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THE RELATIONSHIP OF CAREER AND TECHNICAL STUDENT
ORGANIZATIONS TO COLLEGE AND CAREER READINESS

By
Brenda Smith Haynes

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

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Approval Page

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Dedication

To my husband for his continuous support and prayers. Thank you for being patient with me through this process. To my daughter and grandson for their understanding and patience through this process. To my mother for her encouraging words and prayers.

Abstract

THE RELATIONSHIP OF CAREER AND TECHNICAL STUDENT

ORGANIZATIONS TO COLLEGE AND CAREER READINESS. Haynes, Brenda Smith, 2021: Dissertation, Gardner-Webb University.

Many schools are waking up to the reality that students need programs that will keep them alert and ready for their next level in life. Career and Technical Student Organizations (CTSO) are the co-curricular programs associated with every career and technical education course and promise to offer opportunities for a peek into the real world. This study examined the relationship of CTSOs to college and career readiness. Career and technical education is oftentimes overlooked. Qualitative data were collected in the form of interviews of former high school students who were CTSO participants and teachers who were advisors of CTSOs. This research study is grounded in the theory of constructivism. The qualitative data can be used to show the relationship career and technical student organizations can have while preparing students for college and/or careers. The data clearly showed that all six students believed that participating in their selective CTSO caused them to be ready for their selected career and/or college. The teachers offered their praise and pride of being a part of helping the students achieve their goals.

Keywords: college and career readiness, career and technical education, career and technical student organizations, constructivism, qualitative

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Chapter 1: Introduction

Schools are designed to help students prepare for life after graduation. Far too many schools focus solely on students passing the end-of-course and/or end-of-grade tests, with limited emphasis on college and career readiness. Sanchez (2016) posited that a greater focus on preparing students for the world of work is long past due. The Every Student Succeeds Act, the newest iteration of No Child Left Behind, is the United States governance for public education. The Every Student Succeeds Act requires that all students receive an education with academic standards that prepare them to succeed in college and career fields. This new governance holds school districts accountable for ensuring academic success for every student. With the focus on quality academic standards, the supporting implication is that the United States will graduate students ready for life after high school.

The Carl Perkins Act, originally passed as the Vocational Educational Act of 1963, and later reauthorized in 1984, 1988, 2006, and 2018, was enacted to enhance the quality of career and technical education (CTE) programs provided to American children (Penny, 2018). In its present form, the Perkins Act provides funds to public schools and other grantees to improve both secondary and postsecondary CTE programs.

In the past, CTE was thought of as an alternative path for high school students who did not plan to go to college. Although many citizens may perceive CTE as a second-rate education compared to the traditional curriculum, the core curriculum is not the answer for all students (Sanchez, 2016). The need for a middle path is unquestionable. “Every year, more than 400,000 young people in the top half of their high school class go to college, and 8 years later they have earned neither a two-year, nor

a four-year degree or certificate” (Sanchez, 2016, p. 4). It is reasonable to question whether stronger college and career skills may have facilitated college graduation or secured gainful employment for many of these 400,000 students.

“Our Time Is Now,” asserted Doug Meyer (2016, p. 44), President of the Association for Career and Technical Education (ACTE). Meyer pointed out that President Barack Obama signed an executive order creating the U.S. Presidential Scholars in Career and Technical Education program. This program recognizes the excellent work of outstanding CTE students in America’s schools. Then, former First Lady Michelle Obama sponsored an event at the White House that celebrated Innovations in Career and Technical Education, Adult Education, ACTE, the National Association of State Directors of Career and Technical Education Consortium, and the National Coordinating Council for Career and Technical Student Organizations. During the celebration, the former First Lady praised CTE as a promising option for all students (Meyer, 2016).

State leaders across the United States are exploring their current and future economic landscapes to ensure that today’s workers are prepared for tomorrow’s labor demands (English et al., 2017). However, Cushing et al. (2019) explained that only 37 of the 50 governors included explicit mention of college and career readiness as a priority for their state initiatives. Cushing et al. identified needed employability skills such as communication, teamwork, professional skills, experiences, and leadership skills.

There is broad recognition that American high schools are not doing enough to prepare students for success outside of academic settings, which is at odds with what most believe to be the purpose of high school—to prepare students for the

real world. (Scheidegger, 2019, p. 1)

According to Hyde and Bravo (2015), the painful truth is that college graduates think they are ready for the world of work, but employers do not agree. Berr (2016) revealed that according to a survey conducted by PayScale, nearly 90% of all graduates considered themselves well prepared for their chosen career; unfortunately, only half of the hiring managers shared the same opinion. The Education Trust (2016) asserted that 47% of graduates have completed neither a college nor a career-ready curriculum. By many accounts, public schools are primarily looking to sustain a high graduation rate or to improve end-of-course test scores with varying degrees of interest in student preparation for postsecondary activities. Critics of public education may assert that college and career readiness has taken a back seat to public mandates to raise scores and graduation rates (Ijaz & College, 2017), yet the reauthorization of the Carl Perkin's Act in 2018 validates the belief of many supporters that public education has a vital role in ensuring that students graduate college and are career ready.

Career and Technical Student Organizations

The companion to CTE courses are the career and technical student organizations (CTSOs). CTSOs are a part of the reauthorization of the Perkins Act. "The national Coordination Council for Career and Technical Student Organizations serves as a communications and collaborative vehicle for CTSOs" (Career and Technical Student Organizations, 2014, p. 1). The mission and purpose of CTSOs follow:

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning and real-world application. CTSOs work as an integral component of the

classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program. CTSOs help guide students in developing a career path, a program of study and provide opportunities in gaining the skills and abilities needed to be successful in those careers through CTSO activities, programs and competitive events. In addition, students have opportunities to hold leadership positions at the local, state, and national level and attend leadership development conferences to network with other students as well as business and industry partners. (Career and Technical Student Organizations, 2014, para. 3)

CTSOs serve more than 2 million students nationwide and are allotted approximately \$1.1 billion annually in state grants (United States Department of Education, 2021). In summary, the value of CTSOs is that they provide opportunities for students to construct meaning or make sense of their learning in accord with the constructivism approach to learning.

Statement of the Problem

According to Achieve (2005), an independent, nonpartisan, nonprofit education reform organization dedicated to working with states to raise academic standards and graduation requirements, improve assessments, and strengthen accountability, college instructors estimated that more than two of five students enter college ill-prepared to meet the expectations of their new environment. Additionally, employers estimate that 39% of recent high school graduates are unprepared for the demands of entry-level jobs (Achieve, 2005). Achieve also noted that seven in 10 college instructors said they spend a

significant amount of class time remediating students. The employers found that a high school diploma is not enough to ensure readiness for working in their companies.

Achieve found that 84% of high school graduates who were not in college believed they will need to go to college or obtain more formal training to get the jobs they want in the future.

Garin (2014, as cited to in Kirst, 2014) surveyed 400 students. The findings showed that overall, 60% of college students and 58% of non-college students (students who went directly to work upon high school graduation) said they would have worked harder in high school had they known what they later learned about the expectations of college and the working world. Additionally, 72% of college students and 65% of non-college students indicated that they would have taken higher level or more challenging courses in one or more subject areas had they had such knowledge in high school (Kirst, 2014).

In District C3, the North Carolina southeastern school district that served as the site for this study, over 95 individual CTE courses are offered annually. District C3 offers courses in the following career clusters: manufacturing, marketing, STEM, health sciences, hospitality and tourism, human services, information technology, law and public safety, transportation and logistics, agriculture, architecture, audio-video technology, business management, and finance. In the first semester of 2018, of the 8,753 students tested, only 70.2% scored “proficient” on the CTE post-assessments. In Semester 2, of 7,735 students tested, only 74.7% scored “proficient.”. Although the district has set a goal of 82% proficiency on the CTE post-assessment for the 2019–2020 school year, the fact remains that at the time of this study, according to district scores, 25-

30% of the students may have deficits that render them unprepared for life beyond high school.

The call to ensure that students are ready for college and careers is now being scrutinized across the United States. High school leaders must pay more attention to the structure, culture, and instruction within their schools and the extent to which those elements expose students to rigorous and relevant coursework that would prepare them for various college and career paths (Bromberg & Theokas, 2016). District C3's end-of-course passing rates of 70.2% and 74.7% respectively may not guarantee proficiency in college and career readiness. Prospective employers may suggest to parents that concern is warranted.

Purpose of the Study

According to Conley and McGaughy (2012), "students need a solid foundation of academic knowledge combined with critical thinking and learning skills, whether they are headed for college or a career" (p. 28). The purpose of this qualitative study was to explore whether participation in CTSOs facilitates college and career readiness. Each CTE course offers participation in a co-curricular CTSO. In this study, I will give voice to six students who were CTSO members and upon high school matriculation went directly to work or college. The goal is to understand the perceived impact of student participation in CTSOs on college and career readiness.

Research Questions

The following research questions guided this study:

1. What specific aspects of CTSO participation influenced student success in college (or not)?

2. What specific aspects of CTSO participation influenced student career success (or not)?

Conceptual Framework

Parkay (2013) recalled how the constructivist theory of learning reaches back to the mid-1980s. During that time, educational researchers were seeking to understand how learners make sense of new information based upon prior knowledge. The constructionist viewpoint connects to the views of Gestalt theorists who believed that “wholeness is primary; one should start with the total aspect of a learning situation and then move to particulars in light of the whole” (Parkay, 2013, p. 229). Gestaltists thought learners obtain an overview of knowledge first to facilitate one’s ability to see the forest, not just the trees. Moving forward in history, the constructivists asserted that new learning is developed through active construction, thus “students develop new knowledge through a process of active construction” (Parkay, 2013, p. 229). Further, students actively process learning through the lens of what they already know. The constructivist curriculum allows students to develop expertise within an applicational context. The teacher’s role moves beyond imparting knowledge. It includes scaffolding and responding to the student’s learning efforts as they construct meaning. Marsh and Willis (2006) showed that some educators see an almost natural connection between constructionism and authentic assessments. As such, students can explore and refine their knowledge as they involve themselves in concrete experiences and collaborative discourse and reflections, which enable them to resolve cognitive conflicts relative to their new learning.

CTSOs’ mission and purpose closely align with the constructivist theory: “enhance student learning through contextual instruction, leadership and personal

development, applied learning and real-world application” (Career and Technical Student Organizations, 2014, para. 3). The organizations equip students with a myriad of learning skills and dispositions necessary for life after high school. Through competitive interactions at the local, state, and national levels, students learn to refine their knowledge as well as assimilate prior knowledge with new learning. The application of learning in varying activities allows students to conceptualize how the whole is equal to the sum of its parts, a prerequisite skill necessary for success in the real world.

Methodology

I chose qualitative research as the research method for this study. Butin (2014) stated, “an exploratory dissertation design is best used when an issue is not well understood in the literature or previously unexamined” (p. 80). To date, the perception of the impact of participation in CTSOs in District C3 remains unknown, especially from the viewpoint of the consumers or students. Although the recent quantitative data from the CTE end-of-course tests show passing results, until educators hear directly from CTSO student participants, the overall impact may be defined by the end-of-course scores, 70.2% and 74.7% respectively.

One-on-one interviews were used to collect data. Interviews are a popular method of gathering data and are a simple means of acquiring data from relevant individuals (Butin, 2014). In this study, the relevant individuals are the students who were enrolled in CTE classes and participated in a CTSO in high school and have gone on either to college or a career of choice. Each interviewee was asked a series of questions to obtain the data necessary to answer the research questions.

Definition of Key Terms

CTSO

Career and technical student organization: An organization designed for students enrolled in CTE courses that engage students in activities as an integral part of the curriculum or instructional program (Milgram, 2019).

FBLA

Future Business Leaders of America: Prepares students for careers in business and is the largest business student organization in the world (Milgram, 2019).

DECA

An association of marketing students: Prepares emerging leaders and entrepreneurs in marketing, finance, hospitality, and management in high schools and colleges around the globe (Milgram, 2019).

HOSA

Health Occupation Students of America: Prepares students to become leaders in the global health community through education, collaboration, and experience (Milgram, 2019).

TSA

Technology Students Association: A national organization of students engaged in science, technology, engineering, and mathematics. It is open to students enrolled in, who have enrolled in, or have completed technology education courses (Milgram, 2019).

FCCLA

Family Career and Community Leaders of America: Provides personal growth, leadership development, and career preparation opportunities focusing on the multiple

roles of family members, wage earners, and community leaders. Members develop skills for life through character development, creative and critical thinking, interpersonal communication, practical knowledge, and career preparation (Milgram, 2019).

SkillsUSA

A national membership association serving high school, college, and middle school students who are preparing for careers in trade, technical, and skilled service occupations, including health occupations, as well as for further education. SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. SkillsUSA helps each student excel (Milgram, 2019).

FFA

Future Farmers of America: Prepares students for careers in agriculture and leadership. It welcomes members who aspire to become teachers, doctors, scientists, business owners, and more (Milgram, 2019).

Limitations of the Study

Limitations, which are apparent in most studies, are potential weaknesses or problems beyond the control of the researcher. They determine the extent to which the findings may be generalizable to other groups (Creswell, 2014). A limitation of this study may be that the lapse of time between students participating in their CTSO and enrolling in this study may have rendered them unable to remember and articulate the value or otherwise of the CTSO activities experienced in high school. Second, students may have differing definitions of college and career readiness, which may have negatively influenced the validity of their answers.

Delimitations of the Study

Creswell (2014) explained that delimitations in a study are choices made by the researcher that may color the findings. In this study, I chose to interview six former CTSO participants who went on to college and/or work. According to Latham (n.d.), a qualitative study should include enough participants to reach saturation. Saturation is reached when additional participants do not provide any additional insight.

Significance of the Study

This study is significant to high school principals, college and career educators, administrators, employers, and the District C3 department leaders. The findings show the impact of CTSO participation on college and career readiness. In his 2011 State of the Union Address, President Obama said, “If we want to win the future—if we want innovation to produce jobs in America and not overseas—then we also have to win the race to educate our kids” (p. 1). According to an op-ed by Regan (2011), if we want to win the future, the United States needs a well-educated workforce that will drive tomorrow’s innovation. We need students who graduate ready to take skilled positions in high-growth sectors of the economy. At all levels, businesses need employees who are more creative, more technical, and more connected than ever. This means technical literacy is no longer “nice to have” (Regan, 2011, p. 1), but it is a requirement for success.

Summary

Davila (2014) contended that many public school systems set district goals aimed at increasing college enrollment figures. Unfortunately, more than half of college graduates aged 25 and under who attained a bachelor’s degree are either jobless or

underemployed in a position that requires no more than a high school diploma. It is time to broaden the lens through which we define career readiness. Davila supported the promotion of a rigorous, well-designed CTE program that meets 21st century needs and industry standards derived from local employers. Davila also suggested that schools attain articulation agreements with local community colleges and other postsecondary institutions to enable students to earn advanced credit toward credentials or certificates while still attending high school: “Then we must invest in revitalizing our CTE programs to provide these students with a meaningful exploration of the skills required to be career ready to meet the demands of their chosen career pathways” (pp. 28-29).

Brozena (2015) also noted that basic curriculum knowledge is no longer enough to prepare our future leaders for the global market. There must be a stronger emphasis on the role of schools, districts, and states in aligning the curriculum with career-readiness standards. Zook (2018) defined a career-ready individual as someone who has the essential skills they need to find, acquire, maintain, and grow within a job. Zook stated that business communications, career development, customer service, digital citizenship, digital responsibility, financial literacy, job-seeking skills, professionalism, and written communication skills are essential to creating a well-rounded and well-informed person who is ready for the workforce.

Organization of Study

Chapter 1 included the introduction of this study along with the problem statement, the purpose of the study, the research questions, and an overview of the methodology. Chapter 2 includes the related literature on CTE. Chapter 3 explains the methodology, whereas Chapter 4 presents the results of the study. Chapter 5 defines the

conclusion, shows how it is linked to the related literature, and offers recommendations for future research.

Chapter 2: Literature Review

Very disturbing statistics were discovered from a survey conducted by Gallup for Communities in Schools in 2018 (Busteed, 2018). The outcome showed that only 3% of adults believe that high school graduates are prepared for college. Only 5% believe that high school graduates are prepared for the workplace. The surveyed adults, when asked about what strategies they thought the students needed to be successful in college, stated that schools should offer support for financial planning and social and life skills. When asked about what support was needed to be successful in the workforce, they suggested job shadowing, internships, and entrepreneurship opportunities. The final results showed that schools need to support more programs, curriculum, and experiences that help high school students better understand financial planning, build social and life skills, and have real work experiences in the form of job shadowing, internships, and entrepreneurship (Busteed, 2018).

Schools across the United States are working tirelessly to implement programs that promote college and career readiness. They are discovering that many of their initiatives are not effective. Therefore, schools are looking for additional strategies to benefit students in their quest for the next level in life: college or the workforce (Mokher et al., 2018). The purpose of this qualitative study was to determine whether participation in CTSOs facilitates college and career readiness. This chapter also includes the literature search strategies, the theoretical foundation that supports this study, and the literature review related to key variables and concepts.

The following research questions guided this study:

1. What specific aspects of CTSO participation influenced student success in

college (or not)?

2. What specific aspects of CTSO participation influenced student career success (or not)?

Literature Search Strategy

I used the library of Gardner Webb University to access ProQuest Search and the Google search engine. Key search terms included “career and technical student organizations,” “college and career readiness,” “high school graduation rates,” “constructivism” and “benefits of joining a CTSO.” The literature reviewed spans from 2001-2020. The types of literature reviewed included books, journal articles, peer-reviewed journals, and dissertations. The key search terms were used to lead to research that will highlight the benefits of membership and participating in a CTSO and gain knowledge of what it means to be college and career ready.

Theoretical Foundation–Constructivism

Within the last 25 years, there has been an increase of teachers demonstrating a constructivist-based pedagogy. Teachers want to develop more meaning in the teaching-learning process because they feel it highlights student learning. Teachers were once dedicated to the behaviorist-based way of doing things and were placing the guilt of student failure on themselves; but after not achieving the desired results, they left the traditional way of doing things and discovered that no matter how much high praise they received from the principal during their observation and high scores on the teacher performance appraisal systems, students still did not receive a meaningful understanding from their instruction. They found that constructivism was a welcome theory of knowing that helps one understand the intricacy of the teaching-learning process (Jones & Brader-

Araje, 2002).

Fosnot (2005) stated that constructivism is a theory about learning and knowledge; it designates how one comes to know and what is knowing. Constructivism is an approach to learning which holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner. Arends stated that constructivism believes in personal construction of meaning by the learner through experience and that meaning is influenced by the interaction of prior knowledge and new events (McLeod, 2019). Brau (2018) said that constructivism is when knowledge is best gained through a process of reflection and active construction in the mind. Jenkins stated that constructivists of different persuasions hold a commitment to the idea that the development of understanding requires active engagement on the part of the learner (Jones & Brader-Araje, 2002).

History of Constructivism

Constructivism dates to the days of Socrates when he asked direct questions that caused his students to realize their weakness when it comes to thinking. Constructivist educators use the Socratic dialogue to assess student learning and to plan new experiences. Progressive education that looked at childhood development and education led to the evolution of constructivism. John Dewey and Jean Piaget led the way (Liepolt & Wilson, 2004). Piaget's theory of cognitive development led to constructivism (Brau, 2018). Piaget focused on how people make meaning in relation to the interaction between their experiences and their ideas. He noted that children are not cognitively inferior to adults, they just think differently (Brau, 2018).

Interestingly, Jean Piaget, the founder of constructivism, who was not interested in

education or the art of teaching, had a PhD in biology at the age of 21. Of more than 50 books, he only wrote one book on teaching and pedagogy. His specialty area was studying how organisms adapt to their environment and the study of philosophy. Through all his research, he always had the same basic research problem: What is the nature of knowledge? How does it grow and develop? Piaget established that the nature of knowledge should be studied empirically where it actually is constructed and develops (Sjoberg, 2007) Studying the development of children aided him to his epistemological research question: the growth of knowledge and the development of logical thinking. It was in 1920, that he started to use the term constructivism. It was a detailed study on the development of children. In the 1950s, the term constructivism was being used in academic fields other than biology. He rejected the behaviorist theory that knowledge is derived directly from sense experiences and that knowledge is innate and develops as we grow and mature. His theory of knowledge is based on his biological studies of the process of adaption, self-regulation, and the development of intelligence; and thinking should be understood as the individual's biological adaptation to the external world (Sjoberg, 2007). Piaget, noted, "Each time one prematurely teaches a child something he could have discovered himself, that child is kept from inventing it and consequently from understanding it completely" (Gonzalez, 2015, p. 4). His work is labeled cognitive constructivism.

John Dewey believed that real experiences are the groundwork for education. Dewey believed that education needed to be connected to real life. He expressed these thoughts earliest in 1938. Dewey stated that all knowledge is socially constructed and it is something we do together, in interaction with each other (McLeod, 2019). Dewey wrote,

“If you have doubts about how learning happens, engage in sustained inquiry: study, ponder, consider alternative possibilities and arrive at your belief grounded in evidence” (Liepolt & Wilson, 2004, p. 6). Along with other influential figures like Booker T. Washington, W.E.B. DuBois, David Sneed, and Charles Prosser, Dewey helped introduce CTE into all educational curricula in America. Dewey believed that vocational education, now CTE, possessed the potential to make public education democratic and as a means of liberating education. He had an experimental school for elementary students at the University of Chicago where students were able to focus on occupations like shop work, sewing, cooking, gardening, and textiles. He felt that those types of classes would prepare students for future work and give them an appreciation for their selected industry. He felt that education needed change, and vocational education (CTE) was the means to improve education (Gordon & Schultz, 2020).

According to McLeod (2019), another well-known leader of constructivism is Lev Vygotsky. He believed that a child’s environment while growing up influences how they think and what they will think about. Vygotsky stated that cognitive development comes from social interactions from guided learning within a zone of proximal development as children and their partners co-construct knowledge. Based on these thoughts, we use the term social constructivism (McLeod, 2019). Vygotsky believed that the larger zone the child has, the better they will learn in school. Society, experience, and culture define a child’s zone. The zone will not exist without an activity with an expert interacting with the student. The activity must incorporate multiple instructional strategies with the expert modeling appropriate solutions, leading to ways to find the solution, and monitoring the child’s progress. Vygotsky believed that together, the child and the expert will solve the

problem and bring about cognitive development (Kim, 2005). His work is labeled social constructivism and is the basis of his social development theory. This theory asserts three major themes: social interaction, the more knowledgeable other, and the zone of proximal development (David, 2015).

Social interaction plays a fundamental role in the process of cognitive development. Vygotsky believed that social learning precedes development, stating “Every function in the child’s cultural development appears twice; first, between people (interpsychological) and then inside the child (intrapsychological)” (David, 2015, p. 1).

Born in 1917, Ernst von Glasersfeld worked as a journalist and came to live in America in the 1960s as a director of a research project on computational linguistics (Cardellini, 2006). In 1970, at the University of Georgia, von Glasersfeld taught cognitive psychology and later joined the Scientific Reasoning Research Institute as a research associate. He is a leading proponent of radical constructivism who believed there is no rational way of knowing anything outside the domain of our experience, and we construct our world of experiences. Knowledge does not represent reality. Von Glasersfeld believed that teaching needs to move from only linguistic communication to actively involving students in the construction of their own knowledge. Instruction that shows a student how to follow your steps to get to your solution only works when the problem is always the same. What happens when the problem is different? The student only knows the steps for that problem and fails to succeed when the situation changes. That is why students need to understand the mechanisms that underlie your solution. It is not enough to know the answer, but why and how do I get the answer. Following given steps does not lead to understanding. Trial and error will ultimately bring about understanding. This

brings about student interest in the why, thus the teacher can lead the student to understand. “Knowledge is not a transferrable commodity, learning is mainly identified with the activity of the construction of personal meaning” (Cardellini, 2006, p. 177). When asked about the qualities a teacher should possess, Von Glasserfeld believed they should have patience, imagination, and the readiness to believe that students can think and to let them know it. Von Glasserfeld used his experience as a skiing instructor to better explain. He said that when people put on skis for the first time, they are helpless like a student who experiences math for the first time. You have to lead them gently so they can find out for themselves. Therefore, they have to construct their own ability to ski. Von Glasserfeld’s work is considered to be radical constructivism.

Another prominent figure of constructivism is Maria Montessori. She stated that “education is not something which the teacher does, but a natural process which develops spontaneously in the human being. It is not acquired by listening to words, but in virtue of experiences in which the child acts on his environment” (Gonzalez, 2015, p. 3). The Montessori classrooms allows students to have the tools and the freedom to pursue answers to their own questions and learn how to seek out new knowledge for themselves (<https://montessori-nw.org>).

Seeing that constructivism values developmentally appropriate teacher-supported learning that is directed and initiated by the learner, it is an invaluable tool for CTE. When you integrate new information and experiences into what you previously understood, a student can actively construct knowledge. According to Parnell (as cited in Gordon & Schultz, 2020), “learning to do is most important; knowledge will somehow seep into the process” (p. 370). Gordon and Schultz (2020) pointed out that the CTE

teacher should not set tasks but should organize experiences that allow learners to develop their own knowledge and understanding. Gordon and Schultz further pointed out that the CTE environment should have access to experts, multiple experiences and examples of knowledge application, authentic activities sequenced in complexity, and a social context in which learners collaborate on knowledge construction. Brooks and Brooks (as cited in Gordon & Schultz, 2000, p. 370) suggested the following traits for constructivist teachers: use raw data and primary sources, along with manipulative, interactive, and physical models; allow student responses to drive lessons, shift instructional strategies, and alter content; encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask questions of each other; engage students in experiences that might engender contradiction to their initial hypothesis and then encourage discussion; provide time for students to construct relationships and create metaphors; encourage and accept autonomy and initiative; use cognitive terminology such as “classify,” “analyze,” “predict,” and “create” when framing a task; inquire about student understandings of concepts before sharing their own understandings of those concepts; seek elaboration of student initial responses; allow wait time after posing questions; and nurture student natural curiosity through frequent use of a learning cycle model.

Based on the above definitions, constructivism in the CTE classroom can be seen when a teacher/advisor for SkillsUSA wants to implement career readiness skills, they have access to a curriculum titled *SkillsUSA Career Essentials: Experiences* (www.skillsusa.org, 2020). SkillsUSA is designed to prepare students for their future employers. Over 1,000 employers said their greatest need when choosing new employees

is to choose job candidates with SkillsUSA qualities: workplace skills, personal skills, and technical skills grounded in academics. SkillsUSA's mission is to empower members to become world-class workers, leaders and responsible American citizens (www.skillsusa.org, 2020). Their career readiness curricula are designed to present an opportunity for the teacher to implement project-based learning, use high-quality skill development resources, express to the students how employability skills function together to create a career-ready individual; provide instructor-led e-modules that address career readiness with activities that assist with project completion; engage students through contextualized learning applied to real-life and real-work situations; and show them their progress with a badging and grading system (www.skillsusa.org, 2020).

According to Stauffer (2020), students in CTE classrooms learn current job skills along with practice, hands-on experience, and application tests. Stauffer noted that the CTE classroom is highly specific and highly versatile. Teachers use a variety of ways to present information. Simulations, for example, can help resemble real-world situations, such as businesses where the students can better understand the topics discussed in class by putting them to use. CTE teaches life skills and career skills at the same time, jump-starting lives and leading students to become productive members of their communities. This demonstrates constructivism—knowledge gained through a process of action, reflection, and construction (Brau, 2018). Table 1 compares what learning activities look like in the traditional classroom versus the constructivist classroom.

Table 1*Traditional Classroom vs. Constructivist Classroom Examples*

Traditional classroom	Constructivist classroom
Curriculum begins with the parts of the whole. Emphasizes basic skills.	Curriculum emphasized big concepts, beginning with the whole and expanding to include parts.
Materials are primarily textbooks and workbooks.	Materials include primary sources of material and manipulative materials.
Learning is based on repetition.	Learning is interactive, building on what the student already knows.
Teachers disseminate information to students; students are recipients of knowledge	Teachers have a dialogue with students, helping students construct their own knowledge.
Teacher's role is directive, rooted in authority.	Teacher's role is interactive, rooted in negotiation.
Assessment is through testing, correct answers.	Assessment includes student works, observations, and points of view as well as tests. Process is as important as product.
Knowledge is seen as inert.	Knowledge is seen as dynamic, ever-changing with our experiences.
Students work primarily alone.	Students work primarily in groups.

Note. Reprinted from “Constructivism as a Paradigm for Teaching and Learning,” by W. Liepolt, and S. Wilson, 2004, Educational Broadcasting Company.

Constructivism is a paradigm or worldview that posits that learning is an active, constructive process. The learner is an information constructor. Experiences construct knowledge and meaning. Knowledge is constructed based on personal experiences and hypotheses about the environment. Students learn by placing previous knowledge with new information (Olusegun, 2015).

There is a common misunderstanding regarding constructivism: Instructors should never tell students anything directly but, instead, should always allow them to construct knowledge for themselves. This is confusing a theory of pedagogy with a theory of knowing. Constructivism assumes that all knowledge is constructed from learner previous knowledge, regardless of how one is taught, thus even listening to a lecture involves active attempts to construct new knowledge (David, 2015).

As noted by the Cult of Pedagogy (Gonzalez, 2015), constructivist teachers believe that in order to learn, students need as many hands-on experiences with objects, skills, and people as possible. Constructivism provides students with rich experiences and encourages them to reach their own conclusions. John Dewey, another theorist of constructivism, stated, “Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results” (Gonzalez, 2015, p. 3). These ideas inspired me to study constructivism’s relationship to CTSOs and their impact on college and career readiness. CTSOs give students something to do, and, because they are actively doing, learning takes place.

What Does Constructivism Have To Do With CTE and CTSOs

CTE originated in the early part of the 20th century. It was first known as vocational education and offered in trade schools or private business schools. Other names include industrial education, manual education, and career education. In the 1800s, schools were different for the wealthy and those from working-class or poverty-stricken backgrounds. The country that was the center of manual training was Germany, and it began to encourage apprenticeship programs. Jean-Jacques Rousseau and Johann Heinrich Pestalozzi are credited for having their ideas lead the way for industrial training.

Rousseau felt that education was a way to free humankind from the constraints of society, and Pestalozzi insisted that children should learn not only to think but also to do (Gordon & Schultz, 2020).

By the turn of the 20th century, several influential leaders helped CTE move to the forefront. Some of these notable leaders included W.E.B. Du Bois, Booker T. Washington, David Snedden, Charles Prosser, and John Dewey. It is important to point out that Prosser felt that vocational education required students to practice what to do and think about the doing (Gordon & Schultz, 2020). Prosser and Snedden thought it was critical for the learning experience to be as much like the actual workplace as possible. Prosser developed 16 theorems for vocational education (see Appendix A).

Major Dennis Mobley helped advance CTE further in the 1960s. He felt that CTE needed to be a part of the total education program and not a separate entity; CTE should be available and a concern for all people; and it should include professional organizations that include youth groups (Gordon & Schultz, 2020). These youth groups are now known as CTSOs and are designed to allow students the opportunity to explore their interest in an occupational field and to learn and refine leadership, citizenship, and social skills. Members participate in local, state, and national conferences, workshops, and chapter meetings; serve on committees; run for elected positions; assist with chapter fundraising activities; provide community service projects; and serve as mentors for other CTE students.

Although all CTSOs differ, industry-developed written and performance tests that align with job-related skills are incorporated. For example, marketing students may have to develop a marketing campaign; a construction student may have to build a corner of a

house or lay brick; a business student may perform word processing skills; and an agriculture student may be judged on their livestock or crops raised. Reese (as cited in Gordon & Schultz, 2020) noted that CTSO members have gone on to become leaders in business, education, and public service. Some have become university presidents, governors, and U.S. congressmen and senators; former president Jimmy Carter was a member of FFA.

What It Means To Be Career Ready

Gysbers (2013) stated that a career-ready student is resilient, active, and involved in shaping and directing their lives now and in the future. Such students have an adaptive style of interacting in the present and use that style to assertively move toward self-defined career futures that add meaning, purpose, and satisfaction to their lives and are resilient and proactive. In order to plan and visualize their futures, they have the knowledge, skills, and dispositions needed (Gysbers, 2013).

Additionally, while doing work with Lapan in 2004 and 2009, Gysbers identified diversity skills, positive work habits, personal qualities, personality and emotional states, social competence, and entrepreneurship as the six behaviors and skills needed for career readiness (Gysbers, 2013). For students to become career ready, they need to have opportunities. They need to act with personal agility and empowerment; be able to endure obstacles and turn unexpected events into positive opportunities; engage in critical life contexts with purpose and direction; respond to opportunities and make good decisions; exhibit a mature commitment to self-defined direction; feel hopeful, motivated, and optimistic about their lives; be creative and curious; and be able to balance entrepreneurial skills and motivations with concern for others and the fragile

ecosystems we need to survive (Gysbers, 2013).

Career-ready students know how to engage in various current and potential life roles, including being a learner and worker. These students know how to take advantage of the current and possible future opportunities available to them. They can easily move directly into the workforce; join the military; participate in an apprenticeship; opt for a certificate program; or attend a 2-year technical school, community college, 4-year college, or university. Career-ready students also understand that their lives unfold and evolve in various life settings, including school and the workplace (Gysbers, 2013).

According to Saeger (2017), statistics show that in 2012, 80% of students who took college preparatory courses and CTE courses met college and career readiness goals, but only 63% of students met college and career readiness goals when taking the same college preparatory courses without involvement with CTE courses. CTE, with a strong backing of federal funds, is in a position to be the solution for preparing all students for college and career readiness. CTE can provide the leadership and pathway for student success in today's global competitive high-skill and high-demand workforce.

Imel (2000) defined constructivism as a learning theory that maintains learning is a process of constructing meaning from experience and contextual learning grows from the constructivist approach to learning. Thus, we have the term contextual constructivism. Contextual learning is a constructivist approach to teaching and learning (Brown et al., as cited in Imel, 2000). Based on this definition, what you learn is based on life experiences, it is constructed by the learner and not the teacher. The following characteristics can be seen in contextual constructivism: problem-solving, teaching and learning occur in multiple contexts, students monitor their learning to become self-regulated learners,

diversity is acknowledged, students learn from each other, and an authentic assessment is used.

In 2008, students in SkillsUSA participated in an Occupational Health and Safety competition (Threeton & Pellock, 2010). The competition required them to create a scrapbook that highlighted important health and safety accomplishments. The students were assessed on the planning and organization of their lab safety survey, machine and equipment safety, environmental safety, and their industrial site. They were also assessed on the final outcome of the project. The students were interviewed, and the scrapbooks were evaluated by a panel of judges who considered the quality, contents of the scrapbook, and how well the students performed during the interview process. This competition connected to the real world. Health and safety are a major concern in every CTE program and CTSO as well as within every industry. This competition illustrates contextual constructivism, based on the definition that learning occurs when students process new information in such a way that it makes sense to them in their own frames of reference (CORD, 2007, as cited in Threeton & Pellock, 2010).

Brown (1998) defined constructivism as a theory that people learn by constructing meaning through interpretive interactions with social educators seeking to help students link learning with life experiences. Brown outlined eight principles for vocational and career education teachers to use when designing instruction: provide multiple depictions of reality; represent the natural complexity of the real world; focus on knowledge construction, not reproduction; present authentic tasks; provide real-world, case-based learning environments; foster reflective practice; enable context- and content-dependent knowledge construction; and support collaborative construction of knowledge through

social negotiation. Table 2 illustrates the summary of classroom activities that reflect constructivism.

Table 2

Constructivist Classroom Activities

Curriculum practices	Instructional practices	Assessment practices
Applied learning designs	Experiential learning	Journal writing
Interdisciplinary Integration	Problem-based learning	Scoring rubric
Field-related experiences	Student-directed learning	Portfolios
School-community linkages	Mentoring	Observation checklists

Reflecting on Table 2, DECA, a career and technical student organization, provides guidance for their annual competitions so teachers can guide their instruction around selected activities. DECA members are engaged with classroom lessons that are aligned with real-world situations. Classroom instruction includes 21st century skills like critical thinking, problem-solving, communication, collaboration, creativity, and higher-order thinking skills (www.deca.org). Students who participate in this event will have to do the following: select an actual local business operation; design a research study; analyze the results of the research study; prepare a strategic plan; prepare a proposed budget; and present the research study design, their findings, and conclusion, strategic plan, and budget in a role-play situation. The Business Operations Research Event (see Appendix B) reflects constructivist ideas by giving students an opportunity to demonstrate their own knowledge and skills needed to showcase what management personnel they would actually use through the preparation of a detailed written strategic plan and presentation based on the results of a research study. The 2021 topic addresses the world's current events: COVID-19. Participants are asked to develop a strategy to rebuild customer loyalty and spending as a result of business interruption for at least the

previous 6 months. Participants will collaborate with a local business or organization to analyze the current state of business operations as a result of business interruption and explore strategies to rebuild customer loyalty and spending. Participants will then present a strategic plan to rebuild customer loyalty and spending.

The competition reflects constructivist views which illustrates constructivism. The participants will actively construct or make their own knowledge and that reality will be determined by the experiences of the learner (Fosnot, 2005) and that the development of understanding requires engagement on the part of the learner (Brau, 2018). Also, this competition reflects a real-world situation according to Loy et al. (2020); when restaurants were instructed during the early phases of the COVID-19 pandemic to move to takeout only, a big disruption on local farms took place. Not only did farms suffer, but all other connected industries like breweries, distributors, payroll, insurance companies, and also importantly, jobs. So, rebuilding customer loyalty and spending after a disruption is a notable issue to address. Dr. Brian Marks, an economics professor at the University of New Haven, while being interviewed said, “The restaurants have to be able to convince us that we can trust the environment in which we’re walking into” (Loy et al., 2020, p. 1).

Case Studies

Seguine (2002) investigated the use of constructivist teaching practices at the high school level. The purpose of the study was to discover how the constructivist teachers attained their skill and knowledge of constructivism and how that knowledge and skill is translated into their classroom applications. A qualitative method was used to complete the study. The study was done in two phases. In the first phase, I focused on which

constructivist teachers to select, and the second phase was used to collect data and broaden my perspective of the chosen constructivist teachers. The selected teachers taught in the following core areas: math, social studies, and science. The math teacher was National Board for Professional Teacher Standards certified; the social studies teacher took preference because of his gender; and the science teacher was new to teaching but had worked in the medical industry for over 18 years. The setting took place at three high schools in a midwestern metropolitan school district. The selected schools included one large comprehensive high school with block scheduling, one large comprehensive high school with traditional scheduling, and one alternative high school.

It was discovered that all three teachers believed in the importance of active student engagement, the assessment of prior knowledge, using mistakes to initiate learning, and fostering a rapport with their students. The following teaching strategies were observed: questioning techniques and storytelling. These are both constructivist characteristics. The main differences in the teachers were seen in their use of assessment. The math teacher saw assessment as a part of the teaching process; the social studies teacher used formative and informal assessment; and the science teacher used traditional testing. The teachers believed grading was paralyzing the learning process because of the high demands on testing. Their focus was on learning and not the ritual of giving grades. They allowed their students the ability to construct their own learning.

The students understood the difference between a constructivist teacher and a traditional teacher. They believed the constructivist teacher is more caring and is consistent when it comes to meeting the personal and learning needs of the student. They believed the constructivist teacher exemplifies more confidence and command for their

subject area. I also noted that the teacher participants expressed their lifelong passion for teaching, have no desire for quitting, and love working with high school students.

I used surveys, interviews, and on-site observations to gain data. During the second phase, I observed teacher behaviors and activities in individual classrooms. Over the course of 2 semesters, I observed the classrooms for multiple weeks. In order to conduct a document review, I collected the following documents from each teacher: lesson plans and assignments, test and other performance assessments, examples of student artifacts, teacher portfolios, the school website, and descriptions of conferences or workshop trainings received by the participants.

I, however, found no evidence that the students performed better in a constructivist classroom versus a traditional classroom, but it was revealed that the students had a great sense of self-esteem and joy while learning with the constructivist teachers. These data were discovered among the written comments from the students. Last, I stated that the constructivist teachers attained their skill and knowledge by a crystallizing event in their life, the development of an individual learning theory, and classroom practice (Seguine, 2002).

Williams (2017) conducted a multiple case study to discover the extent to which high school science teachers in schools that serve military sponsors outside of the United States use constructivist-based practices to engage and empower students. I used the constructivist learning theory for her theoretical framework. I randomly selected seven science teachers and one administrator to participate. The teachers participated in interviews with me and allowed me to observe their classroom instruction. An interview was held with the administrator.

I took the interview data and conducted three classroom observations (using variable times) to see if the views and beliefs from the interviews were consistent with classroom practices. From those data, I was also able to gather descriptions of the classrooms and schools with the context of each other and see how the district is empowering and engaging students. All the students were military connected.

I found that the teachers in the study believed student engagement to be when the student is participating, questioning, discussing, working, and learning in the learning environment. They interpreted student empowerment as an environment in which students have the ability and opportunity to gain and use knowledge and fostering an environment that allows student control of how they use and gain knowledge; and all teacher participants supported this idea. To substantiate their claim, the teachers said that their use of case studies, using real-world examples, the impact of human activity on the environment, and the use of storytelling were instructional strategies. The administrator participant disagreed with the teacher participants and believed that students in the science classrooms do not receive a lot of instruction that can be connected to the real world. The administrator believed that most science instruction is simply rote recall information. I agreed with the administrator based on the classroom observations. When observing to detect student empowerment, I discovered that the students were reluctant to ask questions. The students were very rarely seen asking the instructor questions, being inquisitive about the given activities, or suggesting activities to the teacher.

The final outcome suggests that the science teachers in a school that serves military sponsors outside the United States do not use social or cultural constructivism. Instead, the science classroom is more teacher centered. The observational data showed

no support for a student-centered, culturally and socially constructivist environment that supports student empowerment and engagement (Williams, 2017).

What Is College Readiness

While exploring the importance of improving college access and readiness for low-income and minority students in urban high schools, Roderick et al. (2009) defined what it means to be college ready. They identified four main areas of skill development that are critical in shaping college readiness: content knowledge and basic skills, core academic skills, noncognitive skills and norms of performance, and “college knowledge”(Roderick et al., 2009, p. 190).

Basic skills are the foundation of knowing your subject area; core knowledge includes writing and analytic thinking. These skills are highly valued by colleges and are also areas college professors feel students most lack. Noncognitive skills include self-control, self-monitoring, and self-awareness—work habits, study skills, time management, help-seeking behavior, and social problem-solving skills. These skills are essential to help students cope as they manage their new environments and new academic and social demands of college (Roderick et al., 2009).

Roderick et al. (2009) also noted that another definition of college readiness exists, as defined by the minimum 4-year college admission requirements. Colleges believe that students are college ready if they graduated from high school and have taken and passed the minimum coursework requirement of a 4-year college with at least some admissions criteria. From this definition, they discovered that less than 23% of African Americans and only 20% of Latino graduates would be deemed college ready (Roderick et al., 2009).

Several other ways to measure readiness were noted: readiness defined by performance on achievement exams and readiness defined by GPA. NAEP scores are determined by scores on achievement exams such as the ACT. The ACT has benchmarks that determine college readiness. GPA is also used by colleges in making admission decisions. Geiser and Santelices (2007) looked at the performances of 80,000 students who attended one of eight University of California campuses from 1996 to 1999.

They predicted college GPA and likelihood of graduation on the basis of high school grades, SAT scores, class rank, family background, and a measure of the average test scores of students' high schools using a nested model to adjust for college effects. High school grades emerged as the strongest predictor of college GPA and college graduation. (Roderick et al., 2009, p. 195)

Finally, Roderick et al. (2009) defined college readiness based on college knowledge. This is based on whether the student has the data, resources, and skills necessary to effectively navigate the college admission process, also called college knowledge. College knowledge has not been traditionally used to determine college readiness, but it shows that the student is aware of the financial and income information needed for determining which college to choose. "If educators are to use college readiness as a strategy for accomplishing the goal of college access and success, they must couple academic preparedness with the knowledge and skills students need to navigate the college-going process" (Roderick et al., 2009, p. 200).

Gillis et al. (2016) noted that CTE courses are considered less demanding than typical academic core courses, even though CTE courses contain real-world literacy practices and offer a chance for students to develop complex literacy skills. Gillis et al.

covered the findings of two questions: What are some of the literacy practices involved in CTE disciplines? How might we work with CTE professionals to help students, who may already struggle with typical academic literacies, be successful with the more technical and complex literacies of CTE courses? The study found two literacy practices within CTE teachers. Exemplary teachers focused on the structure and language of texts drawn from specific careers and taught students how to use these texts as they created projects or solved problems. These literacy practices mirror those that academic content area teachers should engage in; but, in a CTE setting, they are more authentic and more closely tied to students' future goals (Gillis et al., 2016). This study also noted the misconception that CTE teachers lack the knowledge of how to integrate academic content into their lessons. This idea was taken from a study by Darvin (2006, as cited in Gillis et al., 2016):

Darvin documented CTE teachers using multiple texts, both print and digital, in creative and effective ways. CTE teachers in this study moved back and forth between text and hands-on activities, whether those activities occurred in a lab, an auto repair shop, or a horse barn, as they engaged their students in authentic learning activities. The pattern of activity observed across all the CTE classrooms involved reading, hands-on application, and writing in a recursive pattern. The CTE teachers engaged students in practices that mirrored those used by tradespeople in the field. (p. 638)

Gillis et al. (2016) also looked specifically at literacy in the areas of agriculture, business, and marketing education. In agriculture education, students receive contextualized and inquiry-based classroom and laboratory instruction as well as supervised agricultural

experience programs. These experiences are practiced through and by participating in FFA. The students get the opportunity to gain basic concepts through experiential learning. They developed problem-solving skills and the ability to apply those skills in real-world agriculture settings, which involves data selection, organization, and analysis; writing memos and reports; and using information in agriculture publications, technical service manuals, and realia designed for a hands-on/minds-on learning experience. These experiences apply scientific understandings to raising livestock and crops as well as mathematics and literacy skills in business settings (Gillis et al., 2016).

The business and marketing classroom provided examples of literacy practices embedded in CTE. Students are expected in business administration classes to be able to write professional emails; select and use graphic aids; utilize note-taking strategies; write proposals; prepare complex written reports; gather and interpret company data, graphs, and tables; and interpret the data to write summarizing reports, trend reports, sales forecasts, and proposals for teachers, managers, prospective customers, and businesses.

In marketing education, students are expected to be able to explain the impact of electronic communication tools, identify data monitored for marketing decision-making, explain the impact of electronic communication tools, identify data monitored for marketing decision-making, explain the factors that influence buying behavior, monitor/measure customer buzz, explain the use of descriptive statistics in marketing decision-making, demonstrate connections between company actions and results, develop a marketing plan, and translate performance measures into financial outcomes. Many of the skill sets that business/marketing students are required to master involve analyzing, summarizing, interpreting, and predicting. These examples of expectations in

business/marketing illustrate the complex and authentic literacy practices in which students engage regularly (Gillis et al., 2016). Gillis et al. (2016) further noted that CTE courses are uniquely positioned to help students integrate academic and workplace literacies.

Royster (2015) noted in reference to the “The Forgotten Middle” article (ACT, 2008) that by the eighth grade, students who do not demonstrate readiness are less likely to become college ready by graduation. Making sure students are prepared for college is a problem that spans primary, secondary, and higher education (Royster, 2015).

Ultimately, the purpose of Royster’s (2015) study was to explore, within the context of an urban school district, the factors that affect whether a student becomes college ready. Royster wanted to uncover to what extent does participating in extracurricular college preparation activities, taking college preparatory courses, and having college aspirations affect whether a student will become college ready.

The Benefits of Joining a CTSO

McNally and Harvey (2001) noted that a CTSO is a structured and developed opportunity for students. The aim of CTSOs is to develop the most critical of skills necessary for success and transition to adult life: the skill of self-determination.

Vocational education or CTE has historically provided a labor-market advantage and a curriculum centered on life skills through specific career development programs.

McNally and Harvey pointed out that CTSOs are successful because of their commitment to educational institutions and organizations’ intended intra-curricular nature. The U.S. Department of Education’s policy outlines recognized the integral nature of CTSOs in vocational-technical programs and saw the concept of total student development as

necessary for all vocational-technical students to assume successful roles in society and to enter the labor market (McNally & Harvey, 2001).

McNally and Harvey (2001) further noted the total focus concept in vocational-technical education and CTSOs includes developing leadership skills, encouraging personal and social growth, exploring career opportunities, actively participating in community betterment, developing respect for work and lifelong learning, nurturing team skills, and developing citizenship. Therefore, CTSOs are an avenue to actively addressing total student growth. Student growth is the fundamental mission of all CTSOs. Involvement also helps students to cultivate the employment skills needed for independent living. A direct result is that students obtain a competitive advantage in the labor market and the workforce (McNally & Harvey, 2001).

Decken (2012) wrote from her perspective as a health science CTE teacher. She gained insight about CTSOs after giving her students a written assignment titled, “Getting to Know You.” She wanted to get to know her students’ demographics, interests, and career goals. Her goal was to try to direct students toward their career goals. She found that the best way was to involve students in HOSA—the CTSO related to health science education. Decken introduced the students to HOSA by showing an introductory DVD that included highlights of the previous state conference and former student members. HOSA has more than 55 competitive events that help students with their leadership skills, confidence building, content knowledge for different health disciplines, peer networking, team building, and employability skills. To be prepared for college or a career, these are particularly important factors to consider. Decken directed the senior students to complete a portfolio that requires them to complete a cover letter, resume, and reference letters.

There is an optional section where the students can include hobbies, job applications, work experience, letters of recommendation, community service experience, and extracurricular activities. These items can be used for the HOSA competition because the event requires students to participate in a mock job interview.

Decken (2012) found that her former students were important in helping to recruit new HOSA students. What former students had to say about the CTSO experiences carried great weight with new students. She pointed out her experience with two former students who made an impact on her program.

They became involved as officers and engaged in competition, went above and beyond the requirements and were recognized as Outstanding HOSA chapter students. Both received certification as nursing assistants. One pursued a licensed practical nurse (LPN) career before continuing to become a Registered Nurse (RN); she now works at a dialysis clinic facility. The other went right into a Bachelor of Science Nursing program and is now working at a local hospital facility in the Emergency Department. (Decken, 2012, p 38)

Decken recorded one of her students, Caterrace Johnson Moore, as saying, “Taking CTE courses placed me ahead of my peers in college. They looked to me as a mentor” (p. 38). Moore became an avid supporter of CTE and CTSO involvement. “She said it is the only place you can get employability skills as you make life decisions” (Decken, 2012, p. 38) and found that her participation in HOSA boosted her self-confidence, enabling her to get out of her shell and be able to speak in front of a large group. She also noted that the experience gave her opportunities to see places she had never seen and helped her get over her fear of traveling. She was so over her fear that she

traveled to Jamaica for her wedding and honeymoon.

Another HOSA student under Decken's (2012) leadership participated in HOSA as the chapter president. She was part of a winning team in a biomedical debate. Her team won first place at state and represented South Carolina at the HOSA Nationals in Orlando, Florida. She stated, "I absolutely loved HOSA. It not only helped build my teamwork abilities, but also helped me make wonderful friends from other schools. The debate team was wonderful for my social skills and eye-opening to the vast world of medicine" (Decken, 2012, p. 38). She noted that her CTSO experience gave her the foundation for her career. She is now an emergency department nurse saving lives, and she attributes her abilities as a nurse to a good foundation—the knowledge, skills, and confidence acquired from HOSA and CTE coursework.

Additionally, a young man who served as a HOSA state officer and a national HOSA president quoted the following about his experience:

My experience and knowledge acquired as a member and officer of HOSA and career and technical education will exemplify my success as a future physician.

The hands-on skills, certifications I earned, and leadership opportunities provided me with an edge over my peers. (Decken, 2012, p. 39)

Overall, Decken (2012) stated that she has seen her students over the years morph from being quiet, shy, and unsure of themselves to being excited, extroverted, and encouraging because of their experience in a CTSO.

Studies have shown that students who participate in CTE courses are more likely to be engaged in learning and tend to stay in school, thereby receiving a formal high school diploma. Students drop out of high school for several reasons, such as family

problems, job fulfillment, substance abuse, gang activities, or because they have fallen behind in their coursework (Minchello, 2017).

ACTE (2011) produced a journal article in its career readiness series titled, “Expanding Career Readiness Through Career and Technical Student Organizations,” acknowledging the need to ensure that students are college- and career-ready as well as stating that this is a critical concern across the United States. Usually, the discussion surrounds academic skills; but notably, career readiness requires a more rigorous blend of academic, technical, and employability skills as well as the ability to apply these skills in authentic career situations (ACTE, 2011).

CTSOs have more than 1.5 million student members to showcase the most critical component of strong CTE programs. CTSOs are specifically authorized by the U.S. Congress in the Carl D. Perkins Career and Technical Education Act and operate as national not-for-profit organizations divided into state associations and local school chapters. CTSOs offer diverse programming designed to enhance classroom instruction and cover four common goals: leadership development, academic and career achievement, professional development, and community service (ACTE, 2011).

CTSO participants have the opportunity to experience the opportunity to expand their leadership abilities, contextualize their academic instruction, and pursue and equip themselves with job-related skills that coincide with their career field of interest. There is also an opportunity to receive scholarships, monetary prizes, and awards, which encourages students to continue their career-path education and assume personal responsibility for their own career readiness (ACTE, 2011). The journal also noted that previous research shows the following impact of student overall career readiness:

Students who participate in CTSOs demonstrate higher levels of academic engagement and motivation, civic engagement, career self-efficacy, and employability skills than other students, and the more students participate in CTSO activities, the better the results. Students who participate in school organizations in 10th grade have higher high school grade point averages and are more likely to be enrolled in college at age 21 than other students. (ACTE, 2011, p. 2)

Students who are career ready also need to be able to apply academics in the context of real-world situations. ACTE (2011) shared an example from the HOSA medical reading competition. The students are required to read five different healthcare-related books, such as Lisa Sanders's *Every Patient Tells a Story: Medical Mysteries and the Art of Diagnosis*. After reading, students must then apply, analyze, synthesize, and evaluate information from the assigned books in their written and oral exams (ACTE, 2011).

CTSO participation leads to an increase in multiple employability skills. Many positive examples of these skills have been identified in CTSO programs, including teamwork, decision-making, critical thinking, leadership, community awareness, career awareness, and personal and social development. The college readiness fact sheet for FCCLA pointed out the success of FCCLA members in career preparation, communication, and leadership skills that were developed through their involvement (FCCLA College Readiness Fact Sheet, 2017).

CTSO participation can also lead to the attainment of greater technical skills. Some examples include the following: FBLA develops competitive projects in

accounting, cybersecurity, and marketing. HOSA demonstrates medical terminology and career knowledge. SkillsUSA illustrates 3D visualization and animation, architectural drafting, automated manufacturing technology, occupational health and safety, and mobile robotic technology (ACTE, 2011). According to the National Research Center for Career and Technical Education, participating in leadership and professional development activities in a CTSO raises the educational aspirations of students (Alfeld et al., 2007).

Controversial Findings

Barnum (2017) found that students who complete a CTE program have better short-term employment outcomes but struggle to pivot as industries evolve. Barnum further noted that although President Trump cut CTE funding, there is, at least in concept, broad support across the ideological spectrum for helping more high school students learn career-specific skills.

This lack of funding is also noted on Long Overdue Investment in Career Technical Education Proposed (2017), which stated that funding for the Perkins Act has not kept up with the increasing demands of the growing economy. Perkins funding declined by \$171 million between 2006 and 2016. Careertech.org maintained that more than 20 states received Perkins Basic Grant funds that were at or below the level they received in 1998 (Long Overdue Investment in Career Technical Education Proposed, 2017); however, new international research has found a significant downside of such programs: Students may have this advantage early in their careers, but they are affected later in life as the economy changes and they dearth for the general skills necessary to adapt (Barnum, 2017).

Advance CTE (Long Overdue Investment in Career Technical Education

Proposed, 2017) explored the myths and facts, looking at many of the downsides people believe about CTE programs. One myth is that only non-college-bound students take CTE classes. With 78% of CTE concentrators enrolling in postsecondary education, it is a fact that CTE programs provide a seamless pathway to postsecondary education (Long Overdue Investment in Career Technical Education Proposed, 2017).

Barnum (2017) pointed out that the study done by Advance CTE showed apprehensions about the trade-offs that come with enlarging CTE training in the United States. That thought is related to any CTE translation that substitutes for extensive knowledge and skills transferable across jobs.

Advance CTE also noted that the idea of CTE as simply job training is a myth. CTE programs start broad and then become career specific. The learners receive hands-on training, mentoring, and unique internship opportunities (www.careertech, 2017).

Although many European countries provide extensive vocational education, the United States has diminished or eliminated separate vocational tracks in most high schools. While vocational students make higher salaries and are more likely to be employed as young adults, that benefit fades over time; by their late 40s, those who went through a general education program have higher unemployment rates (Barnum, 2017). Barnum (2017) further stated that in the United States, career-focused courses are often just a small part of a student's course load. As of 2009, the average American student took 3.6 CTE classes in high school. Furthermore, Barnum noted that this research does not imply that CTE programs are a bad idea, but it is important to understand the trade-offs, and policymakers should not just look at the short-term impacts.

Dougherty (2016) answered the following questions: Do students who participate

in CTE—and especially those “concentrating” by taking a sequence of three or more courses aligned to a career in a specific industry—achieve better outcomes than their peers? Were they more likely to graduate from high school, enroll in postsecondary education, and perhaps, most importantly, be employed and earn higher wages?

Working in coordination with the Arkansas Research Center, Dougherty (2016) found that students exposed to CTE are more likely to graduate, enroll in a 2-year college, be employed, and have higher wages. They also are more likely to pursue a 4-year degree; and compared to similar students, the concentrators are more likely by 21% to graduate. The study also noted that CTE provides the greatest increase in intensity to boys and students from low-income families.

Overall, this study (Dougherty, 2016) adds to the growing body of evidence on the impact of high school CTE. Policymakers in other states should heed Arkansas’s example by increasing their investment in secondary CTE that is aligned with the demands of the local labor market. It is also high time to reauthorize the Perkins Act and increase federal investment in this area. The scars of the recession have faded, but they have not disappeared. Connecting more young people with available opportunities by giving them the skills employers are seeking should be a national priority (Dougherty, 2016).

The vast majority of the literature has noted that CTE has a profound impact on students’ futures, whether in postsecondary education or their chosen career. The literature suggests that students who participate in CTE have higher academic outcomes compared to similar students. However, the extent to which the students in District C3, enrolled in a CTE course and participated in their co-curricular CTSO is not known. Therefore, the question of how impactful are the CTSO activities in preparing them for

life after high school and/or college remains.

Chapter 3: Methodology

Participation in a CTSO allows students opportunities to extend classroom learning, builds confidence in their knowledge and skills, and provides social and travel opportunities. Students build important employment skills such as decision-making and problem-solving skills. Students who attend state and national conferences meet peers from around the country (GreatSchools Staff, 2016). The purpose of this qualitative study was to explore the impact of participation in CTSOs on college and career readiness. Chapter 3 presents the following areas: the setting of the study, the research design and rationale, data analysis, the role of the researcher, and threats to validity.

School District C3, the North Carolina school district chosen for this study, has 17 high schools that offer CTSOs. In the past 3 years, over 30,000 students participated in CTE courses allowing students to receive work-related credentials that are valuable to prospective employers (Public Schools of North Carolina, 2019). The Carl Perkins Act provides CTSOs as companions to CTE classes.

Steps of Data Collection

The following research questions are answered in this study:

1. What specific aspects of CTSO participation influenced student success in college (or not)?
2. What specific aspects of CTSO participation influenced student career success (or not)?

The collection of data for answering the research questions included a variety of steps.

1. The researcher used a promotional flier on social media outlets to recruit the

participants for this study (see Appendix C). Based on criteria sampling, the following criteria were used for selection and participation in this qualitative study: Participants must have graduated from a District C3 high school, must be recent (no more than 2 years) high school graduates, and must have been a former CTSO member. From the available pool, I chose three students who went directly to college upon graduation and three students who went directly into the workforce. Purposeful sampling is used in qualitative research to identify and select individuals who are especially knowledgeable about or experienced in a phenomenon of interest (Palinkas et al., 2015). Six students were chosen for actual participation, leaving two students as standby participants in the event that one or more of the six students cannot complete the study. Using social media, four CTE teachers from District C3 who have been CTSO advisors for at least 5 years were chosen. Teacher participation will be voluntary.

Creswell (2014) affirmed that it is

typical in qualitative research to study a few individuals or a few cases.

This is because the overall ability of a researcher to provide an in-depth picture diminishes with the addition of each new individual or site. One objective of qualitative research is to present the complexity of a site or of the information provided by individuals. (p. 209)

2. Upon approval from the Institutional Review Board, one-on-one interviews were used to collect data. Interviews are a popular simple method of gathering data from relevant individuals (Butin, 2014). In this study, the relevant

individuals are the students who were enrolled in a CTE class and participated in their co-curricular CTSOs while in high school. Subsequently, the participants have either gone on to college or a career of their choice. I interviewed six students and four CTSO teachers. Each interviewee was asked a series of interview questions (see Appendix D) to obtain the data necessary to answer the research questions. All interview sessions were audiotaped and commercially transcribed.

I chose qualitative research as the research approach for this study. Qualitative research involves looking in depth at non-numerical data. It is a research method used to study human behavior, opinions, themes, and motivations. Qualitative research allows one to explore and understand the meaning individuals or groups ascribe to a social or human problem (Creswell, 2014). This type of research allows a strong focus on individual meaning, but it also discovers the importance of rendering the complexity of a situation. During each interview session, I read a prepared statement to each interviewee and explained the purpose of the study. Participation was voluntary, and candidates could opt out at any point in the study. I asked each participant to sign a statement of consent which is a part of the data collection protocol that would verify their full understanding of the study's purpose and the option to discontinue participation at any time (see Appendix E). The structured student and teacher interviews occurred over 3 weeks using Zoom. Each interview session was recorded, commercially transcribed, coded, and organized by theme. NVivo 12 Pro and Dedoose, frequency word search

software programs, were used to substantiate the themes. Dedoose is a qualitative software program used for analyzing textual and audiovisual data. Using this software helped me discover and identify emerging themes (Dedoose, 2012). NVivo 12 Pro is a data analysis software (<http://qsinternational.com/nvivo-qualitative-data-analysis-software/about/nvivo/who-its-for/academia>) that allows you to organize, store, and retrieve data for better efficacy.

3. The data collection protocol for this study was based on the literature review chapter with emphasis on the constructivist theory of learning and the mission and purpose of CTSO organizations. CTE and CTSOs are grounded in the theory of constructivism. Constructivism supports the need for students to gain current job skills along with higher order thinking skills and the ability to solve problems. Almost all CTSOs utilize simulations to mimic real-world situations in their classroom and on the competition stage. Constructivism allows students to construct their own knowledge from experiences (Doolittle & Camp, 1999).

Specifically, the instrument delved into whether or not participation in CTSOs allowed students to expand, refine, and make sense of the learning from CTE classes as well as whether the mission and purpose of the CTSOs influenced the college and career status of each participant. The protocol for this study was devised in collaboration with the dissertation chair and was validated by two CTE teachers. Permission was given from a previous study to adopt the interview questions (see Appendix F). The teachers who validated

the instrument did not participate in the data collection phase.

2. The data analysis procedures are as follows. I read through the interview data to get a sense of the data. I then organized the raw data preliminarily according to emerging themes and according to questions. The process of coding data entails reducing the texts to themes (Creswell, 2014). The coded and organized themes helped to tell the stories of the participants and served to form the commentary for answering the research questions. Triangulating the answers from all participants helped validate the findings and conclusion.

In summary, Chapter 3 explained the rationale for the methodology used in this research study and a description of the procedures and the methodology. The criteria for the selection of participants, data collection procedures, and data analysis procedures were designated. Data collected during the interview sessions for both students and teachers were professionally transcribed and uploaded into Dedoose and NviVo 12 Pro software for electronic verification of themes. A careful analysis of all data helped secure the findings of the study as displayed in Chapter 4.

Chapter 4: Results

Introduction

According to Conley and McGaughy (2012), “students need a solid foundation of academic knowledge combined with critical thinking and learning skills, whether they are headed for college or a career” (p. 28). The purpose of this qualitative study was to explore whether participation in CTSOs facilitates college and career success for select students in southeastern North Carolina. Each CTE course offers participation in a co-curricular CTSO. In this study, I give voice to six students who were CTSO members and upon high school matriculation went directly to work or college. This study further gives voice to CTSO advisors. The goal is to understand the perceived impact of student participation in CTSOs on college and/or career success.

A qualitative method was used to complete the study. The study was done in two phases. In the first phase, I interviewed CTSO advisors and CTSO student participants. In the second phase, I interviewed CTE constructivist teachers. The selected teachers taught in the following areas: marketing, culinary, criminal justice, and agricultural science. The agriculture teacher was a certified National Board Professional Teacher and took preference because of his gender. The culinary teacher is from Jamaica and was part of a fellowship program that allowed her to teach in the United States. The criminal justice teacher recently earned a master’s degree in educational technology, and the marketing teacher formerly worked in corporate America. Six students were selected; three of the respondents went straight to college, whereas three went directly to work upon graduation.

The setting was a southeastern metropolitan school district in North Carolina. The

selected district (referred to as District C3) has seven high schools that follow block scheduling, two early college high schools, and two alternative high schools.

The following research questions guided this qualitative study:

1. What specific aspects of CTSO participation influenced student success in college (or not)?
2. What specific aspects of CTSO participation influenced student career success (or not)?

The purpose of Chapter 4 is to present the data gathered from the semi-structured interviews. The first section in the chapter provides descriptive information on the study participants, including their involvement in the data collection activities (i.e., interviews). A description of the data analysis conducted for the study follows. The largest section of the chapter displays the collected data. A summary concludes the chapter.

Description of Study Participants

The study was conducted with a total of 10 participants. Six participants were students who had graduated from a District C3 high school. These students were (no more than 2 years) high school graduates and had been a former CTSO member. The average age of the student participants was 20 years. Five students were Black, and one student was Asian. Four students were female, and two students were male. These students participated in a variety of CTSOs. Three students participated in DECA, two students participated in SkillsUSA, two students participated in HOSA, and one student participated in TSA. These descriptive data are summarized in Table 3.

Table 3*Descriptive Statistics: Student Participants (N = 6)*

Participant #	Age	Sex	Race	CTSO
2	21	Female	Black/African American	DECA
4	21	Male	Black/African American	SkillsUSA
5	20	Male	Black/African American	DECA & SkillsUSA
8	20	Female	Black/African American	DECA
9	19	Female	Black/African American	HOSA
10	21	Female	Asian	HOSA, TSA

In addition, four CTE teachers from District C3 who had been CTSO advisors for at least 5 years were chosen for participation. Three of these teachers were female, and one teacher was male. All teachers participated in different CTSOs: DECA, SkillsUSA, FCCLA, and FFA. These teacher participants had a range of years of experience as an adviser, with an average of 6.75 years in education. These descriptions are summarized in Table 4.

Table 4*Descriptive Statistics: Teacher Participants (N=4)*

Participant #	Sex	CTSO	Years as an advisor
1	Female	DECA	5
3	Female	SkillsUSA	4
6	Female	FCCLA	8
7	Male	FFA	10

Research Procedures

Each interview was recorded and commercially transcribed. The average number of transcribed pages for the interviews was three, and the number of transcribed pages per individual interview ranged from two to four. The data was organized, coded according to emerging themes, triangulated appropriately, and used to answer research questions.

All interview transcripts were further uploaded to Dedoose and NVivo 12 Pro for additional analysis.

Dedoose is a web-based software program (<http://www.dedoose.com/userguide>) that assists researchers with qualitative or mixed method approaches while working with text, audio, video, images, survey, and test data. The program allows researchers to integrate your data to project codes and themes.

NVivo 12 Pro is a data analysis software (<http://qsinternational.com/nvivo-qualitative-data-analysis-software/about/nvivo/who-its-for/academia>) that allows you to organize, store, and retrieve data for better efficacy. It allows you to import data from text, audio, video, emails, images, spreadsheets, online surveys, and web content. It allows you to ask complex questions so you can discover deeper insights into your research.

Interview transcripts were analyzed according to the research questions:

1. What specific aspects of CTSO participation influenced student success in college (or not)?
2. What specific aspects of CTSO participation influenced student career success (or not)?

Data Analysis

As part of the data analysis procedures, the interview transcripts were read several times to increase familiarity with the data (Eisner, 1997). The 6-step framework described by Braun and Clarke (2006) was used for this study. This required me to engage in gaining familiarity with the data (reading), generating initial codes (coding), searching for themes (theming), reviewing the themes, defining and naming themes, and

finally, producing the report, which includes identification of similarities and patterns between narratives. The use of an inductive analysis for data interpretation enabled me to better understand underlying patterns, assumptions, and ideologies to be identified, which, in turn, allowed for the identification of various features that formed the experiences of the data (Saldaña, 2016). During the 6-step framework of data analysis, a codebook was developed to help arrange the data. The initial codebook can be found in Appendix G. I engaged in the following self-reflective questioning associated with inductive analysis:

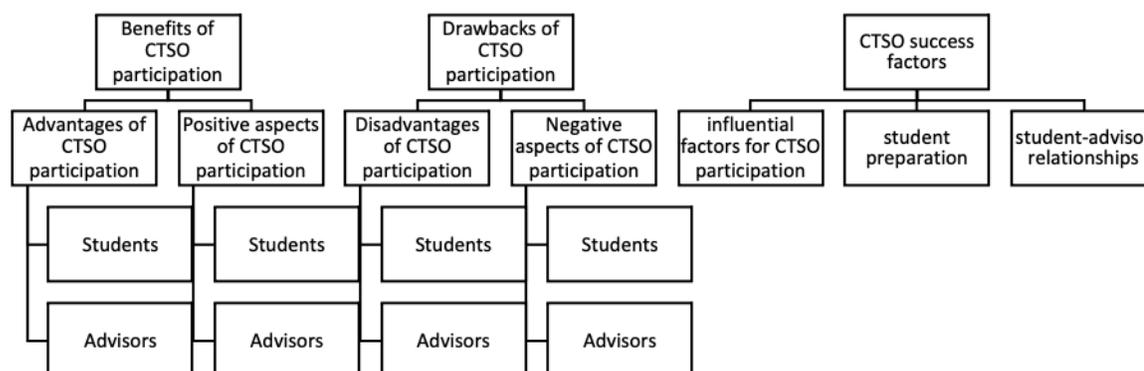
- (1) Do the themes make sense?
- (2) Does the data support the themes?
- (3) Am I trying to fit too much into a theme?
- (4) If themes overlap, are they really separate themes?
- (5) Are there themes within themes (subthemes)?
- (6) Are there other themes within the data? (Maguire & Delahunt, 2017, p. 13).

The initially identified themes and noteworthy passages were re-reviewed to help with identifying additional themes, reclassification, and the re-checking of current themes to ensure accuracy. Following these steps, a final codebook was developed to sort the data into the themes, subthemes, and codes. The final codebook can be found in Appendix H. In addition, as a result of NVivo and Dedoose processes, several figures were developed to visualize the data. Figure 1 represents a hierarchy of the codes, subthemes, and themes. This hierarchical structure depicts the themes and subthemes that were different between students and advisors. For example, within the theme *benefits of CTSO participation*, the subtheme *advantages of CTSO participation* differed between

students and advisors and was therefore further coded to those groups. Figure 2 represents a word cloud, indicating the words that appeared most frequently in the interviews. The larger the word, the more frequently the word was articulated. As can be seen in this word cloud, the words most frequently used by respondents are “community,” “students,” “CTSO,” “skills,” “participate,” “events,” “positive,” “going,” “content,” and “organization.” They appear large, indicating the frequency of their use across interviews. Last, Figure 3 represents a tree map. This tree map displays words that were used in the interviews in a hierarchical structure. The words are split into rectangles that are sized and ordered by their frequency.

Figure 1

Hierarchy of Codes, Subthemes, and Themes



The top level in Figure 1 depicts the three major themes: benefits of CTSO participation, drawbacks of CTSO participation, and CTSO success factors. The next level depicted clarifies the top theme. Those include advantages of CTSO participation,

Results

The data from the analysis of interview sessions served to answer the research question: “What aspect of CTSO influenced success in college and/or career?” The inductive data analysis resulted in three overarching themes: (1) benefits of participating in a CTSO, (2) drawbacks of CTSO participation, and (3) CTSO success factors.

All themes and subthemes will be thoroughly described in the following sections. In addition, codes and example text that supports the code will be shared to show participant comments that motivated each theme.

Theme 1: Benefits of Participating in a CTSO

The first study theme was the benefits that students and advisors observed from participation in a CTSO. This theme had two subthemes: advantages of CTSO and positive aspects of CTSO.

Advantages of CTSO. All 10 participants described at least one advantage they believed they gained as a result of participating in a CTSO. (The descriptions that follow, were coded in two different ways: advisors and students.)

All six student participants provided specific examples of advantages they experienced as a result of their CTSO participation. For some participants, an advantage was learning about different career options. Participant 10 (college student) shared,

The advantage of participating in both of the programs is getting to know different career options to prepare myself for the future. It also helped me learn about different types of careers in the subcategories of cybersecurity, technology, and the health profession.

Participant 5 (work student) also noted this advantage:

You get more of a feel for the field you are looking to go into. For example, at the time I was looking to become a firefighter. So, going to the Fayetteville Fire academy helped me advance my knowledge about what I will be going into after I graduated and getting to that career. Skills helps with the task you will have to do during your average day in the career.

Similarly, Participant 2 (college student) appreciated the opportunity to network: “The main advantage that I got from it would be networking.”

Two other participants also shared that they believed they gained vital career skills because they participated in a CTSO. Participant 8 (college student) mentioned, From what I can say, the experience taught me to be competitive, which has been important in the transition between high school to college because I do go to a large university. So already being introduced to a competitive nature has helped me to succeed in my classes.

Additionally, Participant 4 (work student) reported other skills that were gained:

Both of the organizations taught me social skills that I couldn't find anywhere else in high school or any other portion of my lifetime. I was able to grow exponentially being able to talk to people, being able to handle myself in different environments, such as business meetings. I'm a small business owner myself, while I am still now in the military, and it helped me in so many different ways being able to grow in rank and talking to people to help my business.

In addition to these advantages that were described by students, advisors also provided some examples of advantages that can be gained from CTSO participation. All four advisor participants noted advantages of this participation. Several participants

believed this participation allowed them to get to know their students better. For example, Participant 7 (advisor) mentioned, “You get to know the students a lot better, more so than in the classroom. When you take them out on field trips, or the different events that the organization holds. That's probably the biggest advantage.” Participant 6 (advisor) shared that sentiment and stated, “The learning, the new knowledge, the exposure, the experience, watching the kids grow, watching their aww moments, taking them out, again, getting new experiences, seeing them win or succeed, and again, watching their faces.” Last, advisors were able to feel more confident about their students’ preparation for the workforce. For example, Participant 1 (advisor) shared,

I'm learning that children or students, need knowledge on how to be prepared for the workforce. We know that a great deal of our students are not going to college once they graduate from high school, some of them are going straight into the workforce or taking up a trade.

Positive Aspects of a CTSO. All participants identified positive aspects of a CTSO. These responses captured student and advisor recognition of the benefits of participating in a CTSO.

All six student participants noted at least one positive aspect of a CTSO. There was a unanimous consensus that one of the main positive aspects of CTSO participation was the opportunity to network. For example, Participant 10 (college student) shared,

The positive aspect is that I made a lot of connections through the conferences both the state and national that I still hold on to today, which is nice. You get to network a lot, which is good. You get to learn more about the different career fields more in-depth because at the conference they have sessions you can attend.

Another positive thing is that it made my high school experience a lot better than I thought it was going to be. It was very memorable.

In addition, Participant 2 (college student) noted, “networking...has really helped me out a lot on the planning aspect of it, in DECA, we had to compete in events that required a lot of planning. Now in my college career, I plan everything out to a tee.” Similarly, Participant 4 (work student) said, “It opened many, many doors for me. I think I had job offers while doing SkillsUSA.... It opened up doors that I've never thought an 18-year-old young man will be able to get.” Participant 8 (college student) also commented,

Well, with DECA, I was able to be introduced to the business world. And I was able to learn things about an industry that I hadn't been interested in before. So, it kind of brought that to light for me.

Last, Participant 9 (work student) indicated that networking was a positive aspect and specifically described networking with other students:

While traveling, you get to see new things that you haven't seen before. You get to communicate with other students about their experiences after Health Occupations Students of America. You get to relate to other students that want to do the same thing as you.

In addition, advisors also indicated that there were positive aspects of CTSO participation. For example, a few participants noted that they were able to see their students grow. Participant 6 (advisor) shared,

My students, they grow into leaders. I took a shy kid to a conference and he became president and one served on the club's advisory board. They have competed and done well at the state and national levels just to get that

recognition. They have earned certificates of achievement and earned gold and silver medals to show their accomplishments. They can go back and serve as alumni if they choose. They have earned scholarships as a result of participating in events, and they can always go back and serve as alumni. That's leadership development.

Similarly, Participant 1 (advisor) mentioned, "positives are helping students to develop in their career path and another positive is being able to see the student succeed and attain their goals." In addition, advisors were able to gain experience in different fields in a similar way to the students. Participant 3 (advisor) stated, "When it comes to working in the workforce, through being an advisor, I have learned about a lot of trades I never would have thought would have been interesting." Last, advisor participants were able to get to know their students better and learn how prepared they were for the workforce. Participant 7 (advisor) said, "You get to know the students better and discover where their interests are. I enjoy working with them on a personal level while developing their skills and their interest in agriculture." Participant 3 (advisor) reported, "I've learned that students are more capable of doing things that we wouldn't think they would be able to do."

Table 5

Frequency of Subthemes in Theme 1

	Number of participants	Number of references
Advantages of CTSO	10	12
Positive aspects of a CTSO	10	11

Theme 2: Drawbacks of CTSO Participation

The second study theme was composed of participant descriptions of the potential

negative consequences of participating in a CTSO. This theme had two subthemes: disadvantages of CTSO and negative aspects of a CTSO.

Disadvantages of CTSO. Some participants described different factors they considered were disadvantages of participating in a CTSO. These descriptions were coded in two different ways: advisors and students.

Two student participants noticed that their CTSO participation interfered with their social lives. For example, Participant 5 (work student) shared, “That’s one main disadvantage, I can think of, is just missing out on interaction with peers.” Similarly, Participant 4 (work student) stated,

My social life lacked in various ways, more or less in ways that I didn't have as much social time because I had to focus more so on my projects for the programs. Those are the biggest disadvantages for me.

A couple of participants did not report experiencing any disadvantages. For example, Participant 2 (college student) said,

I wouldn't necessarily think this is a disadvantage, but because I hold myself to a very strong like business standpoint, and I have an aura about me that I'm older because of the way that I was trained in DECA.

Participant 8 (college student) also shared, “I haven't seen any disadvantages.”

Last, Participant 9 (work student) believed a major disadvantage of participating in a CTSO was the cost and commented, “The disadvantages could be the raising money part, like some, like we didn't have enough money to go to Nationals. So, we didn't really go. I think it should be more funding for students.”

Aligned with the student feedback, several advisors also commented on

disadvantages of CTSO participation. Three participants mentioned the extra work that advising for a CTSO required. For example, Participant 7 (advisor) reported,

It takes a lot more work, if you just add on to the time when you're in the classroom, just add your CTSO to that time frame. It's not near like taking them out whenever you're going overnight on trips, taking a group. It takes a lot more preparation and work on your part to have a meeting and have club gatherings and prepare students for these different events.

Similarly, Participant 1 (advisor) succinctly shared, "Longer hours giving more of your time." In addition, Participant 7 (advisor) said, "It takes a lot more work, just in the classroom, just add on for that time frame is not near like taking them out. Whenever you're going overnight on trips, you need more preparation." This participant further stated, "It takes a lot more preparation and work on your part to have a meeting and have club gatherings and prepare students for these different events."

Last, Participant 3 (advisor) also believed a disadvantage of advising for a CTSO was the inability to control how they participated, stating,

One disadvantage that I can see is not having the participation that I want. For example, my CTSO, SkillsUSA, our events are based off jobs. Okay. Like I said earlier, we do know, quite a bit of students go straight into the workforce. So a disadvantage of my particular CTSO is children not taking it seriously and wanting to join to learn trade skills, something that can help them later on in life. So to me, that is the biggest disadvantage, children not taking the CTSO seriously.

Negative Aspects of a CTSO. All participants contributed information to the negative aspects of a CTSO subtheme. These descriptions were coded in two different

ways: advisors and students.

Three student participants did not identify any negative aspects of participating in a CTSO. Participant 9 (work student) shared, “I don’t really think it was anything negative.” Similarly, Participant 5 (work student) noted, “Honestly, from my experience I can’t think of any negative.” Last, Participant 2 (college student) reported, “I don’t consider there to be any negative aspects of it.”

In contrast, three other students were able to identify at least one negative aspect of a CTSO. Participant 10 (college student), who belonged to more than one CTSO, described a negative aspect being that it was hard to balance participation in several groups and stated,

I would say deciding which events you want to do because there are so many. I’m indecisive. That was a big negative for me because I want to do it all. But you can’t do it all. I guess another negative is that the conferences would be around the same time or on the same weekends. It was hard to choose one from the other.

Participant 4 (work student) mentioned that his skills did not compare to the other students he observed at competitions:

I thought it could have been somewhat biased, just because of some of my opponents and the competitions that I was in. It seemed they had an upper hand at times. But once I learned more about it, I learned that they were better prepared. They had more training. That was probably the biggest downfall, but it didn’t showcase everyone’s full training. It wasn’t fully clear of everyone’s full training that they were all getting.

Last, Participant 8 (college student) observed a lack of communication between CTSOs

around the country and mentioned, “I feel like one thing that could have been helpful was maybe being able to be in contact, like direct contact with other people around the state and around the country who are also in the program.”

In addition to these student reports, the advisors also shared their opinions about negative aspects of CTSO participation. Two participants indicated that the amount of time required to participate was a negative aspect. For example, Participant 7 (advisor) shared, “That's really the biggest. It takes a lot more time and effort to do different events.” Similarly, Participant 6 (advisor) described,

Takes a lot of time. You sometimes don't necessarily get recognized, for which you're not doing it for that, but it's sometimes kind of on the school level, not treated as equally as some other organizations within the school. So sometimes there's just no recognition or I don't know if you consider that so much negative aspects of advising. It's a lot of time and effort and energy.

Another point Participant 3 (advisor) raised as a negative aspect of CTSO participation was having to force students to participate: “The negative aspects would be maybe forcing them to do it and they don't want to do it. I would want my students to participate in the CTSO because they want to, and they want to learn.”

Table 6

Frequency of Subthemes in Theme 2

	Number of participants	Number of references
Disadvantages of a CTSO	10	10
Negative aspects of a CTSO	10	11

Theme 3: CTSO Success Factors

The third and final study theme was composed of participant descriptions of their

own experiences with joining a CTSO and their experiences in a CTSO. This theme had three subthemes: influential factors for CTSO participation, student preparation, and student-advisor relationships.

Influential factors for CTSO Participation. All 10 participants mentioned influential factors that encouraged them to participate in a CTSO. Five participants shared that it was their school that motivated them to participate in a CTSO. For example, Participant 9 (work student) said, “My teacher asked me what did I want to do? I want to be a nurse. We have a HOSA program. So, I started communicating with the HOSA coordinator and I started taking classes and we ended up competing.” Similarly, Participant 8 (college student) reported,

I was interested in joining a club, unlike the other clubs I had been a member of, and one of my teachers told me that they felt that I would be a good fit for the club, and I actually did enjoy it.

Participant 1 (advisor) noted, “It was strongly encouraged at our school to be able to provide a CTSO for the students to have an after-school activity. Our school encouraged it.” Participant 6 (advisor) conveyed,

So initially, I did it because I thought it came with the job, but then after that, I continued with it because I saw the potential gains both for the students, the school, and myself as an advisor of the group that was there.

Four participants were motivated to participate in a CTSO to gain professional development experience. For example, Participant 4 (work student) shared,

SkillsUSA and the Fire Academy. It was a competition that we would go to every year. We were told by our fire chief that SkillsUSA it was a great way for us to

grow in our career. If we want to continue to become a firefighter. It was a great way to network and just to meet new people that would help us grow in life.

Participant 2 (college student) also noted, “And seeing how DECA was like very professional, I just loved it. So that's kind of what brought my attention to it. So, word of mouth and being myself.” Similarly, Participant 5 (work student) reported, “I’m a competitor and it was put to me at first like a competition, so I went for it.”

Last, two participants were motivated to participate in a CTSO because their family encouraged them. Participant 10 (college student) revealed,

I would say, my sister, the peers I had, and the professors I had in high school. My sister did the accounting one finance. She influenced me like, “Hey, you should take a career path in high school that you want to learn more about.” That's how I got into student health sciences and the different extracurriculars you can do within it and then how to prepare for that for future careers. If I was interested, which I was, yes, that's how I got into it.

Participant 2 (college student) also described family encouragement: “My older siblings first were in it. And they were telling me how it was a great program...and then when I came to high school, I wanted to be a part of something that would better me for my future.”

Student Participation. All participants commented about how participating in a CTSO helped prepare students for the workforce. Eight participants described specific skills related to careers that they gained or saw students gain as a result of their CTSO participation. For example, Participant 1 (advisor) mentioned, “One of our students was the DECA president for our school and DECA helped prepare her to be more of a leader.

Developed her into going to college and I'm sure she'll be successful in her career.”

Participant 10 (college student) also reported,

Yes, because I did the health sciences and that helped me a lot with learning the biology and anatomy here in college. But now, at my workplace, I'm a medical assistant. Those terminologies that I learned in health science does carry on to where I work when I do the charts and talking to patients and being able to tell them the medical terms and breaking it down to them the way I learned it in high school, which is beneficial to me and my future career aspirations.

Similarly, Participant 4 (work student) commented, “I had to prepare myself. It made me prepare myself to step into the business world where most 18-year-old young men; when I was doing it, were not handling themselves the same way that I was.” In addition,

Participant 5 (work student) revealed,

It helped me prepare myself mentally...at first, I kind of became a volunteer firefighter for a little bit, so it literally prepared me to do that and whatever I would be getting into...like I would be getting into the calls to have to put on my gear extra fast in order to get on the truck.

Two participants also believed that a major preparation step was networking with others through their CTSO participation. Participant 2 (college student) stated,

So that really has been helping me out with my college career, and potentially to when I want to teach. I'm going to know and be in the right places, because of the people that I have made connections with.

Participant 9 (work student) said,

It really gave me more than enough. Like, I knew more than a lot of other students

that were taking the same class as me because of the good things that I did in high school as a part of my CTSO.

Last, two participants simply agreed that students were more prepared for the workforce because they participated in a CTSO. Participant 9 (work student) shared, “Yes, it did. All right.” Participant 1 (advisor) also commented, “Yes, I do believe that. I do believe that. Yes.”

Student-Advisor Relationships. The third and final subtheme within the CTSO success factors theme was student-advisor relationships. This subtheme was composed of participant descriptions of the quality of relationships they experienced in their CTSOs. Comments were contributed by both student and advisor participants.

The relationships between students and advisors were described overwhelmingly as positive. Four participants mentioned they were able to get closer to their advisors or advisees because of the CTSO. For example, Participant 1 (advisor) shared,

We've developed a close relationship. I think they get to know my personality, more than just inside the classroom setting because we spend time after school and then at various competition locations, so you get to know them on a personal level and just being able to enjoy their personalities.

Similarly, Participant 9 (work student) noted, “It was great. Like, because we traveled together, I felt like it made us a better group. We were a team because we competed together. So, we had to be a good team. You have to have great teamwork.”

In addition, four participants reported that they had good relationships with their advisor or student. For example, Participant 10 (college student) said, “They are the best professors I've ever had in my entire life. When I went to college, I'm not even that close

to my professors, because there's so many.” Participant 2 (college student) also revealed, “Absolutely amazing...we created a really strong relationship...I still have a very strong relationship with her because of DECA. And even though she was hard on me, it molded me into the person that I am today.”

Last, three participants described how they learned a lot from their advisors. For example, Participant 2 (college student) reported, “It helped me become this very professional businesswoman. And I even get the nickname at school now, at the university, I’m known as Miss Business. Because I’m always about business and I’m actually the manager of the university choir.” Participant 4 (work student) portrayed a positive learning experience: “The faculty advisor...opened my eyes to a whole lot of different things in the business world that I had never seen before, which helped me grow my own small business when I was in high school.”

Table 7

Frequency of Subthemes in Theme 3

	Number of participants	Number of references
Influential factors for CTSO participation	10	11
Student preparation	10	16
Student-advisor relationship	10	14

Summary

The current study explored whether participation in CTSOs facilitates college and career readiness. Each CTE course offers participation in a co-curricular CTSO. From the interviews with participants, three themes arose covering topics that related to the research questions: (a) benefits of participating in a CTSO, (b) drawbacks of participating in a CTSO, and (c) CTSO success factors.

The benefits of participating in a CTSO theme included information about the good qualities that came with participating in a CTSO, for both students and advisors. This theme included two subthemes: advantages of participating in a CTSO and positive aspects of participating in a CTSO. All participants described what advantages they gained from their CTSO participation, such as learning that the next-generation workforce is prepared and learning new skills. They all also reported positive aspects of CTSO participation, including networking and experiencing new things.

The second theme, drawbacks of CTSO participation, was composed of two subthemes: disadvantages of CTSO participation and negative aspects of a CTSO. All participants provided descriptions of negative factors related to their CTSO participation. One major finding on both the student and advisor side was that CTSO participation required a good time commitment that could interfere with social lives; however, many participants also claimed they did not experience any downside to their CTSO participation.

The third and final theme was CTSO success factors. This theme encompassed the reports of aspects of the CTSO that contributed to the success of student participants. Three subthemes composed this theme: influential factors for CTSO participation, student preparation, and student-advisor relationships. There were several motivations that participants had for joining a CTSO, including school encouragement, family involvement, and the opportunity to learn new skills. All participants also commented on the level of preparedness students experienced because of their participation. Last, participants described the positive relationships they had with their advisor or student.

Overall, college students reported that CTSO participation helped them feel more

prepared for the college world. These students particularly commented on how these organizations helped them network and “get themselves out there.”

In addition, work students also felt that by participating in a CTSO, they were able to prepare for life after high school in the workforce. These students described specific skills they learned such as preparing for an interview and what to say in a formal work environment.

Overall, advisors reported that CTSOs prepared students for life after high school. This preparation includes learning about leadership, teamwork, and collaboration. In addition, advisors believed that certain CTSOs prepared students by training them in content areas and showing them career avenues.

The responses participants provided during these semi-structured interviews highlighted their varying experiences in a CTSO. These interviews also provided information about what factors influence participation and what is gained from participation. Chapter 5 is a discussion of the results, in addition to the conclusions and recommendations.

Chapter 5: Discussion

Overview

The Princeton Review (2021) offered the following constructive facets associated with participation in high school clubs: sharpened communication skills, enhanced creative thinking, and heightened ability to work effectively with other people. Further, involvement in extracurricular activities is one of the few ways colleges can gain insight into a student's personality.

This qualitative study was purposed to explore whether participation in high school CTSOs facilitated college and career success for select students in southeastern North Carolina. This study gave voice to six students who were CTSO participants and upon high school matriculation went directly to work or college. Further, data were collected from four high school advisors who were interviewed to gain additional perspectives. A goal of this study was to understand the perceived impact of student participation in CTSOs on college and/or career success as a means of informing district-level administrators, educational advocates, and financial decision makers in education. The following research questions guided this study:

1. What specific aspects of CTSO participation influenced student success in college (or not)?
2. What specific aspects of CTSO participation influenced student career success (or not)?

Chapter 5 provides a discussion of the study's findings and conclusions.

Implications of the findings along with recommendations for further research are also included. This qualitative study adds to the body of research on CTE as well as the

relationship of CTSOs to college and career readiness.

Review of Findings and Conclusion

The findings from the data collected from the students and advisors illuminate the importance of offering CTE to students regardless of their intent to go directly into the world of work or off to college. According to the students and teachers, the commonalities of positive aspects that influenced student success in college and/or career were teamwork skills, networking, traveling, leadership development, presentation skills, and a chance to experience new things. The above commonalities parallel the summation of the Princeton Review (2021) presented in the introduction of this chapter.

Although few negative comments emerged, such as losing time with friends, lack of funds for travel, and students not being serious about competition, overall, the positive aspects of CTSO participation overshadowed the negatives. According to Cordova (2021), “we are facing a critical juncture as a nation, and now we must double down on strategies, like strongly articulated career-technical education pathways, that we know work” (p. 5). In collaboration with Education Week, Lieberman (2021) surveyed executives from some leading companies to discover what they want and expect from today’s K-12 students when they potentially hire them. The desired skills were agility, flexibility, growth mindset, resilience, teamwork, collaboration, social and emotional skills, problem-solving, critical thinking, innovation, creativity, self-regulation, cognitive flexibility, strategic thinking, self-awareness, emotional intelligence, and good communication skills. The company executives felt that students should enroll in courses that focus on presentation skills and should allow opportunities for students to connect with real-life work experiences (Lieberman, 2021). The extent to which participation in a

CTSO impacted career and college success as documented in this study is extremely notable for educators.

Additionally, educators must understand that not all students will attend college; however, many will go on to live very productive lives. The impact of COVID-19 further stresses the need for career readiness. Many students are taking, or took, a gap year during or because of COVID-19. They simply delayed college entrance. These students needed or will need solid career preparation to make the best use of this time. For many, this time may be used to explore career paths. For that reason and many more, it is important to offer high school students career exploration opportunities that are supported by companion organizations. The future is unpredictable. No student can say for sure what the next day will present. The findings of this study overwhelmingly validate the essentiality of offering CTE offerings to high school students and delineate specific aspects of CTSO participation that influenced student success in college and careers.

Recommendations for Future Action

A 2018 Gallup poll showed that only 3% of adults believed that high school graduates are prepared for college, and 5% believed that high school graduates are prepared for the workforce (Busteed, 2018). The surveyed adults felt that schools need to offer additional support for financial planning, social, and life skills. They felt that this could be accomplished through job shadowing, internships, and entrepreneurship opportunities. The survey concluded that schools need to support more programs, curriculum, and experiences that help high school students better understand financial planning; build social and life skills; and have real work experiences in the form of job shadowing, internships, and entrepreneurship (Busteed, 2018). In accordance with

Busteed (2018), local high schools must continue their course offerings in the area of CTE along with companion CTSOs. At this writing, the school district featured in this study offers courses that cover 16 career clusters. As decision makers are creating budgets of the future, expansion of and updates to CTE and companion organizations must take center stage. Presently, teachers have the option of advising CTSOs; nevertheless, I believe, as done in the past, CTE teachers should regularly opt to participate in advising an organization. The main benefit of doing so is a stronger connection to the students and the profession. Budget managers may also consider financial compensation for advisors. With or without compensation, what is best for students must remain centered.

Recommendations for Future Research

The initial aim of this study was to explore whether participation in a CTSO prepares students for college and career readiness. This study was limited to one North Carolina, urban school district. To further the research on the impact of CTSOs on college and career readiness, I recommend conducting the following research studies:

- a follow-up study of CTSOs across the entire state,
- a replication of this study in the four largest urban school districts in North Carolina,
- a longitudinal replication of this study over a period of 10 years, and
- a replication of this study that focuses on the impact of individual CTSOs on college and career readiness.

Summary of Results

As clearly noted in Chapter 2, Gysbers (2013) identified diversity skills, positive

work habits, personal qualities, personality and emotional states, social competence, and entrepreneurship as the six behaviors and/or skills needed for career readiness (Gysbers, 2013). Many graduates find themselves without the necessary skills needed to be successful in college or their chosen careers. It was also found in Chapter 2 that students lacked core knowledge, self-awareness, work habits, study skills, time management, help-seeking behavior, and social problem-solving skills. These skills are essential to help students cope as they manage their new environments and/or new academic and social demands of college (Roderick et al., 2009). For students to become career ready, they need to have the right opportunities (Gysbers, 2013). John Dewey, a theorist of constructivism, stated, “Give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking; learning naturally results” (Gonzalez, 2015, p. 3). Participating in CTSOs gives students something to do. CTE provides the leadership and pathway for student success in today’s global, high-skill, and high-demand workforce (Saeger, 2017). Taking advantage of the opportunities presented in CTSOs increases core knowledge and skills in numerous ways. Overall, the study showed that participating in a CTSO had a positive impact on student college and career readiness.

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Appendix A

Prosser's 16 Theorems of Vocational Education

Prosser's Sixteen Theorems on Vocational Education

A Basis for Vocational Philosophy

Dr. Charles A. Prosser, the first National Director of Vocational Education, developed and publicized the following sixteen theorems as a basis for sound and successful programs. Many attempts have been made throughout subsequent years to re-phrase or update these statements, without success. There are certain minimum standards without which one may not reasonably expect to operate a program of vocational education and be effective generally in programs of either preparatory or extension education. There is little reason to believe that these basic standards have changed materially since the early development of the program. For this reason these sixteen theorems are being quoted with a short interpretation supplementing each theorem.

1. "Vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work."

This theorem dictates that the type, kinds, amount, use and arrangement of space, materials, equipment and supplies for a preparatory program be a replica of those in employment. It has a bearing upon the length of time devoted to skill development necessary to approach industrial practice. It has implications for quality and quantity of production expected. It has direct implications for teacher- learner ratios. It relates directly to the efficiency with which a student transfers from school to employment.

2. "Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools and the same machines as in the occupation itself."

The implications of this statement are that instructors must have recent employment experience in order to be skillful in the use of the latest equipment and must make use of the same types of tools and equipment as would be currently found in employment; and, must use live work or work identical to that provided in employment for instructional experience rather than pseudo or so-called "project" work.

Emphasized here is that the skills taught should follow the same basic practices as industrial employers would expect, and learners should be able to move from the training situation to employment situation with little need for adjustment.

3. "Vocational education will be effective in proportion as it trains the individual directly and specifically in the thinking habits and the manipulative habits required in the occupation itself."

Two important education factors are implied in this statement. First— thinking habits which implies that the scientific or problem solving method is being developed in students; and second—that manipulative skills be performed with sufficient repetition that habit formation takes place. This, in turn, has implication for the length of class periods and for the total length

of courses. There is also an implication here for a major aspect of the occupation, namely the technically related content where knowledge and facts are as essential for thinking, as tools are for productive work.

4. “Vocational education will be effective in proportion as it enables each individual to capitalize his interest, aptitudes and intrinsic intelligence to the highest possible degree.”

This theorem has direct implications to class size, to individualized instruction, to instructional methods, to effective guidance and selection of learners, and to the promotional plan for the program. Here also, is that each specific vocation may well have its own unique requirements for admittance. For example, the depth and ability in mathematics could vary considerable between various occupations, as would the physical and other characteristics of individuals.

5. “Effective vocational education for any profession, calling, trade, occupation or job can only be given to the selected group of individuals who need it, want it, and are able to profit by it.”

Vocational education is not for everyone and this statement implies that those admitted should be carefully selected through effective guidance procedures and should be potentially successful as future productive workers. Persons should be selected on the basis of their own interests and aptitudes, and on the basis of their being potentially a successful employee following preparation.

6. “Vocational training will be effective in proportion as the specific training experiences for forming right habits of doing and thinking are repeated to the point the habits developed are those of the finished skills necessary for gainful employment.”

This statement effects one of the most crucial requirements for successful vocational preparation. Few people could be prepared to perform skillfully some work without having spent sufficient time in performing the variety of skills required so that habit formation may take place to the end that they can practice these skills at a future date. The direct implication here is for adequate lengths of time during the day, and for an adequate period of time in months to cover the skill and technical development essential for effective employment as a productive worker.

7. “Vocational education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach.”

The implication in this case is that the teacher cannot teach that which they do not know; and, since the subject matter of the vocational teacher is composed of the skills and knowledge of the occupation, it would follow that teachers who are recognized as highly competent workers themselves through actual successful employment experience would be most desirable for a vocational program. The recency of any such experience is also of utmost importance if learners are to be prepared for current expectations for employers; and this, the recency of

work experience of the potential vocational teacher is implied in this theorem.

8. “For every occupation there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally or socially effective.”

We see in the above statement a direct bearing upon the proficiency expected of learners who wish to find their place in the world of work. Vocational education must prepare the individual to meet the employment requirements of employers. Again, to meet these employment requirements requires considerable preparation, which relates to the length of the period, day or year required for the particular offering.

9. “Vocational education must recognize conditions as they are and must train individuals to meet the demands of the “market” even though it may be true that more efficient ways of conducting the occupation may be known and that better working conditions are highly desirable.”

Vocational education programs can never exist as merely course in a school system but must be considered a community-wide project. Therefore, this statement implies the dire need for the use of craft committees; for instructors with recent employment experience; and for a program that is geared to existing opportunities in the community, the area or the state. Instruction beyond immediate needs is encouraged, but not at the cost of basic current needs of employers.

10. “The effective establishment of process habits in any learner will be secured in proportion as the training is given on actual jobs and not on exercises or pseudo jobs.”

This theorem emphasizes again the need for practical, live work on which learners may practice developing the skills essential to an occupation. Learners cannot obtain the feel for the kind of work that will be done in employment when working on pseudo jobs or so-called projects. The work performed must be as identical and as up to date as possible with current practice in employment situations.

11. “The only reliable source of content for specific training is an occupation in the experience of masters of that occupation.”

This statement reaffirms the need for occupational analysis as the basic method of curriculum development. It also emphasizes the importance of effective involvement of representative occupational advisory committees in assisting in curriculum planning. The occupationally competent instructor must utilize both these resources in the construction of his detailed course content.

12. “For every occupation there is a body of content which is peculiar to that occupation and to which has practically no

functional value in any other occupation.”

This statement has direct implication to the close coordinated instructional program between the related technical construction and the skill development phase of the program. The application of mathematics and scientific principles to problems of the vocation should be the emphasis rather than teaching segregated subject matter courses that may or may not have direct relationship to the needs of the student. So-called broad or general areas of instruction in the subject matter unrelated to the problems at hand will have little benefit to the development of a competent worker.

13. **“Vocational education will render efficient social service in proportion as it meets the specific training needs of any group at the time that they need it and in such a way they can most effectively profit by the instruction.”**

This statement emphasizes the desire on the part of an individual to learn, in that vocational education should provide what the learner wants at the time he wants it, and in relation to his own recognized needs. This theorem has particular emphasis to the extension programs for employed workers since they will not use their own time to attend courses unless they are reaping direct benefits of immediate use from such attendance.

14. **“Vocational education will be socially efficient in proportion as in its methods of instruction and its personal relations with learners it takes into consideration the particular characteristics of any particular group which it serves.”**

This theorem implies that there is no single set of general characteristics such as school grades, IQs or other such characteristics that should be used as a basis for projecting vocational success; but, rather by knowing the individual student's interests, aptitudes and abilities, he can usually be guided into successful vocational experiences or guided away from enrolling into occupations for which they are unsuited.

15. **“The administration of vocational education will be efficient in proportion as it is elastic and fluid rather than rigid and standardized.”**

Here the implication is for flexibility within the framework of sound standards that support good vocational education rather than maintaining a rigid and inflexible plan. Vocational educators should be always alert to possible improvement and be willing to work toward continually adjusting the programs in light of changing employment requirements.

16. **“While every reasonable effort should be made to reduce per capita cost, there is a minimum below which effective vocational education cannot be given, and if the course does not permit this minimum per capita cost, vocational education should not be attempted.”**

Preparation for employment is generally more costly than general education, whether it be at the skilled, para-professional (technical), or professional level. This additional cost is usually

dependent upon the space, equipment, materials, and the necessity for smaller class size than would be true of normal academic programs of instruction. However, this statement directly implies that it is better not to attempt a vocational program than to operate it below the economic level that would lead to success.

Vocational education is not cheap education, but it is economically sound to provide it.

If every vocational educator responsible for programs of instruction would only maintain this list of sixteen theorems in front of them and make a serious effort to meet these goals, the result would, in almost every instance, be sound, quality vocational education. The more nearly a vocational program can approach the full realization of these theorems in its operation, the higher the quality of the program will be. Any attempt to disregard any one of these basic and fundamental concepts, can only result in undermining and destroying the program of vocational education for the citizens of the community.

Source of original statements:

Prosser, C. A. & Quigley, T. H. "Vocational Education in a Democracy" American Technical Society, Chicago, Illinois, 1949.

Author(s) of interpretive text unknown. This text has been retyped from a class handout from Colorado State University's department of Vocational Agriculture, 1985-87(?). Professors Irving C. Cross, Windol L. Wyatt, Ramsey R. Groves.

Appendix B

DECA: Business Operations Research Event



BUSINESS OPERATIONS RESEARCH EVENTS

BUSINESS SERVICES OPERATIONS RESEARCH BOR

BUYING AND MERCHANDISING OPERATIONS RESEARCH BMOR

Sponsored by Piper Sandler

FINANCE OPERATIONS RESEARCH FOR

HOSPITALITY AND TOURISM OPERATIONS RESEARCH HTOR

Sponsored by Piper Sandler

SPORTS AND ENTERTAINMENT MARKETING OPERATIONS RESEARCH SEOR

Sponsored by Piper Sandler

The **Business Operations Research Events** provide an opportunity for participants to demonstrate knowledge and skills needed by management personnel through the preparation of a detailed written strategic plan and presentation based on the results of a research study.

Participants in the Business Operations Research Events will:

- select an actual local business operation
- design a research study
- conduct a research study
- analyze the results of the research study
- prepare a strategic plan
- prepare a proposed budget
- present in a role-play situation
 - the design of the research study
 - the findings and conclusions of the research study
 - the proposed strategic plan
 - the proposed budget to enact the suggested strategies

The guidelines for each of the Business Operations Research Events are consolidated to facilitate coordination of participant activities in each of the career categories. This means the guidelines will be exactly the same for each career category. However, each career category will be treated separately as a competitive event.

CAREER CLUSTERS + DEFINITIONS

The following definitions are used to determine the activities or careers that are included in each of the Business Operations Research Events. These career categories are connected to career clusters.





BUSINESS OPERATIONS RESEARCH EVENTS

BUSINESS SERVICES OPERATIONS RESEARCH **BOR**

BUYING AND MERCHANDISING OPERATIONS RESEARCH **BMOR**
Sponsored by Piper Sandler

FINANCE OPERATIONS RESEARCH **FOR**

HOSPITALITY AND TOURISM OPERATIONS RESEARCH **HTOR**
Sponsored by Piper Sandler

SPORTS AND ENTERTAINMENT MARKETING OPERATIONS RESEARCH **SEOR**
Sponsored by Piper Sandler

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CAREER CLUSTERS + DEFINITIONS

The following definitions are used to determine the activities or careers that are included in each of the Business Operations Research Events. These career categories are connected to career clusters.

BUSINESS MANAGEMENT + ADMINISTRATION

Business Services: Providing services to businesses on a fee or contract basis or providing services to consumers. Examples may include: human resources companies, information technology companies, legal services firms, training and development organizations, health care service providers, libraries, construction companies, landscaping companies, beauty salons, car washes, automotive repair companies, interior decorating, child care services, photography and tutoring services.

FINANCE

Finance: Providing financial services to commercial and retail customers. Examples may include: banks, credit unions, accounting firms, investment companies, insurance companies and real estate firms.

HOSPITALITY + TOURISM

Hospitality and Tourism: Providing products and services related to event management, lodging, restaurant management and travel and tourism industries. Examples may include: hotels, lodging services, convention services, food and beverage services, restaurants, museums, amusement parks, zoos and other tourism-related businesses.

KNOWLEDGE AND SKILLS DEVELOPED

Participants will demonstrate knowledge and skills needed to address the components of the project as described in the content outline and evaluation forms.

Participants will also develop many 21st Century Skills, in the following categories, desired by today's employers:

- Communication and Collaboration
- Creativity and Innovation
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Information Literacy
- Initiative and Self-direction
- Leadership and Responsibility
- Media Literacy
- Productivity and Accountability
- Social and Cross-cultural Skills

Many Common Core Standards for Mathematics and English Language Arts & Literacy are supported by participation in DECA's competitive events.

Crosswalks that show which 21st Century Skills are developed and which common core standards are supported by participating in each competitive event are available at deca.org.

MARKETING

Buying and Merchandising: Getting the product into the hands of the customer through forecasting, planning, buying, displaying, selling and providing customer service. Examples may include any retail or wholesale business that provides consumer goods: specialty stores, department stores, shopping malls, grocery stores, convenience stores, pharmacies, discount stores, farmers markets and car dealerships.

Sports and Entertainment Marketing: Providing products, services or experiences relating to amateur or professional sports or sporting events, entertainment or entertainment events, selling or renting of supplies and equipment (other than vehicles) used for recreational or sporting purposes or products and services related to hobbies, leisure or cultural events. Examples may include: sports team, movie theatres, waterparks, music venues, concerts, festivals, amateur practice facilities, tournaments, summer camps, outdoor adventure companies and craft/music classes.

EVENT OVERVIEW

- The Business Operations Research Events consist of two major parts: the **written document** and the **oral presentation** by the participants. The written document will account for 60 points and the oral presentation will account for the remaining 40 of the total 100 points.
- Each Business Operations Research entry will be composed of **one to three members** of the DECA chapter. All participants must present the project to the judges.
- The body of the written entry must be limited to **20 numbered pages**, including the appendix (if an appendix is attached), but excluding the title page and the table of contents.
- The **Written Event Statement of Assurances and Academic Integrity** must be signed and submitted with the entry. Do not include it in the page numbering.
- The oral presentation may be a maximum **15 minutes** in length, including time for the judge's questions.
- For the presentation, the participants are to assume the role of hired consultants. The judge will assume the role of the owner/manager of the business/organization and will evaluate the presentation, focusing on the effectiveness of public speaking and presentation skills and how well the participants respond to questions that the judge may ask during the presentation.

2021 TOPIC

The 2020-2021 topic for each career category is the development of a strategy to rebuild customer loyalty and spending as a result of business interruption for at least the previous six months. Participants will collaborate with a local business or organization to analyze the current state of business operations as a result of business interruption and explore strategies to rebuild customer loyalty and spending. Participants will then present a strategic plan to rebuild customer loyalty and spending.



1 to 3
PARTICIPANTS



20
PAGES
ALLOWED



15
PRESENTATION
TIME

WRITTEN ENTRY GUIDELINES

The written entry must follow these specifications. Refer also to the Penalty Point Checklist and the Written Entry Evaluation Form.

WRITTEN EVENT STATEMENT OF ASSURANCES AND ACADEMIC INTEGRITY. This must be signed and submitted with the entry. Do **not** include it in the page numbering.

TITLE PAGE. The first page of the written entry is the title page. It must include in any order, but is not limited to, the following:

NAME OF THE EVENT (one of the following):

- BUSINESS SERVICES OPERATIONS RESEARCH EVENT
- BUYING AND MERCHANDISING OPERATIONS RESEARCH EVENT
- FINANCE OPERATIONS RESEARCH EVENT
- HOSPITALITY AND TOURISM OPERATIONS RESEARCH EVENT
- SPORTS AND ENTERTAINMENT MARKETING OPERATIONS RESEARCH EVENT

Name of high school

School address

City, State/Province, ZIP/Postal Code

Names of participants

Date

Title page will **not** be numbered.

TABLE OF CONTENTS. The table of contents should follow the title page. The table of contents may be single-spaced and may be one or more pages long. The table of contents page(s) will **not** be numbered.

BODY OF THE WRITTEN ENTRY. The body of the written entry begins with Section I, Executive Summary, and continues in the sequence outlined here. The first page of the body is numbered "1" and all following pages are numbered in sequence. Page numbers continue through the bibliography (required) and the appendix (optional).

This outline must be followed. Points for each section are included on the Written Entry Evaluation Form. Each section must be titled, including the bibliography and the appendix.

I. EXECUTIVE SUMMARY

One- to three-page description of the project

II. INTRODUCTION

- A. Description of the business or organization
- B. Description of the target market (demographics and psychographics)
- C. Overview of the business or organization's current state of business as a result of interruption

III. RESEARCH METHODS USED IN THE STUDY

- A. Description and rationale of research methodologies selected to conduct the research study
- B. Process used to conduct the selected research methods

IV. FINDINGS AND CONCLUSIONS OF THE STUDY

- A. Findings of the research study
- B. Conclusions based on the findings

V. PROPOSED STRATEGIC PLAN

- A. Objectives and rationale of the proposed strategic plan
- B. Proposed activities and timelines
- C. Proposed metrics or key performance indicators to measure plan effectiveness

VI. PROPOSED BUDGET

Costs associated with proposed strategies

VII. BIBLIOGRAPHY

A bibliography is required. Include a list of the sources of information used in the written document.

VIII. APPENDIX

An appendix is optional. If additional material is appended, all pages must be numbered as noted previously. Include in an appendix any exhibits appropriate to the written entry, but not important enough to include in the body. These might include sample questionnaires used, letters sent and received, general background data, minutes of meetings, etc.

PENALTY POINT CHECKLIST

In addition to the Written Entry Guidelines, participants must observe all of the standards on the Penalty Point Checklist on page 54. These standards are designed to make competition as fair as possible.

PRESENTATION GUIDELINES

- Prior to the presentation, the judge will evaluate the written portion of the entry. The major emphasis of the written entry is on the content. Drawings, illustrations and graphic presentations (where allowed) will be judged for clarity, not artistic value.
- The participants have assumed the roles of hired consultants. The judge is to assume the role of the business's/organization's owner/manager.
- The participants will present the plan to the judge in a 15-minute presentation worth 40 points. (See Presentation Judging.)
- The presentation begins immediately after the introduction of the participants to the judge by the adult assistant. Each participant must take part in the presentation.
- Each participant may bring a copy of the written entry or note cards pertaining to the written entry to use as reference during the presentation.
- Only visual aids that can be easily hand carried to the presentation by the actual participant(s) will be permitted. The participants themselves must set up the visuals. Wheeled carts, moving straps or similar items may not be used to bring visuals into the area. Set up time is included in the total presentation time. Participants must furnish their own materials and equipment. No electrical power or internet connection will be supplied. Alternate power sources such as small generators are not allowed. Sound may be used, as long as the volume is kept at a conversational level.
- Materials appropriate to the situation may be handed to or left with judges in all competitive events. Items of monetary value may be handed to but may not be left with judges. Items such as flyers, brochures, pamphlets and business cards may be handed to or left with the judge. No food or drinks allowed.
- If any of these rules are violated, the adult assistant must be notified by the judge.

PRESENTATION JUDGING

Participants will make a 15-minute presentation to you. Remember, you are taking on the role of the owner/manager of the business/organization. You may refer to the written entry, or to notes, during the presentation.

At the beginning of the presentation (after introductions), the participants will explain the proposed strategic plan. Allow the participants to complete this portion without interruption, unless you are asked to respond. Each participant must take part in the presentation.

If time remains, you may ask questions that seem appropriate, based on your notes or on the written entry itself (to which you may refer during the presentation).

At the conclusion of the presentation, thank the participant(s). Then complete the Presentation Evaluation Form, making sure to record a score for all categories. The maximum score for the presentation is 40 points.



BUSINESS OPERATIONS RESEARCH EVENTS

BUSINESS SERVICES OPERATIONS RESEARCH **BOR**
 BUYING AND MERCHANDISING OPERATIONS RESEARCH **B MOR**
 FINANCE OPERATIONS RESEARCH **FOR**
 HOSPITALITY AND TOURISM OPERATIONS RESEARCH **HTOR**
 SPORTS AND ENTERTAINMENT MARKETING OPERATIONS RESEARCH **SEOR**

WRITTEN ENTRY EVALUATION FORM

Please refer to the **Written Entry Guidelines** for a more detailed explanation of these items.

EXECUTIVE SUMMARY	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
1. One- to three-page description of the project	0-1-2-3	4-5-6	7-8	9-10	

INTRODUCTION	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
2. Description of the business or organization	0	1	2	3	
3. Description of the target market (demographics and psychographics)	0	1	2	3	
4. Overview of the business or organization's current state of business as a result of interruption	0	1	2	3	

RESEARCH METHODS USED IN THE STUDY	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
5. Description and rationale of research methodologies selected to conduct the research study	0-1	2	3	4	
6. Process used to conduct the selected research methods	0-1	2	3	4	

FINDINGS AND CONCLUSIONS OF THE STUDY	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
7. Findings of the research study	0-1	2	3	4	
8. Conclusions based on the findings	0-1	2	3	4	

PROPOSED STRATEGIC PLAN	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
9. Objectives and rationale of the proposed strategic plan	0-1	2-3	4-5	6	
10. Proposed activities and timelines	0-1	2-3	4-5	6	
11. Proposed metrics or key performance indicators to measure plan effectiveness	0-1	2-3	4-5	6	

PROPOSED BUDGET	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
12. Costs associated with proposed strategies	0-1	2	3	4	

APPEARANCE AND WORD USAGE	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
13. Professional layout, neatness, proper grammar, spelling and word usage	0	1	2	3	

WRITTEN ENTRY TOTAL POINTS (60)

JUDGE _____



BUSINESS OPERATIONS RESEARCH EVENTS

BUSINESS SERVICES OPERATIONS RESEARCH **BOR**
 BUYING AND MERCHANDISING OPERATIONS RESEARCH **B MOR**
 FINANCE OPERATIONS RESEARCH **FOR**
 HOSPITALITY AND TOURISM OPERATIONS RESEARCH **HTOR**
 SPORTS AND ENTERTAINMENT MARKETING OPERATIONS RESEARCH **SEOR**

PRESENTATION EVALUATION FORM

PRESENTATION	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
1. Opening presentation; description of the plan; organization, clarity and effectiveness of the presentation	0-1-2-3	4-5-6	7-8	9-10	

TO WHAT EXTENT DID THE PARTICIPANTS:	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
2. Describe methods used to the design research study?	0-1	2-3	4-5	6	
3. Interpret the research data into information for decision-making?	0-1	2-3	4-5	6	
4. Describe strategies and approaches for leading change?	0-1	2-3	4-5	6	
5. Describe the nature of budgets?	0-1	2-3	4-5	6	

GENERAL	LITTLE/ NO VALUE	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS	JUDGED SCORE
6. Professional standards (appearance, poise, confidence), presentation technique, effective use of visuals and participation of all	0-1	2-3	4-5	6	

PRESENTATION TOTAL POINTS (40)

WRITTEN ENTRY (60)

PRESENTATION (40)

SUBTOTAL (100)

LESS PENALTY POINTS

TOTAL SCORE

JUDGE _____

Appendix C
Recruitment Flier

Subjects Are Currently Being Recruited To Study How Career & Technical Student Organizations Impact College & Career Readiness

Research Participation Needed



Refreshments and
a Starbucks Gift Card
Will Be Provided

 bhaynes4@gardner-webb.edu
Brenda Haynes, Ed. S.

 2520 Murchison Road
Fayetteville, NC 28301

Made with PosterMyWall.com

Participant Qualifications

- 2019 High School Graduate
- Took at least 1 CTE Class
- Joined and Participated in a Career & Technical Student Organization
- College Freshman and/or Went Directly to the Workforce

INTERVIEW: TBD

Appendix D
Interview Questions

Demographic Questions

1. Do you agree to participate in this interview? Yes No
2. What is your gender? Male Female
3. What is your CTSO ?
 - FBLA
 - DECA
 - HOSA
 - Skills USA
 - FFA
 - FCCLA
 - TSA
4. How old are you?
 - 17 18 19
5. What is your race?
 - African American/Black
 - Asian/Pacific Islander
 - Caucasian/White
 - Hispanic
 - Native American
 - Other
6. What do you consider to be the advantages of participating in a CTSO?
7. What do you consider to be the disadvantages of participating in a CTSO?
8. What do you consider to be the positive aspects of your CTSO?
9. What do you consider the negative aspects of your CTSO?

10. Do you believe your CTSO prepared you to enter the workforce or entercollege in your desired career field?
11. What factors influenced you to participate in your CTSO?
12. How would you describe student relationships with the faculty advisors of your CTSO?

Teacher/Advisor Questions

1. Do you agree to participate in this interview? Yes or No
2. What is your gender? Male or Female
3. What Career and Technical Student Organization do you advise?
4. How many years have you been an advisor?
5. What do you consider to be the advantages of advising a CTSO?
6. What do you consider to be the disadvantages of advising a CTSO?
7. What do you consider to be the positive aspects of advising your CTSO?
8. What do you consider the negative aspects of advising your CTSO?
9. Do you believe you have prepared students to enter the workforce or entercollege in their desired career field?
10. What factors influenced you to participate as an CTSO advisor?
11. How would you describe your relationships with the student participants of your CTSO?

Appendix E

Statement of Consent/Data Collection Protocol

Gardner-Webb University IRB Informed Consent Form

Title of Study: The Relationship of Career and Technical Student Organizations on College and Career Readiness

Researcher: Brenda S. Haynes, School of Education

Purpose

The purpose of the research study is... *to help educators understand from the voices of former students how well Career and Technical Education courses and Career and Technical Student Organization participation prepare them for college and careers.*

Procedure

What you will do in the study:

- I. Participant will agree to participate*
- II. Participant will complete the Informed Consent Form*
- III. Participant will choose interview date*
- IV. Participant can call in or come in for face-to-face interview*
- V. Provide refreshments for any face-to-face participants*
- VI. Inform participant that they can skip any questions and they can stop the interview at any time*
- VII. Record interviews via NoNotes.com*
- VIII. Collect data*
- XI. Analyze data and develop models and theories*
- X. Write-up and publish results*

Time Required

It is anticipated that the study will require about 45–90 *minutes/hours* of your time.

Voluntary Participation

Participation in this study is voluntary. You have the right to withdraw from the research study at any time without penalty. You also have the right to refuse to answer any question(s) for any reason without penalty. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identified state.

Confidentiality

1. The data will be collected in an interview and will be recorded and transcribed via nonotes.com
2. *The data will be stored on the dedoose.com website.* The information that you give in the study will be handled confidentially. Your information will be assigned a *code number (or pseudonym.)* The list connecting your name to this code will be kept in a

- locked file. When the study has been completed and the data have been analyzed, this list will be destroyed. Your name will not be used in any report.*
3. *The website account will remain active for 3 years and upon deactivation, all files will be destroyed*

Risks

There are no anticipated risks in this study.

Benefits

There are no direct benefits associated with participation in this study. The study may help us understand the correlation of Career and Technical Student Organizations to college and career readiness. The Institutional Review Board at Gardner-Webb University has determined that participation in this study poses minimal risk to participants.

Payment

You will receive no payment for participating in the study. However, you will receive a \$10 Starbucks Gift card for participating.

Right to Withdraw From the Study

You have the right to withdraw from the study at any time without penalty. If you choose to withdraw from the study, your audio recording will be destroyed.

How to Withdraw From the Study

- If you want to withdraw from the study, tell the interviewer to stop the interview and leave the room or hang up the phone. There is no penalty for withdrawing.
- If you would like to withdraw after your materials have been submitted, please contact *Brenda Haynes via XXXXX*.

If you have questions about the study, contact: (*List all researchers and contact information*)

Brenda Smith Haynes, EdD Candidate
Department of Education, Gardner-Webb University
XXXXXX

Dr. Kathi Gibson
Faculty Research Advisor
Department of Education, Gardner-Webb University
XXXXX
kgibson1@gardner-webb.edu

If the research design of the study necessitates that its full scope is not explained prior to participation, it will be explained to you after completion of the study. If

you have concerns about your rights or how you are being treated, or if you have questions, want more information, or have suggestions, please contact the IRB Institutional Administrator listed below.

Dr. Sydney K. Brown
IRB Institutional Administrator
Gardner-Webb University
Telephone: 704-406-3019
Email: skbrown@gardner-webb.edu

Voluntary Consent by Participant

I have read the information in this consent form and fully understand the contents of this document. I have had a chance to ask any questions concerning this study and they have been answered for me. I agree to participate in this study.

Participant Printed NameParticipant

Date: _____

Signature

Date: _____

You will receive a copy of this form for your records.

Appendix F

Permission to Use Interview Questions

December 21, 2020

Bola Jimoh

Permission for the use of Research Survey and Interview Questions

I, Dr. Bola M. Jimoh, thereby give Ms. Brenda Haynes permission to use the Survey and Interview Questions and other information in my dissertation titled "Career Technical Education: Student Perceptions and Effects on Retention in Technical High Schools" for her doctorate research.

Sincerely,



Dr. Bola Jimoh

Appendix G
Initial Codebook

Name	Files	References
advantages of CTSO	0	0
advisors	4	6
students	6	6
disadvantages of CTSO	0	0
advisors	4	4
students	6	6
influential factors to participate in a CTSO	10	11
negative aspects a CTSO	1	1
advisors	4	5
students	6	6
positive aspects of a CTSO	1	1
advisor	4	5
students	6	6
student preparation	10	16
student-advisor relationships	10	14

Appendix H
Final Codebook

Theme	Subtheme	Codes	Description	Example Quote
Benefits of participating in a CTSO	Advantages of CTSO	Students	This code was applied to student descriptions of the advantages of CTSO participation.	“The main advantage that I got from it would be networking. And my college experience, that DECA.”
		Advisors	This code was applied to advisor descriptions of the advantages of CTSO participation.	“The learning, the new knowledge, the exposure, the experience watching the kids grow, watching, their moments, taking them out, again, get new experiences, seeing them win or succeed, and again, watching their faces.”
	Positive aspects of CTSO	Students	This code was applied to student descriptions of the positive aspects of CTSO participation.	“The positive aspect is that I made a lot of connections through the conferences that’s the state and national that I still hold on to today, which is nice. You get to network a lot, which is good. You get to learn more about the different career fields more in- depth because at the conference they have sessions you can attend. Another positive thing is that it made my high school experience a lot better than I thought it was going to be. It was very memorable.”
		Advisors	This code was applied to advisor descriptions of the positive aspects of CTSO participation.	“My students, they grow into leaders. Took a shy kid to become the president or for serving on the club's advisory board. They have competed and done well in the state and national level just to get that recognition. They have earned certificates of achievement, earned gold and silver medals, show their accomplishments, they can go back and serve as alumni they can use. They have earned scholarships as a result of participating in events, and they can always go back and serve as alumni best leadership.”
Drawbacks of participating in a CTSO	Disadvantages of CTSO	Students	This code was applied to student descriptions of the disadvantages of CTSO participation.	“My social life lacked in various ways, more or less in ways that I didn't have as much social time because I had to focus more so on my projects for the programs. Those are the biggest disadvantages for me.”

		Advisors	This code was applied to advisor descriptions of the disadvantages of CTSO participation.	“My students, they grow into leaders. Took a shy kid to becomein the president or for serving on the club's advisory board. They have competed and done well in the state and national level just to get that recognition. They have earned certificates of achievement, earned gold and silver medals, show their accomplishments, they can go back and serve as alumni they canuse. They have earned scholarships as a result of participating in events, and they can always go back and serve as alumni best leadership.”
	Negative aspects of a CTSO	Students	This code was applied to student descriptions of the negative aspects of CTSO participation.	“Negative aspects? I would say deciding which events you want to do because there are so many. I'm decisive. That was a big negative for me because I want todo it all. But you can't do it all. I guess another negative the conferences would be around the same time or on the same weekends. It was hard to choose one of the other. But yes.”
		Advisors	This code was applied to advisor descriptions of the negative aspects of CTSO participation.	“Takes a lot of time. You sometimes don't necessarily get recognized for which you're not doing it for that, but it's sometimes kind of on the school level, not treated as equally as some other organizations withinthe school. So sometimes there'sjust no recognition or I don't know if you consider that so much negative aspects of advising. It's a lot of time and effort and energy.”
CTSO Success factors	Influential factors for CTSO participation		This code was applied to influential factors related to CTSO participation.	“It was strongly encouraged at our school to be able to provide a CTSO for the students to have an after school activity. Our school encouraged it.”
	Student preparation		This code was applied to descriptions of how students were prepared for the workforce because of CTSO participation.	“Yes, ma'am. Very much. So I'ma music education major. So a lot of it again, I can't stress this enough, is networking. People, you have to know people, and you have to always get yourselfout there.”

	Student-advisor relationships		This code was applied to descriptions of student-advisor relationships.	“I think we've developed a close relationship. I think they get to know my personality, more than just inside the classroom setting because we spend time after school and then at various competition locations, so you get to know them on a personal level and just being able to enjoy their personalities.”
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