Latino, and 1.4% were Native American. Forty percent (40%) of the student population was classified as receiving "Free or Reduced Lunch." For the school year 2017, 29.0% of the graduates were CTE Completers.

For the qualitative portion of the study, the researcher contacted the district's Head of Career and Technical Education (CTE; see Appendix A). The researcher requested and gained access to archived data on graduates from High Schools A & B for the 2017 school year. These data were cross-referenced with a list of CTE program

Completers received from the district and used to create a master list of high school graduates from the 2017 school year who received CTE counseling in grades eight through 12. The two schools involved in the study produced a combined 906 graduates.

The two schools produced 450 Career and Technical Education (CTE) program Completers for the 2017 school year. Of those 450 Completers, 80 were students who completed one or more programs of study. So, the actual number of CTE Completers for the school year 2017 was 370 individuals.

As shared earlier, the researcher contacted the district's Head of CTE to access archived data on the total population of 2016-2017 high school graduates, including those graduates who received CTE counseling from grade 8 through grade 12 that were subsequently identified as CTE Completers. After receiving the data, the researcher used available contact information to interview all possible study candidates. The researcher called all Completers and requested email information in order to invite them to participate in the study and access the online survey. This had to be done because the district did not have an email address assigned to the provided contact information.

The researcher was able to obtain 131 email addresses, 65 from School A and 66 from School B. All Completers who provided email addresses were invited to complete the online survey. Forty CTE Completers, or 30% of the Completers, invited to participate in the survey completed the online survey. Forty-five percent were male and 52.5% were female; 65.5% of the survey respondents graduated from School A and 32.5% of the survey participants graduated from School B. Table 1 and Table 2 (refer to Chapter IV) represent the demographics of survey respondents and the school from which they graduated.

Data Collection Procedures

The researcher submitted a letter to the school district's Head of CTE (see Appendix A) to seek access to the district's "Summary of Completers by District/School/Program of Study" report. Upon receiving permission to access this report, the researcher submitted his proposal for acceptance to the Arkansas Tech University Institutional Review Board (IRB; Appendix B). The researcher contacted the district's Head of Career and Technical Education (CTE) to access archived data on the number of CTE Completers for the school year before the implementation of CTE Facilitators and the six years after their implementation, the school year 2011 through 2017. These data were used to complete the quantitative portion of the study to determine whether there was an increase or decrease in CTE Completers.

For the qualitative portion of the study, the researcher contacted the district's Head of CTE to access archived data on the total school year 2017 population of students meeting the requirements of high school graduates who received CTE counseling across grades eight through 12 and eventually became CTE Completers.

Data collection for this study included the use of an online survey, utilizing SurveyMonkey® to gather the survey responses (Appendix C). In order to add validity to the survey instrument, CTE Facilitators reviewed the survey prior to the researcher extending an invitation to participants.

Accessing the participants for this portion of the study proved to be problematic. The contact information received from the district was parent contact information and did not contain email addresses. This problem created the need for the researcher to call and obtain email addresses directly from the former students. In addition, one of the schools,

School A was 43% Hispanic and 7% Asian. Language issues that existed between the researcher and this portion of the population proved challenging when trying to obtain email addresses. The process of obtaining email addresses began on December 16, 2017, and ended January 12, 2018. Of the possible 370 CTE Completers from the school year 2017, the researcher was able to obtain email addresses from 131 program Completers. Survey invitations were sent out via email on January 15, 2018. Reminder invites were sent out January 17, 2018, and January 26, 2018. The survey was closed on February 5, 2018.

The survey responses were collected and entered into SPSS23 for statistical analysis. Forty-one students participated in the survey, with 45% of the participants being male, 52.5% being female, and 2.5% of the respondents preferring not to identify their gender. Sixty-nine percent of the participants were from School A, and 31% of the participants were from School B. The researcher used a mixed methods approach to analyze the collected data and to answer the research questions:

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

Research Question 2. What are the students' perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?

Research Question 3. What are the students' perceptions of their CTE Facilitators and the assistance and support they received from them in developing a career path, or interest, to pursue upon graduation?

Data Analysis

A mixed methods approach was used to analyze the data. A quantitative approach was used to analyze the data for the year before the implementation of CTE Facilitators school year 2011 and for the first graduating class to receive the CTE Facilitator across grades eight through 12, graduates from the school year 2017. Descriptive data showing the frequency of Completers (Figure1) and percentage of graduates who were CTE Completers (Figure2) were used to demonstrate growth over the program during the time period of school years 2011 through 2017.

Descriptive statistics were used to analyze the survey data to determine students' perceptions of the effectiveness of CTE Facilitators in assisting the student's transition to post-secondary education or employment. Descriptive statistics allow the researcher to simply describe and explain what the data show (Trochim, 2006).

The qualitative data from the open-ended items on the survey were analyzed using a constant comparative method. This method provided the researcher with a structured process for detailed analysis. Using this constant comparative method, the researcher systematically reviewed participant responses to identify patterns and themes as they emerged (Patton, 2002).

Ethical Considerations

Steps were taken to ensure the protection of the school district, school personnel, CTE Facilitators, and participants involved in this study. The data obtained from the district and survey instrument materials were kept secure and used specifically for research purposes. In addition, all areas of consideration required by Arkansas Tech

University's IRB for approval (Appendix B) were followed during the research portion of the study.

Chapter Summary

In this chapter, the researcher discussed how the study was implemented, how the data were collected, and how it was analyzed. This study sought to determine the effectiveness of the Arkansas CTE Facilitators as reflected by the self-reported perceptions of the students. The researcher analyzed archived data from the district of study to determine if there had been an increase or decrease in CTE Completers from school years 2010-2011 and 2016-2017. The researcher also analyzed data gathered from a researcher created a survey. The invitation to participants for this portion of the study proved to be challenging. From this experience, the researcher learned to consider how study participants would be contacted for future studies, including possible language issues related to available demographics. The findings from the study are presented in Chapter IV.

Chapter IV: Findings

American high schools are experiencing a major student “drop-out crisis.” Annually, more than a million students drop-out of school; one out of four American students and four out of 10 minorities will not graduate with their peers (Balfanz et al., 2012). At the same time, American business leaders are expressing their growing concerns that American schools are not producing a skilled workforce and that this trend may continue. Lippman et al. (2015) identified that the United States needs workers with a higher level of job readiness, skills to solve problems, and the ability to communicate effectively.

In an attempt to battle this problem, the Arkansas Department of Career and Technical Education (ACTE) adopted a vision for CTE. The concept was developed by the National Association of State Directors of the Career and Technical Education Consortium (NASDCTEC). The goal of their efforts was to emphasize the vital role CTE plays in our nation’s educational advancement and economic competitiveness (Arkansas Department of Career Education, 2016a). As a result, ACTE created four goals for CTE in Arkansas:

Goal 1: Improve CTE Curricula Frameworks through professional development and collaboration.

Goal 2: Improve and Support Program Development through funding priorities and partnerships with stakeholders.

Goal 3: Improve College and Career Readiness for Secondary CTE Students.

Goal 4: Improve Support Services for CTE Students (Arkansas Department of Workforce Education, 2018, p.1).

To ensure that ACTE is meeting their third goal, “CTE prepares students to succeed in further education and careers,” ACTE created College and Career Coaches, also referred to as College and Career Facilitators (Arkansas Department of Workforce Education, 2018, p. 1). The focus of these Facilitators is to specifically target middle and high school students who are most in need of college and career planning (Arkansas Department of Workforce Education, 2018, p. 1).

This study sought to measure the extent to which the availability of Career and Technical Education (CTE) Facilitators improved CTE Completer numbers; ultimately aiding students to transition into post-secondary school, training, or employment upon graduation.

In order to identify the overall effectiveness of the current College and Career Facilitators, this study attempted to answer the following research questions:

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

Research Question 2. What are the students’ perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?

Research Question 3. What are the students’ perceptions of their CTE Facilitators and the assistance/support they received from them in developing a career path, or interest, to pursue upon graduation?

Data Collection

To address the research questions, this study compared the number of Career and Technical Education (CTE) Completers for school years 2011 through 2017. The school

year 2011 was the year immediately preceding the introduction of CTE Facilitators. The following school years 2012 through 2017 had some form of CTE Facilitator involvement. However, 2017 was the first graduating class to go through the entire program, grades eight through 12. It is important to note that graduates from the school year 2016 would have received all facets of the program from the ninth-grade through the 12th-grade.

Participants

Participants for the quantitative portion of the study were comprised of high school graduates from the school district of study, for the school year 2011 and 2017. In the school year 2011, School A provided 371 graduates, 44.5% were male and 55.5% were female. The student population was 19.1% Black, 30.2% White, 9.4% Asian, 35.6% Latino, and 5.7% Native American. Eighty-one percent of the student population was classified as receiving Free or Reduced Lunch. For school year 2011, 33.4% percent of the graduates were CTE Completers. School B provided 451 graduates, 50.3% were male and 49.7% were female. The student population was 6% Black, 80.3% White, 6.2% Asian, 4.4% Latino, and 3.1% Native American. Thirty-five percent of the student population was classified as receiving Free or Reduced Lunch. For the school year 2011, 17.3% percent of the graduates were CTE Completers. Table 1 was used to show the data.

Table 1

Demographic Information on Graduate Numbers and Percentage of Completers for School year 2011

Demographic	School A - 2011		School B - 2011	
	N	P	N	P
Male	165	44.5%	227	50.3%
Female	206	55.5%	224	49.7%
Black	71	19.1%	27	6.0%
White	112	30.2%	362	80.3%
Asian	35	9.4%	28	6.2%
Latino	132	35.6%	20	4.4%
Native American	21	5.7%	14	3.1%
Totals	371		451	
Total economically disadvantaged		81%		35%
Total completers 2011	124		78	
Percent of Class Who are Completers		33.4%		17.3%

Note. N=Number, P=Percent

The participants for the school year 2017 were composed of the following: School A provided 487 graduates, 45.5% were male and 54.5% were female. The student population was 19.9% Black, 0% two or more races, 22.4% White, 7.8% Asian, 47% Latino, and 2.9% Native American. Eighty-two percent of the student population was classified as receiving Free or Reduced Lunch. For the school year 2017, 66.5% percent of the graduates were CTE Completers. School B provided 434 graduates, 52.5% were male and 47.5% were female. The student population was 6.2% Black, 7.8% two or more races, 60.8% White, 10.4% Asian, 13.4% Latino, and 1.4% Native American. Forty percent of the student population was classified as receiving Free or Reduced Lunch. For school year 2017, 29.0% of the graduates were CTE Completers. Table 2

was used to show the demographics of the two schools analyzed, including graduation numbers and the number of CTE Completers produced for school year 2017.

Table 2

Demographic Information on Graduate Numbers and Percentage of Completers for School year 2017

Demographic	School A - 2017		School B - 2017	
	N	P	N	P
Male	222	45.5%	228	52.5%
Female	265	54.5%	206	47.5%
Black	97	19.9%	27	6.2%
2/ more	0	0.0%	34	7.8%
White	109	22.4%	264	60.8%
Asian	38	7.8%	45	10.4%
Latino	229	47.0%	58	13.4%
Native American	14	2.9%	6	1.4%
Totals	487		434	
Total economically disadvantaged		82.0%		40.0%
Total completers 2011	324		126	
Percent of Class Who are Completers		66.5%		29.0%

Note. N=Number, P=Percent

For the qualitative portion of the study, the researcher contacted the district's Head of Career and Technical Education (CTE). The researcher obtained archived data on graduating students from High Schools A & B for the school year 2017. These students received CTE counseling in grades eight through 12 and were CTE Completers. The researcher used the available contact information and called potential study candidates. The researcher, upon contact, requested e-mail information in order to invite

prospects to participate in the study. The researcher was able to obtain 131 email addresses, 65 from School A and 66 from School B.

For the study, 30% of the candidates invited to participate in the study elected to partake; 45% were male, 52.5% were female, and 2.5% percent of the participants elected not to identify their gender. Sixty seven and a half percent of the participants were from School A and 32.5% were from School B. Table 3 presents the demographics of survey participants, and the school from which they graduated.

Table 3

Demographics of Survey Participants

Gender	N	Percent	Valid Percent	Cumulative Percent
Male	18	35.3	45	45
Female	21	41.2	52.5	97.5
Prefer not to Respond	1	2	2.5	100
Total	40	78.4	100	100
Missing	11	21.6		
Total	51	100		
High School	N	Percent	Valid Percent	Cumulative Percent
School A	27	52.9	67.5	67.5
School B	13	25.5	32.5	100
Total	40	78.4	100	100
Missing	11	21.6		
Total		100		

The current placement is important data to analyze when reviewing student perceptions of CTE Facilitators. The following data is the same data requested by the Arkansas Department of Education from school districts to help track CTE Completers.

Survey participants responded that 57% were currently in college or technical school, 14.3% were employed in the field in which they were a Career Technical

Education (CTE) Completer, 16.7% were employed in a field in which they were not a CTE Completer, 2.4% were in the military, and 9.5% were unemployed and not in school. Table 4 represents the current placement of survey participants.

Table 4

Current Placement of Survey Participants

Current Status	N	Percent	Valid Percent	Cumulative Percent
In college or technical school	24	47.1	57.1	57.1
Employed in the field in which you were a Career Education completer	6	11.8	14.3	71.4
Employed in a field in which you were not a Career Education completer	7	13.7	16.7	88.1
In the military	1	2	2.4	90.5
Unemployed, not in school	4	7.8	9.5	100
Total	42	82.4	100	100
Missing	9	17.6		
Total	51	100		

Study Results

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

A comparative analysis was done using archived data to analyze whether the CTE Facilitators had any effect on the number of Career and Technical Education (CTE) Completers produced by either high school. To begin analyzing the data in relation to

Question 1, a paired samples t -test was run to compare the data from the two school years to determine if the difference in the student numbers was statistically significant.

However, the data did not meet the pretest criteria for the t -test.

The decision was then made to show the data in a line graph. This was done to give a visual representation showing whether the CTE Facilitators were able to produce any noticeable increase in the number of CTE Completers. This also gave the researcher the ability to compare both schools separately and together. It allowed the researcher to thoroughly evaluate the available data produced by each school. Figure 1 was used to display this information.

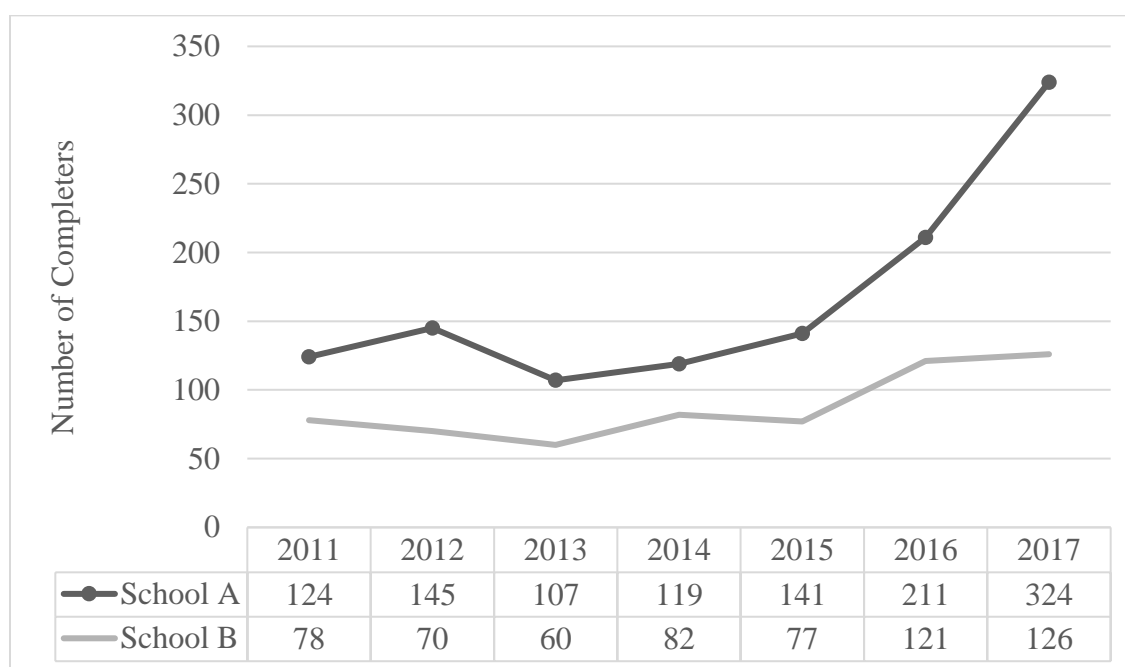


Figure 1. CTE completers for school years 2011-2017.

The Facilitators seemed to have no noticeable impact on CTE Completer numbers in school years 2012 through 2015. However, school years 2016 and 2017 seemed to have an increase in CTE Completers. It is important to note that graduates from the school year 2016 would have received all facets of the program from grades nine through

12. The graduates from the school year 2017 would have been the first graduating class to receive all facets of the CTE Facilitator program, receiving counseling in grades eight through 12. This caused the researcher to look at graduate numbers from School A and School B in order to determine if there had been any change in the number of graduates produced by either school. Figure 2 was used to illustrate the number of graduates produced by each school for the school years 2011 and 2017 and the percentage of graduates who were also CTE Completers. These data were analyzed to gauge the actual increases in CTE Completers.

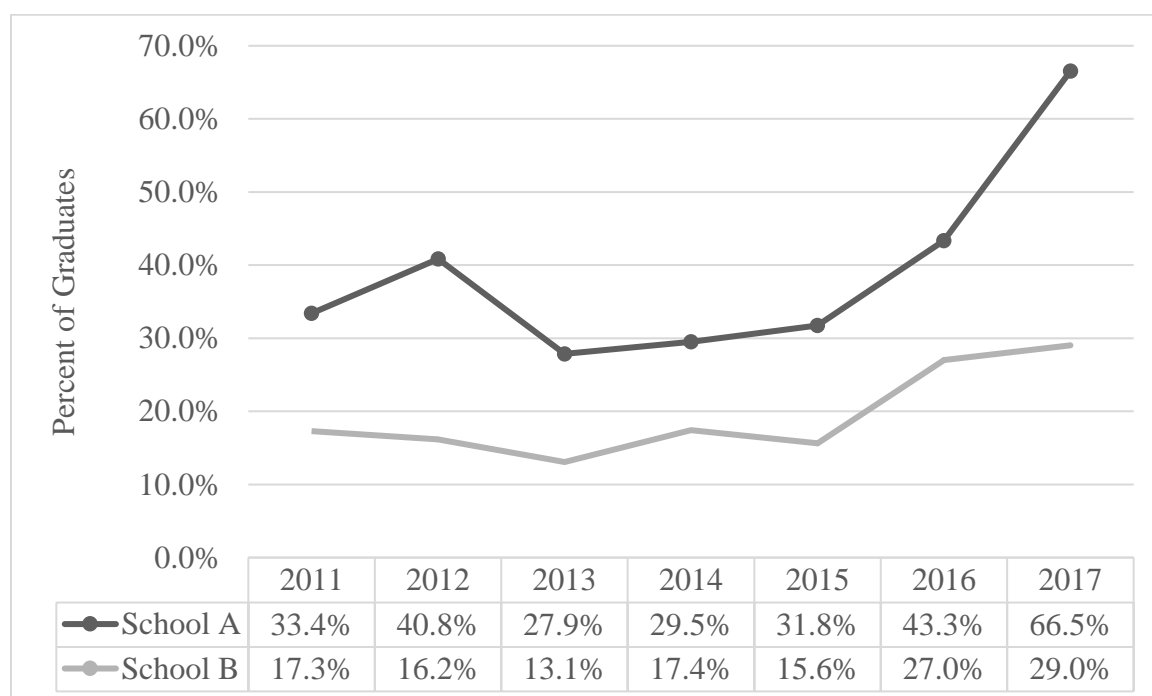


Figure 2. Percentage of graduates who were CTE completers.

Based on the analysis of Completer numbers and the percentage of graduates who were CTE Completers, Question 1 was affirmatively answered as the CTE Facilitators apparently did have a positive impact on the number of CTE Completers.

A significant increase was noted in the growth of CTE Completers for both schools, in relation to the school year 2011 versus 2017. School A had 200 more

Completers, and 33.1% more of the graduates were CTE Completers in the school year of 2017 than in the school year of 2011. School A produced a 161% increase in CTE Completers in 2017 compared to the school year 2011, and a 99% increase when the difference in graduates between the two years was taken into account. School B, while not having as substantial of numbers, comparatively produced similar results. In the school year 2017, School B had 48 more Completers and 11.7% more of School B's graduates were CTE Completers. School B produced a 67% increase in CTE Completers in school 2017 when compared to 2011 and a 61% increase when the difference in graduates between the two years was taken into account. This fact is important because previous studies have shown a direct correlation between CTE Completers and an increase in graduation rates (Grad Nation, 2017; Shadden, 2011).

Qualitative data were collected from the survey. In addition, comment sections embedded into the survey to capture the students' perception related to research questions 2 and 3:

The survey participants consisted of 40 CTE Completers or 30% of the candidates invited to participate in the study. The survey participants were 45% male, and 52.5% female; 67.5% of the participants graduated from School A, and 32.5% of the participants graduated from School B. The survey (Appendix C) consisted of 12 questions, along with open-ended items allowing participants to leave additional comments after question six.

The analysis of the qualitative survey data for this study is presented within this chapter. A brief review of the data is discussed followed by a discussion of the data as it relates to each question.

The survey data were reviewed and analyzed seeking to find an answer to the two remaining questions, Question 2 was directly related to Question 1. Both were designed to ascertain if there was an increase or decrease in CTE Completers and to examine the extent to which the surveyed students felt the CTE Facilitators contributed to those results. This focus on these questions led to a limited number of survey questions directly linked to Question 2. Most of the survey questions were focused on Question 3. Therefore, the qualitative review portion of this study emphasized the researchers' considerations of Question 2 and Question 3.

Research Question 2. Research Question 2 states, "What are the students' perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?" To analyze the survey results related to Question 2, the researcher ran frequency tables and utilized student comments to determine the students' perceptions in relation to their CTE Facilitators helping them to decide on a program of study to become a Completer. Table 5 shows student responses to survey question six, which was directly related to answer study Question 2.

The data identified 26.1% of students surveyed responded as strongly agreeing with the statement "my career and technical facilitator/counselor helped me to identify a career path to pursue toward becoming a Career and Technical (CTE) Completer." The data also identified that 23.8% of the respondents agreed and that 14.2% of them were neutral; 21.3% responded that they either disagreed or strongly disagreed. One student commented:

My counselor was great. The computer thing we took helped to find things I was interested in. I wish I knew about other programs I could

have been a Completer in. More contact my junior and senior year would have been beneficial. I didn't always understand the different paths when I was registering.

Table 5

Student Perceptions Related to survey Question 6

“My career and technical facilitator/counselor helped me to identify a career path to pursue becoming a Career and Technical (CTE) completer?”				
	N	Percent	Valid Percent	Cumulative Percent
Did not respond	6	11.70%	14.20%	14.20%
Strongly disagree	2	3.90%	4.70%	19.10%
Disagree	7	13.70%	16.60%	35.80%
Neutral	6	11.70%	14.20%	50.00%
Agree	10	19.60%	23.80%	73.80%
Strongly Agree	11	21.50%	26.10%	100.00%
Total	42	82.30%	100.00%	
Missing System	9	17.60%		
Total	51	100.00%		

Another student responded, “I think more involvement, like arranging a meeting during class when they discover a student is on track for a Completer, would be very beneficial to going over what it means, for careers, and future.” Still another student responded, “I would have liked to have the opportunity to become a Completer in other fields.” This led the researcher to note that the CTE Facilitators were having a positive impact on students becoming Completers; however, the students had questions that were

not being addressed throughout the program. The researcher then looked at data related to how students felt regarding their CTE Facilitators' ability to answer questions related to the CTE program. Table 6 summarizes student responses to survey question 11 (see Appendix C for the entire survey instrument).

Table 6

Student Response to Survey Question 11.

"My career(s) and technical facilitator/counselor was available to answer questions related to the CTE program:"				
	N	Percent	Valid Percent	Cumulative Percent
Did not Answer	3	5.8%	7.5%	7.5%
Strongly disagree	2	3.9%	5.0%	12.5%
Disagree	3	5.8%	7.5%	20.0%
Neutral	15	29.4%	37.5%	57.5%
Agree	8	15.6%	20.0%	77.5%
Strongly Agree	9	17.6%	22.5%	100.0%
Total	40	78.4%	100.0%	100.0%
Missing System	11	21.4%		
Total	51	100.0%		

The data showed that 42.5% of students surveyed responded that they agreed or strongly agreed with the question: "My career and technical facilitator/counselor was available to answer questions related to the CTE program." Thirty seven and a half percent took a neutral position on the question. This is a high percentage of ambivalent respondents, and it caused the researcher to consider whether CTE Graduates had given

any previous consideration to the role CTE Facilitators may have played in their success. More to the point, it caused the researcher to consider whether CTE Facilitators were really recognized by CTE Completers for having increased their potential for success. Only 7.5% disagreed, and 5% strongly disagreed with the implied value CTE Facilitators lent to their success. However, the negative tone implicit such response could suggest that at least some students saw no contributory value in their sustained relationship with CTE Facilitators.

This begs the question: “Why would they feel this way? What was the bias of experience that prompted this response?” This led the researcher to note that most students perceived their CTE Facilitator to have been helpful in guiding their development of a program of study leading to becoming a Completer. However, some seemed to believe the CTE Facilitator made no difference at all. This suggests there would be value in a follow-on study to investigate why these students felt as they did. Such a study would significantly advance consideration of how the CTE Facilitator functional model might be improved.

Subjective respondent feedback, as quoted above, suggests subject to further research that CTE Facilitator “in-process” contact with student program participants between formal activities might improve relationships and the perception of their value. The researcher analyzed data from the survey along with data used from the quantitative portion of the study to answer Question 2 of the study. Research Question 2 states, “What are the students’ perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?”

Based on this data the researcher concluded that CTE Facilitators were having a positive impact on helping students to become CTE Completers when analyzing the school year of 2011 compared to the school year 2017. In the school year 2017, School A had 200 more Completers, and 33.1% more of the graduates were CTE Completers than the school year 2011. School B, while not having as substantial of numbers, comparatively produced similar results. In the school year 2017, School B had 48 more Completers, and 11.7% more of School B's graduates were CTE Completers. Table 7 was used to illustrate that 26.1% of students surveyed responded as strongly agreeing with the statement, "my career and technical facilitator/counselor helped me to identify a career path to pursue toward becoming a Career and Technical (CTE) Completer." Twenty-three point eight percent agreed, 14.2% were neutral 21.3% either responded as disagreeing or strongly disagreeing.

From a review of this data, the researcher was able to identify that the CTE Facilitators had a positive effect on improving CTE Completer numbers. However, that the current program could be improved possibly by creating the ability for Facilitators to have more time with students in the later years of the program. This could possibly help the students' perceived value of their CTE Facilitator.

Table 7 supported the students perceived their CTE Facilitator had a positive impact on their becoming a program Completer. The students surveyed responded that 42.5% agreed or strongly agreed with the statement "My career and technical facilitator or counselor was available to answer questions related to the CTE program," 37.5% were neutral, 7.5% disagreed, and 5% strongly disagreed. This leads the researcher to note that students perceived their CTE Facilitator as having a positive effect on their completing

their program of study. Again, this is significant to note because previous studies have shown a direct correlation between CTE Completers and a positive effect on graduation rates (Grad Nation, 2017; Shadden, 2011).

Research Question 3. “What are the students’ perceptions of their CTE Facilitators and the assistance/support they provide them to develop a career path, or interest to pursue upon graduation?”

To begin analyzing data related to Question 3 the researcher grouped survey responses into frequency tables. The researcher began with the question seven, “My career(s), and technical facilitator/counselor helped me to identify a career path to pursue toward becoming a Career and Technical (CTE) completer.” The data from the student's responses to survey question seven (Appendix C) was put into Table 7.

The data identified that 21.4 % of students surveyed responded as strongly agreed with the statement “My career(s) and technical facilitator/counselor helped me to identify a career path to pursue when I graduated from high school;” 30.9% agreed, and 28.5% were neutral. Data also showed 11.9% responded as either disagreeing or strongly disagreeing. One student commented, “I am currently attending college to major in the field in which I was a Completer. I felt my courses helped me to decide on my major.”

Another student responded, “In the business classes I am currently taking, all the information from my high school classes have helped me so much and gave me a good background. Another student responded, “I think more involvement, like arranging a meeting during class when they see you are class to becoming a Completer.” Another student responded:

Yes, I immediately enrolled into the college of business at the University of Arkansas, Fort Smith. I also began to reach out to banks and firms so that I can have a connection to rely on so that once I receive my degree, I can go into business with experience.

Table 7

Student Response to Survey Question 7

“My career(s) and technical facilitator/counselor helped me to identify a career path to pursue when I graduated from high school?”				
	N	Percent	Valid Percent	Cumulative Percent
Did not answer	3	5.8%	7.1%	7.1%
Strongly Disagree	2	3.9%	4.8%	11.9%
Disagree	3	5.8%	7.1%	19.0%
Neutral	12	23.6%	28.5%	47.6%
Agree	13	25.4%	30.9%	78.5%
Strongly Agree	9	17.6%	21.4%	100.0%
Total	42	82.3%	100.0%	100.0%
Missing System	9	17.6%		
Total	51	100.0%		

Students also identified the “Kuder” system as being an asset that helped them to identify fields of interest to pursue upon graduation; 72.5% of the students surveyed identified using the “Kuder” system one to three times after their eighth-grade career orientation course. One student commented:

My counselor was great. The computer thing we took helped to find things I was interested in. I wish I knew about other programs I could have been a Completer in. More contact my Junior and Senior year would have been beneficial. I didn't always understand the different paths when I was registering.

While the researcher was able to arrive at the conclusion that the CTE Facilitators were having a positive impact related to Question 3 (What are the students' perceptions of their CTE Facilitators and the assistance/support they provide them to develop a career path, or interest to pursue upon graduation?), it is important to note that students felt more time spent with their CTE Facilitator would have been extremely beneficial. One student noted, "Please help the students more, guide them and explain the careers better, so that they can understand which one is best for them!" Another student noted, "I think more involvement, like arranging a meeting during class when they discover a student is on track for becoming a Completer, would be very beneficial to going over what it means, for careers, and future."

From the comments given by survey participants along with reanalyzing the current CTE Facilitator, the researcher was able to conclude that it would be beneficial for students to have more time with their CTE Facilitator throughout the later years of their education, specifically 10th and 11th grades.

Chapter Summary

Based on the results of the data analysis the researcher was able to answer Question 1: "What are the similarities and difference in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?" From the data, the researcher concluded that the CTE Facilitators had a positive impact on

increasing the number of CTE Completers for the year before their implementation school year 2011 and school year 2017. The school year 2017 is the first graduating class to go through the complete CTE Facilitator program.

Based on the evidence provided by the student survey utilized to gauge student perceptions of the CTE Facilitators the researcher was able to answer Question 2:

“What are the students’ perceptions of CTE Facilitators and the assistance/support they provide them to become program Completers?”

From the survey data combined with statistical data from the school year 2011 and 2017, the researcher was able to conclude that the CTE Facilitators were having a positive effect of helping students to become CTE Completers. However, it is important to note that the 37.5% of the participants surveyed took a neutral position related to Question 2. This is a high percentage of indecisive respondents, and it caused the researcher to consider whether CTE Completers had given any previous consideration to the role CTE Facilitators may have played in their success. More to the point, it caused the researcher to believe that future studies would benefit in looking at ways to improve the current program.

In the school year 2017, School A had 200 more Completers, and 33.1% more of the graduates were CTE Completers than it had in the school year 2011. School B, while not having as substantial of numbers, comparatively produced similar results. In the school year 2017, School B had 48 more Completers, and 11.7% more of School B’s graduates were CTE Completers than in 2011.

Based on the evidence provided from the student survey utilized to gauge student perceptions of the CTE Facilitators the researcher has been able to answer Question 3:

“What are the students’ perceptions of their CTE Facilitators and the assistance/support they provide them to develop a career path, or interest to pursue upon graduation?”

The researcher was able to conclude that students’ perceptions were in line with CTE Facilitators having a positive impact on helping them to transition to post-secondary education or employment. However, it caused the researcher to believe that future studies would benefit in looking at ways to improve the current program. Specifically, with more time spent with their CTE Facilitator during the later portion of the program. Chapter V will discuss the conclusion of the study and discuss recommendations and opportunities for further research.

Chapter V: Discussion, Conclusions, and Recommendations

The purpose of this study was to explore student perceptions on the effects of high school Career and Technical Education (CTE) Facilitators and the impact they had on helping the study students to develop a career path that leads them to post-secondary education, a career trade school, or immediate employment upon graduation from high school. The study also analyzed the effect Career Development Facilitators have on increasing CTE program Completers. American schools are facing a major “drop-out crisis” along with an ever-increasing demand by American business leaders for schools to produce a skilled workforce to meet their future employment needs. As shared earlier, data suggest that students who take a concentrated approach to CTE are more likely to graduate from high school, 1% more likely to be employed after high school, and 1.3% more likely to enroll in a two-year college (Camera, 2016). In order to battle the “drop-out crisis” and meet the needs of Arkansas’ businesses, the Arkansas Department of Career and Technical Education (ACTE) created four goals for CTE in Arkansas:

Goal 1: Improve CTE Curricula Frameworks through professional development and collaboration.

Goal 2: Improve and Support Program Development through funding priorities and partnerships with stakeholders.

Goal 3: Improve College and Career Readiness for Secondary CTE Students.

Goal 4: Improve Support Services for CTE Students (Arkansas Department of Workforce Education, 2018, p. 1)

This study focused on ACTE Goal three, “CTE prepares students to succeed in further education and careers,” specifically its program which created College and Career

Coaches, also referred to as College and Career Facilitators (Arkansas Department of Workforce Education, 2018, p.1). The focus of these Facilitators is to specifically target middle and high school students who are most in need of college and career planning services (Arkansas Department of Career Education, 2016a).

Summary of the Findings

This study was designed to gauge student perceptions in hopes of seeing if the Facilitator program was having a positive impact on Career and Technical Education (CTE) Completers. Previous studies have shown being a CTE Completer has a positive impact on graduation rates (Shadden, 2011). Also, the researcher wanted to gauge if students felt the Facilitators were helping them to develop a path to pursue upon graduation. The study was designed to answer three questions:

Research Question 1. What is the increase or decrease in CTE Completers in comparison to the year before and the seven years after the creation of CTE Facilitators?

Research Question 2. What are the students' perceptions of CTE Facilitators and the assistance and support they received from them to become CTE program Completers?

Research Question 3. What are the students' perceptions of their CTE Facilitators and the assistance and support they received from them in developing a career path, or interest, to pursue upon graduation?

Results of the study showed that, in relation to Question 1, CTE Facilitators were having a positive impact on CTE Completer numbers. A statistical difference was noted in the growth of CTE Completers for both schools when the school year 2011 and 2017 were compared. The school year 2011 was the last year before the district being studied

implemented the Arkansas Career and Technical Education Facilitator program, and school year 2017 was the district's first graduating class to go through the entire Facilitator program grades eight through 12. The results of the study showed that School A had 200 more Completers, and 33.1% more of the graduates were CTE Completers in the school year 2017 than in the school year 2011. School B, while not as significant in number, comparatively produced similar results. In the school year 2017, School B had 48 more Completers, and 11.7% more of School B's graduates were CTE Completers.

Question 2 was answered using survey data. The data was interpreted to answer if the students felt their Facilitator helped them to become a CTE program Completer. The data were analyzed and interpreted to show that the students felt the program was an overall positive experience. However, there was no significant data that supported that the students felt the Facilitators helped the students to become CTE program Completers. Only 41.2% of the students agreed or strongly agreed with the statement "My career(s) and technical facilitator/counselor helped me identify a career path to pursue toward becoming a Career and Technical Education (CTE) Completer." This left 37.5% of the survey participants to take a neutral position on the Question. This high percentage of uncertain respondents caused the researcher to consider whether CTE Completers had given any previous consideration to the role CTE Facilitators may have played in their success. Moreover, it left the researcher to believe that the program was successful in increasing CTE Completer numbers; however, that the current program could have perceived flaws.

Question 3 was also analyzed utilizing survey data. Question 3 was, "What are the students' perceptions of their CTE Facilitators and the assistance and support they

provide them to develop a career path, or interest, to pursue upon graduation?” The data related to Question 3 was analyzed and interpreted to show that the students felt their Facilitators helped them to develop a path to pursue upon graduation. A minimal amount of survey participants, 5.9%, disagreed with the question “My career(s) and technical Facilitator/Counselor helped me identify a career path to pursue that involved immediate employment after graduation,” and 3.9% strongly disagreed.

The comments portion of the survey produced a variety of applicable points. The students implied that their experience with their CTE Facilitator and the CTE program were overall positive and that much of their experience and knowledge gained in the CTE classes prepared them for school and “real world” application. The comments also indicated that for those students who responded in the comments portion of the survey thought that their experiences with CTE helped them to transition in post-secondary education or immediate employment. For those students that commented, 57.1% indicated they were in a college or trade school, 14.3% reported they were employed in the field for which they were a Completer, 16.7% were employed in a field not related to the program they were a Completer in, and 9.7% were unemployed and not in school.

Interpretation of Findings

My assumption going into the study was that Facilitators would have a positive impact on students becoming Career and Technical Education (CTE) Completers; however, that they would not meet the students’ needs of helping them to develop a path to pursue upon graduation. The study verified that the Facilitators had a positive impact on improving CTE Completer numbers; a significant increase in the number of CTE Completers for both schools. When analyzing data for School A and School B for the

school year 2011 compared to the school year 2017, the following was found: School A had 200 more Completers, and 33.1% more of the graduates were CTE Completers in the school year of 2017 than it had in the school year 2011.

School B, while not as significant in number, comparatively produced similar results. In the school year 2017, School B had 48 more Completers, and 11.7% more of School B's graduates were CTE Completers. This increase in the number of CTE program Completers is substantial for two reasons. First, the goal of CTE is to produce students who have the skills needed for immediate employment. Second, the Arkansas Department of Career and Technical Education's (ACTE) primary focus for creating CTE Facilitators was to battle declining graduation rates.

Dougherty (2016) stated that the goal of today's CTE is to "connect students with growing industries in the American economy and to give them the skills and training required for long-term success" (p. 4). When CTE programs of study are strategically designed, and the associated curriculum is delivered efficiently, secondary CTE programs provide preparation and skill-building for careers in fields such as information technology, health services, and advanced manufacturing. An increase in CTE Completers would support that the CTE Facilitators are ensuring this occurs.

The Arkansas Department of Career and Technical Education (ACTE), the primary focus for creating CTE Facilitators, was to battle declining graduation rates, and specifically to target middle and high school students who are most in need of college and career planning services (Arkansas Department of Career Education, 2016a). As shared earlier data suggest that students who take a concentrated approach to CTE were more likely to graduate from high school (Camera, 2016; Shadden, 2011). The

substantial increase in CTE Completers identified in this study would support that the CTE Facilitators are having a positive effect on graduation.

The frequency of Completers was used to analyze the schools in which the responding students were Completers in relation to their answers to survey questions. This exercise produced little substantial information. The lack of depth and scope in the survey questions resulted in not only limited information, but information of limited differentiation. I found it interesting that the study showed the students felt their CTE Facilitator had a positive impact on the path they chose to pursue upon graduation. However, the “whys” for 90% feeling so and the “whys” for almost 10% not feeling so were not adequately reflected in the narrative responses offered by these students. Again, I believe this reflects a deficiency in the design of the survey questions. It might have served the study better if the questions were designed to be open-ended, requiring the respondent to immediately follow up a close-ended “yes” or “no” with an immediate, evaluative, “why” statement.

The cumulative percentage 90.5% of survey participants indicated that they were either in college or a technical school, employed in the field of study in which they were a Completer, employed but not in the field for which they were a not a Completer, or in the military. Again, this cumulative information is interesting, however, that accumulation does not allow for deeper consideration of “why” 13% of the Completers were employed in a field other than the field related to their Program focus. One survey respondent said, “I’m not employed in the field I was a Completer, but I feel my classes helped me to get the job I have.” This response, again, begged the questions “why” and “how.” Unfortunately, the survey did not tease out responses to these questions. One can

only imagine how much more valuable the study would have been had these questions been asked and appropriately respondent to.

Another survey respondent stated:

Being a Completer allowed me to experience the business side of life at a very young age and influenced the way in which I acted and reacted to situations at work. It allowed me insight that quickly allowed me to decide if I wanted to be in business.

This response evidences that such consideration by all respondents could have been elicited with a more artfully constructed survey questionnaire. At the same time, even this response left the researcher wanting more information. What were the “insights” to which the respondent was referring?

Equally interesting was the support one survey respondent gave when he or she said:

I immediately enrolled into the College of Business at the University of Arkansas, Fort Smith. I also began to reach out to banks and firms so that I can have a connection to rely on so that once I get my degree I can go into business with experience.

As a researcher, I was curious to understand what experience within the program precipitated interest in enrollment in college level business courses by the Completer. Were this shared, the program could be analyzed to enhance Facilitator and student dynamics to further promote this level of Completer follow-on.

Seemingly, evidence supports the fundamental reason behind the creation of the Perkins Acts and the Tech Prep curriculum. Tech Prep was designed to meet the nations’

overwhelming need to produce graduates prepared to enter the workforce. Specifically, legislation that was designed to meet the needs of students who would not traditionally attend colleges or universities upon graduation (Bragg, 2000). Curriculum for secondary school was designed for seamless integration into community colleges and technical schools (Bragg, 2000; Friedel, 2011; Gordon, 2008; Lynch, 2000).

While the study identified that students felt the Facilitator program was a positive, it did not necessarily impact why they decided to go on to school. One survey respondent noted, “I enjoyed the class I was a completer in, but I decided to major in Political Science instead.” Again, I immediately saw the weakness in my survey design. I wanted to know the “why.” Regardless of this point, the student did not enter college pursuing the subject in which he or she was Completer; but, the student did transition seamlessly into post-secondary education. This is the fundamental purpose of the CTE Facilitator program (Arkansas Department of Career Education, 2016a).

The study did identify that students were interested in additional time to spend with their CTE Facilitator; the students’ comments provided some valuable insight into why. Seventy-three percent of students surveyed indicated they only met with their CTE Facilitator one to three times after their eighth-grade year. This suggests, at least to this researcher, that the overall interaction between Facilitators and students falls short of what is desired, if not actually needed. Furthermore, additional survey comments indicated that more time with Facilitators would have been beneficial for students, supporting their selection of career paths to pursue upon graduation. One student said, “I think more involvement, like arranging a meeting during class, when they discover a student is on track to become a Completer, would be beneficial. Also, explaining what

being a Completer means for future careers and employment opportunities.” This was a response that put some “meat on the bones.”

CTE Program evaluators would be well-served to consider what this comment suggests for improving outcome, and maybe dissatisfaction with the Program. This Completer is calling, retrospectively, for more relationship between Facilitators and their assigned students. At the very least, Program managers and the Facilitators themselves should be designing more contact hours – with interested students – into the curriculum.

Another survey participants’ comments were equally insightful when he or she said:

The computer thing we took helped us to find out things we were interested in. I wish I knew more programs I could have been a Completer in. More time with my Facilitator during my Junior and Senior year would have been beneficial. I didn’t always understand the different paths when I was registering for classes.

This comment, again, highlights a requirement for Program managers and Facilitators to scrutinize how time is allocated to the interface between Facilitators and students and the nature of work done together at the point of interface. Further, the comment suggests that Program leadership look at the quantity and quality of Program-specific collateral used to educate and inform participants.

It is important to take into consideration when looking at the effectiveness of the Career and Technical Education (CTE) Facilitator program that the ultimate purpose of CTE is to provide a smooth transition into post-secondary education or employment. The program was designed to provide college and career planning to middle and high school students, specifically those from the most economically challenged counties in Arkansas

(Arkansas Department of Career Education, 2016d). If the current program can be improved in any facet to help these students identify a path to pursue upon graduation, it must be recognized and examined. This is immensely important when working with students of poverty (Arkansas Department of Career Education, 2016a; National Center for Educational Statistics, 2016; Gordon, 2008; Plank et al., 2005).

Limitations of the Study

There is little question in the researcher's mind that the survey instrument, the basic study questions, should have been more robust, more differentiated, and more definitive. But, other factors limited the success of the study itself.

One issue actually related to the quality of current and archived Program/Participant Information. For the purpose of this study, subjects were selected from high school students who were graduates of an Arkansas high school in the 2017 school year and were Career and Technical Education (CTE) Completers. They had received counseling from an Arkansas CTE Coach or Facilitator from grade eight through 12. One unexpected obstacle was the difficulty in contacting all of the potential study-related graduates. When I sought the data from the school district, I learned there were no email addresses for past Program participants on file. In order to email the survey, it was necessary to contact potential participants by phone to request email addresses. The fact that the contact numbers were parent contact numbers and not personal graduate contact numbers created logistical challenges and added considerable process time to the survey. Furthermore, one of the schools, School A, had a high minority population; 50% of the student population was either Hispanic or Asian. The contact information I obtained from the district was for parents. I ran into additional problems with speaking

with parents who had limited English fluency. Due to difficulties with language, culture, and communications, I was unable to obtain email addresses from a majority of this population. In hindsight, I would have looked at alternative options to enlist more survey participants.

This study was also limited in that it is specific to the participating school system and may not be generalizable to other populations or other school systems across the state. As of the time of this study, 48 school districts across the state are engaged in some facet of the Arkansas College and Career Coach program. This study was unable to extend beyond the scope of this district being studied, and in return could not gauge the overall effectiveness of the Arkansas College and Career Coach program.

Further limitations included geographical exclusions as the study only included graduates from one portion of the state. The effectiveness of the individual Facilitator could be a strength or weakness when looking at possibly incorporating the program in another school district or state system, as the school system being studied only utilized two Arkansas CTE Facilitators, and their personal effectiveness will have played a major role in the study's results.

Implications and Recommendations for Practice

Based on the results of the Completer data analyzed from school years 2011 and 2017 along with the data presented from the participants of the survey, the researcher suggests that the Career and Technical Education (CTE) Facilitator program continue as it has been beneficial in increasing CTE Completers. Research has proven the students who participate in CTE courses who were considered concentrators (taking three or more classes in a single program of study) were 21% percent more likely to graduate from high

school (Dougherty, 2016). In a study involving New York City CTE high schools, positive graduation rates have been shown for all students, but specifically minority students. However, noted in the same report was the fact that only 8% of New York high schools were CTE high schools and, additionally, did not have some focus on CTE curriculum (Feeney, 2014). The Arkansas Career and Technical Facilitator programs give Arkansas schools the ability to potentially provide the CTE high school focus into a traditional high school setting.

Through researching the data from the study, the researcher can conclude that more time spent with the CTE Facilitators specifically in grades 10 through 12 would help to improve student transition upon graduation. One option to increase Facilitator time spent with students would be to increase the number of Facilitators employed within the district. When looking at the district studied, the Facilitators are responsible for approximately 400 new students a year and monitoring approximately 2,000 students' grades eight through 12, in order to allow more time to be spent with students looking at the effectiveness of the student to Facilitator ratio and alignment would be beneficial. Another possible option for rectifying this area of weakness would be to re-structure the program to include additional mini-lessons in grades 10 and 11. This would allow the Facilitators to spend additional time with the students creating opportunities for review of the student's program of study, additional areas of interest, and allow for additional prospects in which the student may become a Completer. Moreover, it may allow the Facilitator to reevaluate the students' interest and help redirect them towards another route or area of study for the students to pursue upon graduation.

Recommendations for Further Study

After completing the research for this study, there are a couple of things that could have improved within the structure of the study. First, I would like to expand the school districts and the Facilitators utilized for the study. Originally, I had this idea; however, I ran into challenges finding schools that were comparable in size and demographics and that were utilizing the same or similar CTE Facilitator program. In hindsight, the inclusion of other schools and districts would have provided more insight into the effectiveness of the program statewide.

The outcomes of this study provided positive results showing CTE Facilitators as an asset to students, specifically on the correlation between CTE Facilitators and an increase in CTE Completers. These results can be considered to possibly have an extremely large impact on graduation rates statewide. Previous studies have already shown a direct correlation between CTE Completers and graduation rates (Association for Career and Technical Education, 2014; Grad Nation, 2017; Shadden, 2011). This study has shown a direct correlation between the implementation of CTE Facilitators and CTE program Completers. Further studies on the CTE Facilitator position could provide support for making the CTE Facilitator position mandatory in Arkansas schools.

The second recommendation for future research is to look at the impact CTE Facilitators are having on low socio-economic students. Career and Technical Education (CTE) has already been proven to have a positive impact on graduation rates for minority students and students with low socio-economic status (America's Promise Alliance, 2017; Feeney, 2014). Moreover, many students with a low socio-economic status report boredom and feeling that traditional school coursework is not relative to their “real-

world” needs. The relevance of school curriculum and coursework is often noted by students in poverty or low socio-economic status as one the greatest factors why students drop-out of school (Balfanz et al., 2012; Feeney, 2014). All students, but especially students of poverty, need to understand why high school is important. CTE directly ties education to their future. A study on the effect of CTE Facilitators and improving the CTE experience for low socio-economic students could prove tremendously beneficial.

The third recommendation for further study would involve analyzing the current CTE Facilitator program and structure for areas of improvements. While this study proved the CTE Facilitators had a positive effect on improving CTE Completers and helping the students transition to post-secondary education or employment, the students identified that more time with their CTE Facilitators would have been beneficial. In the current structure, the program is designed as each of the Facilitators are responsible for the student population of one high school and two junior high schools. The student Facilitator relationship begins in the students’ eighth-grade year. During the students’ required “Career Development” class, the CTE Facilitator completes a three to five-day mini-lesson on career planning. During this lesson, the “Kuder” assessment tool is introduced. The tool is used to measure career interests, skills, and work values of the students, and to help Facilitators guide students toward curriculum and career instruction.

Before students enroll in their ninth-grade classes, the Facilitators go through selecting classes with students that are aligned with their career goals and post-secondary interest. This is a working document that students are free to change, as their interest change. During their ninth-grade year, the Facilitators take their students on a tour of a local university. The tour intends to expose students to both college and post-secondary

careers. Also, during the ninth-grade year, the Facilitators hold the “I Can Career Expo.” At the expo, 50 to 60 local businesses help to introduce students to possible local employment opportunities and career paths. Furthermore, in ninth-grade, the students’ career path document becomes a little bit more official, as the Facilitators try to outline a path of interest for them to become program Completers and a path to pursue upon graduation.

A brief lesson is conducted with these students before 10th-grade registration. The Facilitators review the document created in eighth-grade and answer any questions the students may have. After ninth-grade, the Facilitators are in contact as needed. They may create a tour or field trip, if the opportunity presents itself or if they find an event they believe will be beneficial for students. The Facilitators are also available should the principal of the school they serve request a special event. There is little true contact with the CTE Facilitators after ninth-grade. Through the comments portion of the survey for this study, the researcher was able to identify students felt additional time with their CTE Facilitator would have been beneficial. One student noted, “Please help the students more, guide them and explain the careers better, so that they can understand which one is best for them!” Another student noted, “I think more involvement, like arranging a meeting during class when they discover a student is on track for a completer, would be very beneficial to going over what it means, careers, and future.” Further research on how to improve the current CTE Facilitator program could prove beneficial to improving the program and experience for students.

Conclusions

Historically, Career and Technical Education (CTE) has been created to prepare future workers and address the employment needs of the nation. The first form of vocational education in America was an apprenticeship. Since that time, the federal government has placed a priority on Career and Technical Education. This can be seen from the introduction of the Morrill Act of 1862 to the Perkins Act of 2006.

With the increasing challenges American Schools face with student motivation and high school drop-outs, CTE has been a highly effective tool that has been successfully used to battle these problems. As an attempt to battle these problems in Arkansas the Arkansas Department of Education created the Arkansas College and Career Coach Program (formerly known as Arkansas Works). Initially, the College and Career Coach Program program began as a trial program in January 2010. The Arkansas Department of Career Education (2016a), noted that the program was a “collaborative effort among members of the Governor’s Workforce Cabinet: Arkansas Department of Career Education, Arkansas Department of Education, Arkansas Department of Higher Education (Association of Two-Year Colleges), and Arkansas Department of Workforce Services” (p. 1). The program was designed to provide college and career planning to middle and high school students in low economic areas within the state (Arkansas Department of Career Education, 2016d).

This study analyzed students’ perceptions of CTE Facilitators and their ability to help them transition into post-secondary education or employment. The study proved that the students perceived that the CTE Facilitators had a positive effect on helping them to transition from secondary school into college or employment. Moreover, the study

proved the CTE Facilitators had a positive impact on increasing the number of students who were CTE Completers. Previous studies have already shown students who are CTE Completers as having a positive correlation with high school graduation rates. This study has also identified possible avenues for further research to help continue the effectiveness of CTE programs across the state and provide students with the greatest opportunity for individual success.

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Appendix A: Permission to Use Data

Mr. /Mrs. XXXXXXXX, CTE Director
XXXXXXX School System
XXXXXXX, AR

Dear XXXXXXX,

I am a student at Arkansas Tech University in the Educational Leadership doctoral program. I am interested in determining the graduation rates of 12th-grade Career and Technical Education (CTE) Completers. The purpose of this study is to gauge students' perceptions of the effectiveness of Career Development Facilitators in helping them to develop a career path that leads them to post-secondary education or a career trade school. I am interested in examining high school seniors from archived data for the 2009-2017 school years.

I would like to request permission to obtain and analyze data on high graduates in your school system for the years of 2009-2017 who were CTE Completers and were involved and guided by your districts CTE Facilitator or Counselor. The names of participating school systems will be coded to protect their identity. Identifying information on individual students will not be collected.

With the focus the state of Arkansas and the Arkansas Department Career and Technical Education are placing on the College and Career Coach program, I am confident that you will find the information gathered from this study to be beneficial to your school system and the Arkansas Department Career and Technical Education.

Sincerely,
Edwin Hansen

Permission is granted to Edwin Hansen to obtain and analyze data on the Career and Technical Education Completers of XXXXXX 2009-2017 school years.

Signature

Date

Appendix B: IRB Approval



ARKANSAS TECH
UNIVERSITY

**Office of Sponsored Programs
and University Initiatives**
Administration Building, Room 207
1509 North Boulder Avenue
Russellville, Arkansas 72801

Office: 479-890-4327
www.otu.edu

11/22/17

To Whom It May Concern:

Edwin Hansen's IRB application "Arkansas Career and Technical Education Facilitators and Career Transitions: The Perceptions of Students" is approved through November 22, 2020. The approval code is Hansen_112217.

Thank you,

A handwritten signature in blue ink, appearing to read "Jeff Aulger".

Jeff Aulger, Ed.D.

IRB Chair

Appendix C: Survey

1. Male
Female

2. Are you currently?

1. Furthering your education
2. Employed in the field in which you were a Career Education completer
3. Employed not in the field in which you were a completer
4. Military
5. Unemployed, not in school

3. Were you a completer in a career field?

Yes No

4. If you answered yes to #3, what career field did you complete?

5. If you are a completer in a career field, did you find that career field to be interesting?

Yes No

Comments

6. To the following items, please respond with the most appropriate rating response:

My career(s) and technical Facilitator/counselor helped me identify a career path to pursue toward becoming a Career and Technical Education (CTE) completer:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

7. My career(s) and technical Facilitator/Counselor helped me identify a career path to pursue when I graduated:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

8. My career(s) and technical Facilitator/Counselor helped me identify a career path to pursue that involved immediate employment after graduation:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

9. My career(s) and technical Facilitator/Counselor was available to answer questions related to my post-high school educational goals?

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

10. My career(s) and technical Facilitator/Counselor was available to answer questions related to my post-high school career goals:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

11. My career(s) and technical Facilitator/Counselor was available to answer questions related to the CTE programs:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

12. I believe I would have benefited from more face-to-face contact with my CTE Facilitator\Counselor:

Strongly disagree Disagree Neutral Agree Strongly Agree

Comments:

13. After your Career Development Class (8th grade) how many times did you review your career interest using the on-line career planning tool Kuder?

1-3 4-6 7-10 More than 10

Comments:

14. Any additional comments would be appreciated:

