FUNDING CAREER AND TECHNICAL STUDENT ORGANIZATIONS: DETERMINING

THE VALUE OF THE CTSO EXPERIENCE

A Record of Study

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

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December 2018

Major Subject: Curriculum and Instruction

ABSTRACT

Career and Technical Student Organizations (CTSOs) play a vital role in student success in Career and Technical Education (CTE). CTSOs provide a co-curricular experience that undeniably benefits student achievement, but a current deficiency exists in verifiable CTE data that support the funding of CTSOs. Little research has been conducted that documents students' experiences in these organizations. No widely-published or available instrument has been designed to capture students' experiences and outcomes related to their participation in CTSOs. Supporting these student organizations' budgets and requesting ongoing funding from school districts require empirical evidence about the benefit of these organizations on students' learning outcomes and experiences. The purpose of this study is to develop an instrument to determine the value of students' CTSO experience. In this mixed-methods study design, both qualitative and quantitative data were collected for the purpose of instrument design. This instrument design is based on a review of current information available about the organizations, a systematic categorization of the organizations' characteristics, focus group interviews with teachers whose students participate in the organizations, and survey data from students who participate in the organizations. The product of this research is a framework that can be used to design an instrument that can capture students' experiences in these unique organizations. School districts can use the instrument for the purposes of exploring and documenting their students' experiences and the benefits of participating in these organizations.

DEDICATION

As a student I never believed that I would get this far, but I was once told that it is your attitude, not your aptitude, that determines your altitude. Many of us stumble in life, but it is only through our ability to fail that we can truly learn. We learn what it takes to overcome, to forgive, and to become humble to the opportunities and journeys ahead. So, I live, I fail, I learn, and I dare to continue my pursuit of life's endeavors.

As a teacher I am here to educate the hearts and minds of students for life, and I hope that my story, and this accomplishment, will inspire others to live, love and learn.

As a husband, and as a son, I have been surrounded by unconditional love and support from the most joyous family one could ever be blessed to have. My family inspires me and has been the light that has filled my heart with love, zeal, and the fire I needed to accomplish this dream.

For my mom, Chu.

ACKNOWLEDGEMENTS

I want to thank my mom, dad, brother and my dogs for always showing understanding, interest and unwavering hearts. You motivated me when I was down and always believed in my excellence. Thank you for always being there and instilling a love of learning and a love of life in me.

Finally, I want to thank my husband, Curt York. Without you, I would be incomplete. Without you, I would be lost. Without you, I would be an utter mess. You have supported my craziness, my travel, my work, my exhaustion, my frustrations, and my tears. Thank you for pushing me to finish my doctorate and for being there with me every step of the way.

CONTRIBUTORS AND FUNDING SOURCES

Contributors

This work was supervised by a record of study committee consisting of Professor Mary Margaret Capraro [chair], Professor Bugrahan Yalvac [co-chair] and Professor Julie Singleton of the Department of Teaching Learning and Culture and Professor Beverly Irby of the Department of Educational Administration and Human Resources.

All work for the record of study was completed by the student, under the advisement of Professor Mary Margaret Capraro [chair], Professor Bugrahan Yalvac [co-chair] and Professor Julie Singleton of the Department of Teaching Learning and Culture and Professor Beverly Irby of the Department of Educational Administration and Human Resources.

Funding Sources

All work for this record of study was completed without outside financial support.

NOMENCLATURE

CTE   Career and Technical Education

CTSOs   Career and Technical Student Organizations

BPA   Business Professionals of America

FCCLA   Family Career and Community Leaders of America

HOSA   Health Occupations Students of America

PBMAS   Performance Based Monitoring Analysis System

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CHAPTER I

INTRODUCTION:

CONTEXT AND PURPOSE OF THE ACTION

Situational Context

In College Station ISD, there is a lack of research and empirical evidence that support the designation of funding to student organizations in Career and Technical Education (CTE). Most school districts mandate that Career and Technical Education teachers sponsor or oversee Career and Technical Student Organizations (CTSOs) as outlined in their CTE performance goals. Current CTE Texas Essential Knowledge and Skills warrant the participation of CTE programs in a CTSO. Students' and teachers' experiences in CTSOs include several leadership and technical skills conferences, as well as various trips, meetings, and other extracurricular activities. The experience of participating in a CTSO undeniably benefits students; however, I did not find any instrument designed to measure this benefit and value in the literature. The significant financial commitment school districts make to support CTE programs demands a valid and reliable instrument to determine the value of the students' experiences in CTSOs.

Statement of the Problem

Career and Technical Education (CTE) provides students with a rigorous and relevant education that prepares them for the world of work in high-demand, high-skill careers. Among these careers are welders, computer programmers, IT technicians, cosmetology technicians, audio/video technicians, health science careers, engineers, and others. CTE builds partnerships with local industry and post-secondary institutions to provide students hands-on experience in their future career fields. CTE serves as a support for core academic curriculum, incorporating sixteen career cluster areas including Agriculture and Food; Architecture and Construction; Arts

and Audio/Visual; Business and Management; Information Technology Manufacturing; and Science, Technology, Engineering and Mathematics (STEM). Nationwide, 94% of high school students enroll in CTE programs, and 90.18% of students who concentrate on CTE programs graduate from high school, compared to an average national graduation rate of 74.9% (What is CTE?, 2016). Career and Technical Student Organizations (CTSOs) are a key component of CTE. CTSOs combine school, industry, and community organizations to provide high school students a comprehensive learning experience. CTSOs are funded through school districts' CTE budgets as well as federal grants, such as the Carl D. Perkins Act.

I did not locate a report or a study that provides a rationale for the CTSOs' funding. McNally and Harvey (2001) state that the "career and technical student organization has been recognized as an important component of vocational-technical education since federal law P.L. 740 established the integral relationship between CTSOs and vocational-technical education" (p. 115). Current CTE Texas Essential Knowledge and Skills warrant the participation of CTE programs in CTSOs. This connection recognizes that "Organizational elements of CTSOs produce beneficial effects on students by reinforcing the learning that took place in the CTE course, and by providing an opportunity to put this learning into practice" (Alfeld, Aragon, Hansen, & Stone, 2006, p. 123). Students and teachers participating in a CTSO often attend leadership and technical skills conferences, various trips, meetings, and other extracurricular activities. There are benefits to students that participate in a CTSO, yet there is not an instrument available for the school districts to evaluate the value of the students' experiences. In an era of data-driven decisions, teachers and school districts need a clear measure of the impact these programs and funds make on students.

CTSOs are referred to as extra-curricular activities, but they are more accurately described as co-curricular. "CTSOs bring together students interested in careers in specific career and technical education fields and provides them with a wide range of individual, cooperative, and competitive activities that are designed to expand their leadership and job related skills" (Thompson, Thompson, & Orr, 2003, p.2). The opportunities presented to students participating in a CTSO offer a unique arena for student success, and the "benefits of belonging to a CTSO apply to all students" (McNally & Harvey, 2001, p. 117). The Carl D. Perkins Vocational and Technical Education Act of 1984 recognized the importance of CTSOs. This legislation (P.L. 105-332) allows states to use vocational funds to support CTSO programs (McNally & Harvey, 2001). In addition to allowing federal funds to support CTE, the Perkins Act legislation requires that states develop evaluation systems to assess four core indicators of student performance, including academic and vocational achievement, program completion, successful transition from school to postsecondary education and/or employment, and accessibility and equity (Rojewski, 2002). Although the Perkins Act mandates these program evaluations, many school districts have yet to implement a measurement device that evaluates the performance of the students participating in CTSOs.

One of the challenges school districts face in measuring the impact of CTSOs on their students is the difficulty of designing the measurement instrument itself. While "CTSO programs provide opportunities that are designed to afford equal access" (McNally & Harvey, 2001, p. 116), students are not required to participate in a CTSO. Because participation is voluntary, "criticism of the methods used to collect data, and the usefulness of evaluation results exist" (Rojewski, 2002, p. 24). "Practitioners also face substantial challenges in determining what state and local evaluation criteria (indicators) will be used, the specific data needed to reflect these

criteria, methods of collecting it, and how to use it once collected" (Rojewski, 2002, p. 25). CTSOs connect extra-curricular time with classroom curricula; therefore, measuring the impact of CTSOs on students' academic success requires the creation of a valid and reliable measurement instrument.

The funding of CTSOs should be supported by all school districts from the classroom teacher to the administration in the central offices. Recently, responsibility for CTE program evaluation has shifted out of the hands of state agencies and into the hands of local CTE administrators (Manley, 2011). Because "vocational educators have identified strong CTSOs as an essential part of high quality vocational education" (Thompson et al., 2003, p.2), the CTE administrators responsible for evaluating local programs require an evaluative tool that provides empirical data about the benefits students gain through participation in CTSOs. Although there is a lack of direct CTSO data, anecdotal evidence and participant experience show benefit for students who participate in the CTSO experience. Empirical research is needed to explore the benefits and student success of participating in a CTSO.

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Research Questions

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In order to design an evaluation instrument for the CTE programs in high schools, in the present study I answered the following research questions: What extant data on CTE and CTSOs are available for the state of Texas and College Station ISD? What are the teachers' perceptions of CTSOs? What are the students' perceptions of CTSOs? Which characteristics will be used to identify students as participants in CTSOs?

Personal Context

Seventeen years ago, College Station ISD took a chance on me to teach Information Technology classes in hopes that I would educate students in the field of computers and networking and have them work towards industry standard certifications. At the time, I held no college degree and came to the interview with only IT certifications, my expertise in technology, and a passion to teach. I took this opportunity to inspire others as a gift, and I have dedicated my service to educate the hearts and minds of students for life. I strive to motivate those around me to challenge themselves and grow in their personal learning.

My educational journey is a story about how Career and Technical Education has the power to transform lives. When I was hired to become a teacher, not only did I not have a college degree, but I had failed out of college. I relied only on my skills in technology to retain a job in the Information Technology industry where I began to earn computer certifications. Although I was hired to teach the content of these exact computers certifications for College Station ISD, I still needed to obtain my classroom teaching credentials, so I was enrolled in a program at Sam Houston State University where I was introduced to Dr. Nedom Muns. At the time, I did not realize that this man would change my life and inspire me to finish my college aspirations. When he looked at my past, he simply said, "It's your attitude, not your aptitude, that determines your altitude." His words were inspiring, and his message was clear that my work in Career and Technical Education was only just beginning. Under his guidance, I earned my Trade and Industrial teaching certification, and then worked to obtain my Bachelor's Degree in Industrial Technology Education, followed by a Masters in Educational Leadership, Educational Administration. I am now working towards my doctorate in Curriculum and Instruction with an emphasis on CTE and CTSOs.

My work and my passion for CTE spans before my time in the classroom and has been my primary focus during my career. I have worked on the boards of the Texas Industrial and Vocational Association, Engineering Electronics Information Technology Teachers of Texas, and Association of Career and Technical Education and as an advisor and director for SkillsUSA, a CTSO. What I have found is that there is an unprecedented level of success and empowerment students can achieve through their time in CTE, especially when coupled with membership in a CTSO. Students and educators learn that through diligent study and ardent practice, their service towards others can make an important impact on society, on the economy, and in the workforce. They learn that advocating for their own leadership and rights in education is how they can make a difference in their local communities and across the nation. I have personally seen the amount of transformative success that has impacted my own students from their participation in SkillsUSA. I know that this is the reason to continue my work, my research, and my support towards CTE and CTSOs. The stories of success and the impact that CTE and CTSOs have on the lives of students need to be told and celebrated. My hope is to explore the many variables of student success in my research study in order to form a tangible way to measure and account for the work that is transforming student lives from within CTE and CTSOs.

My research and work will directly impact the students, teachers, and administrators of College Station ISD, especially those that are associated in any CTSO. The results of my record of study has the possibility to affect the surrounding community, CTE throughout Texas, and the Career and Technical Organizations themselves.

Terminology

For the purposes in this study, the following definitions will be used:

Career and Technical Education – Abbreviated as CTE, provides students with the academic and technical skills, knowledge and training necessary to succeed in future trade-based careers. CTE prepares learners for the workforce by introducing them to workplace competencies and makes academic content accessible to students by providing it in a hands-on context.

Career and Technical Student Organizations – Abbreviated as CTSOs, 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 work experiences through a CTE program. CTSO's help guide students in developing a career path and a program of study and providing opportunities in gaining the skills and abilities needed to be successful in related 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, n.d.).

Career Cluster – are organizing tools for curriculum design and instruction and function as a useful guide in developing programs of study, bridging secondary and postsecondary curriculum, and creating individual student plans of study for a complete range of career options (Career Clusters, n.d.).

Texas Essential Knowledge and Skills – Abbreviated as TEKs, are the Texas issued state standards of public school curriculum for what students should know and be able to do in a given course.

BPA – Business Professionals of America is a student organization that contributes to the preparation of a world-class workforce through the advancement of leadership, citizenship, academic, and technological skills for students at the Secondary and the Post-Secondary level. Through co-curricular programs and services, members of Business Professionals of America compete in demonstrations of their business technology skills, develop their professional and leadership skills, network with one another and professionals across the nation, and get involved in the betterment of their community through good works projects (Career and Technical Student Organizations, n.d.).

FCCLA – Family, Career and Community Leaders of America is a dynamic a student organization that helps young men and women become leaders and address important personal, family, work, and societal issues through Family and Consumer Sciences education. Involvement in FCCLA offers members the opportunity to expand their leadership potential and develop skills for life planning, goal setting, problem-solving, decision making, and interpersonal communication (Career and Technical Student Organizations, n.d.).

FFA – FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education (Career and Technical Student Organizations, n.d.).

HOSA – Health Occupations Students of America is a national vocational student organization endorsed by the U.S. Department of Education and the Health Occupations Education Division of the American Vocational Association. The mission of HOSA is to promote career opportunities in the health care industry and to enhance the delivery of quality health care (Career and Technical Student Organizations, n.d.).

SkillsUSA – SkillsUSA is a national organization serving high school and college students and professional members who are enrolled in technical, skilled and service occupations, including health occupations (Career and Technical Student Organizations, n.d.).

Carl D. Perkins Vocational and Technical Education Act – Simply referred to as the Perkins Act, it is dedicated to increasing learner access to high-quality CTE programs of study by providing federal support for CTE programs (Carl D. Perkins CTE improvement act, 2006).

Conclusions for Chapter I

I have found that there is a value and benefit for students who participate in a CTSO. These benefits can range from increased academic performance, personal learning and enhanced technical skills. The justification for the spending of local school funds warrants the need for an evaluation instrument to showcase these values we attribute to CTSO participation. As a CTE teacher that has participated in a CTSO, I can personally attest to this need. There is a need for empirical data representation in order to communicate with College Station ISD stakeholders why CTSOs should continue to be financially supported. I am surprised that there is a lack of current information regarding CTSOs, and I understand the importance and use of a well-

designed instrument that documents the experience and benefit of students participating in these organizations in a systematic and reliable way.

CHAPTER II

REVIEW OF SUPPORTING SCHOLARSHIP

Review of the Literature

Career and Technical Student Organizations play a vital role in a student's success while enrolled Career and Technical Education courses. The benefits of CTSOs include student motivation, opportunities for contextual participation, recognition of student accomplishments, networking connections within the business community, and opportunities for leadership development (Camp, Jackson, Buser, & Baldwin, 2000). CTSOs are oftentimes referred to as clubs and are considered so vital to the educational experience of CTE students that they are described as co-curricular rather than extra-curricular in nature. However, to fully appreciate the benefits of participating in a CTSO, one must first understand the fundamentals of CTE and CTE funding.

The economic reality of the 21st century necessitates that all students have access to a relevant, viable curriculum. One increasingly important pathway to education and training is through Career and Technical Education. Once considered an option only for low-achieving, non-college bound students, "career and technical education programs now serve students looking for high-technology jobs and good salaries, which in turn contribute to a state's economic development" (Fletcher, 2006, p. 163). CTE provides students with academic and technical training to help them gain knowledge and skills in a particular career area. In total, about 12.5 million high school and college students are enrolled in CTE across the nation. CTE prepares these learners for the world of work by introducing them to workplace competencies and makes academic content accessible to students by providing it through a hands-on context.

In fact, the high school graduation rate for CTE concentrators is about 90%, 15 percentage points higher than the national average (What is CTE?, 2016). The term CTE is further defined by the Carl D. Perkins IV Act as:

> Organized educational activities that offer a sequence of courses that provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; provides technical skills proficiency, an industry-recognized credential, a certificate, or an associate degree; and may include prerequisite courses that meet the requirements of this subparagraph; and include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual. (Carl D. Perkins, 2006, p. 1)

Content areas within CTE are organized by career pathways. The career pathway is developed, implemented, and maintained in partnership between secondary and postsecondary education, business, and employers (Hull, 2004). A career pathway is a coherent, articulated sequence of rigorous academic and career/technical courses, commencing in the ninth grade and leading to an associate degree, baccalaureate or subsequent degree, an industry recognized certificate, and/or licensure.

Career pathways are derived from career clusters, which were developed by the National Career Clusters Institute. The career clusters provide a framework for organizing and delivering quality CTE programs through comprehensive career pathways. In total, there are 16 career clusters representing more than 79 career pathways to help students navigate their way through

CTE and discover career options. The 16 clusters in the framework are: 1) Agriculture, Food and Natural Resources; 2) Architecture and Construction; 3) Arts, Audio/Visual Technology, and Communications; 4) Business Management and Administration; 5) Education and Training; 6) Finance; 7) Government and Public Administration; 8) Health Science; 9) Hospitality and Tourism; 10) Human Services; 11) Information Technology; 12) Law, Public Safety, Corrections, and Security; 13) Manufacturing; 14) Marketing; 15) Science, Technology, Engineering, and Mathematics; and 16) Transportation, Distribution, and Logistics (The National Career Clusters Institute, 2016). The Agriculture, Food and Natural Resources career cluster focuses on the essential elements of life, food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production (Career Clusters, n.d.). Courses in the Agriculture, Food and Natural Resources career cluster are designed to prepare learners for careers in the planning, production, processing, marketing, distribution, financing, and development of agricultural commodities, services, and natural resources, including food, fiber, wood products, water, minerals, and petroleum (Career Clusters, n.d.). The Architecture and Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management (Career Clusters, n.d.). The Arts, Audio/Visual Technology, and Communications career cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the Arts, Audio/Visual Technology, and Communications career cluster require a creative aptitude, a

strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication (Career Clusters, n.d.). The Business Management and Administration career cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations (Career Clusters, n.d.). The Education and Training career cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster (Career Clusters, n.d.). The Finance career cluster encompasses careers that focus on planning, services for financial and investment planning, banking, insurance, and business financial management. Careers in this field require problem-solving, organization, and communication skills (Career Clusters, n.d.). The Government and Public Administration career cluster focuses on planning and performing governmental functions at the local, state, and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations. Careers Government and Public Administration career cluster range from politics to planning and developing affordable housing, public transportation, and recreational areas, as well as the managing the preservation of historic buildings and neighborhoods, and dealing with public health, social, and safety issues (Career Clusters, n.d.). The Health Science career cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students will learn to reason, think critically, make decisions, solve problems, and communicate effectively (Career Clusters, n.d.). The Hospitality and Tourism career cluster focuses on the management, marketing, and operations of restaurants and other food/beverage

services, lodging, attractions, recreation events, and travel-related services. Students learn knowledge and skills focusing on communication, time management, and customer service that meet industry standards (Career Clusters, n.d.). The Human Services career cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services (Career Clusters, n.d.). The Information Technology career cluster focuses on building linkages in Information Technology occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services (Career Clusters, n.d.). The Law, Public Safety, Corrections, and Security career cluster focuses on planning, managing, and providing legal services, public safety, protective services, and homeland security, including professional and technical support services. Through these courses, students examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services (Career Clusters, n.d.). The Manufacturing career cluster focuses on planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance, and manufacturing/process engineering (Career Clusters, n.d.). The Marketing career cluster focuses on planning, managing, and performing marketing activities to reach organizational objectives (Career Clusters, n.d.). The Science, Technology, Engineering, and Mathematics career cluster focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services (Career Clusters, n.d.). The Transportation, Distribution, and Logistics career cluster focuses on careers in planning, management, and movement of people, materials,

and goods by road, pipeline, air, rail and water and related professional support services such as

transportation infrastructure planning and management, logistics services, mobile equipment and

facility maintenance (Career Clusters, n.d.). Hull (2004) stated that "career clusters define the

foundational skills and knowledge needed for occupations within given career areas" (p. 3).

Through these career clusters, school districts can customize the CTE opportunities and career

pathways offered within their schools in order to cater to the economic needs of the local

community and industry. In addition to specialized CTE programs, school districts can balance

the career pathways offered based upon program funding. Some CTE curriculum sequences

require more funding than others. When determining the balance of programs offered, school

district administrators must maintain knowledge of CTE funding.

Career and Technical Education is funded through local, state, and federal funds. This

funding has been created by a rich history of Federal Acts that have supported skilled and

technical training in the United States in efforts to support the American economy. CTE became

a focus in the American educational system when vocational learning started to increase in 1876.

The first manual training school, established in St. Louis, Missouri in 1879, set the foundation

for modern career and technical education. The first mass acceptance of CTE came after the

World War I, and the movement spread in the years that followed. This movement would not

have been possible without the fiscal and directional support provided by the Smith-Hughes

Vocational Education Act of 1917. This act developed a partnership between the federal, state,

and local governments and created the foundation of acts that continue to support CTE today

(Manley, 2011). The Smith-Hughes Act established vocational education as a separate and

distinct "system" of education that included separate state boards of vocational education,

funding, areas and methods of study, teacher preparation programs and certification, and

professional and student organizations (Rojewski, 2002). The George-Barden Act of 1946 was the first piece of federal legislation to specifically mention CTSOs, known at the time as Vocational Student Organizations, or VSOs; however, the Smith-Hughes Act of 1917 did allocate funding for vocational teachers whose duties included advising and supervising student organizations (Threeton & Pellock, 2010). The passage of the Vocational Education Act of 1963 signified a major change in federal policy and direction for career and technical education, shifting from an exclusive focus on job preparation to a shared purpose of meeting economic demands that also included a social component. The Vocational Education Act of 1963 was amended in 1968 and then again in 1976. These amendments stipulated that funds could be used for: 1) high school and postsecondary students, 2) students who had completed or left high school, 3) individuals in the labor market in need of retraining, 4) individuals with academic, socioeconomic, or other obstacles, 5) individuals with intellectual disabilities and those who were deaf or otherwise disabled, 6) construction of area vocational schools facilities, 7) vocational guidance, and 8) training and ancillary services such as program evaluations and teacher education (Threeton, 2007). In 1984, the Carl D. Perkins Vocational Education Act embedded dual themes of "responding to economic demands for a trained workforce with marketable skills and social concerns for making vocational programs accessible to all students including individuals with special needs" (Rojewski, 2002, p. 10). This movement in the Perkins Act created the framework for CTE in the United Stated since that time, and these themes continue in current CTE foundations.

The Carl D. Perkins Career and Technical Education Improvement Act, known simply as the "Perkins Act," details the federal government's mandated spending procedures and funding allocations as they pertain to CTE. The Perkins Act was grounded in the notion that the U.S. was

falling behind other nations in its ability to compete in the global marketplace, and it reflects an evolution of federal support for vocational education (Threeton, 2007). The Perkins Act's stated purpose was to strengthen the workforce preparation process. CTE spending agencies (national, state, and local) identified by the Perkins Act must comply with its mandates in order to receive continued federal financial support, although current funding allocated to states under this Act comprise only 5% of a local district's CTE expenditures (Manley, 2011). The Perkins Act must be reevaluated and reauthorized by Congress every eight years. The 2006 Carl D. Perkins Act, known as Perkins IV, allocated approximately 1.3 billion dollars in federal aid to CTE programs in all 50 states (Carl D. Perkins, 2006). Perkins IV promotes the development of activities and services which integrate academic and career and technical instruction in order to prepare students for high-skill high-wage occupations (Carl D. Perkins, 2006). This legislation placed greater accountability on integration of academic standards, which is aligned directly with the No Child Left Behind movement. Perkins IV is ultimately intended to increase CTE's responsiveness to the national economy while requiring greater accountability in regards to the integration of academics and technical standards (Threeton, 2007). One significant development of the Perkins Act of 2006 was the change from the term Vocational Education to the now popular Career and Technical Education (CTE) title. The Perkins Act is currently up for reauthorization in 2018.

Although federal funding through the Perkins Act is important to CTE, expenditure of federal funds is strictly monitored and regulated, and they only account for a small percentage of a school district's overall CTE budget. In Texas, the CTE funding allotment is based upon weighted funding. School districts are entitled to receive weighted funding for eligible full-time equivalent (FTE) students in approved CTE programs. In addition to this weighted funding,

school districts are also eligible to receive $50 for each FTE student enrolled in either: 1) two or more advanced CTE courses for three or more credits, or 2) an advanced CTE course as part of a tech-prep program. These two funding elements determine a district's total CTE allotment. The allotment applies to students in grades 9–12 enrolled in CTE programs and students with disabilities in grades 7–12 enrolled in Career and Technology for the Disabled (CTED) programs. School districts receive 35% more funding for CTE students than for non-CTE students ("Career and Technology Education Allotment", 2016). The weighted funding allotment for CTE generates school district budgets where CTSO funding holds a major share.

With the proper funding, school districts can increase the relevance of the CTE curriculum by supporting Career and Technical Student Organizations. CTSOs play a vital role in a student's success while enrolled in CTE courses. The benefits of CTSOs include student motivation, opportunities for contextual participation, recognition of student accomplishments, networking connections within the business community, and opportunities for leadership development (Camp et al., 2000). The U.S. Department of Education currently recognizes eleven CTSOs at the secondary level. CTSOs are composed of eleven categories that include: 1) Business Professionals of America (BPA), 2) Distributive Education Clubs of America (DECA), 3) Family, Career and Community Leaders of America (FCCLA), 4) Future Business Leaders of America (FBLA), 5) Future Educators Association (FEA), 6) Health Occupations Students of America (HOSA), 7) National FFA Organization (FFA), 8) National Young Farmer Educational Association (NYFEA), 9) National Postsecondary Agricultural Student (PAS) Organization, 10) SkillsUSA, and 11) Technology Students of America (TSA). CTSOs are considered to be co-curricular rather than extra-curricular and provide a comprehensive supplement to the classroom curriculum. Within CTSOs, there are many opportunities for students' leadership development,

including becoming an officer at the local, regional, or national level. In addition, competitive

events serve to test both technical and non-technical job-related competencies. Many of these

events integrate academic knowledge into industry-developed problem scenarios. Preparation for

the competitive events provides "hands-on experience in different trade, technical and leadership

fields; develops job-related technical skills and competencies; offers recognition to participants;

and serves to ensure business and industry involvement in career and technical education

programs" (Alfeld, Aragon, Hansen, & Stone, 2006, p. 123). Students who become members of

CTE student organizations are inspired to join because their peers or family members have

recommended membership, they desire to participate in career-related activities and

competitions, and they want to connect with other students who share common career interests.

"Students, teachers, and parents expect that membership in these organizations will result in

learning and enhanced skills as well as the development of positive values, social skills, and an

ability to work independently and collaboratively" (Brown, 2002, p. 1). With more than 1.5

million student members combined, CTSOs provide a unique program of career and leadership

development, motivation, and recognition for secondary and postsecondary students enrolled, or

previously enrolled, in career and technical education programs (What is CTE?, 2016). The

CTSO structure and co-curricular aspect in CTE are what make the CTSO experience so

valuable to participants.

There are objective benefits to students and teachers who participate in CTSOs. Alfeld et

al. (2006) states that "while CTSOs have received much attention in the CTE field, most of the

research on their contributions and benefits to high school CTE students is anecdotal" (p. 150).

The notion that the benefits of a CTSO are apparent but not empirically research-based is further

supported by Brown (2002): "a positive attitude about the benefits of CTE student organizations

often occurs as a result of the testimonials of other members of the organization" (p. 1).

Thompson et al. (2003) explained that "CTSOs bring together students interested in careers in specific career and technical education fields and provides them with a wide range of individual, cooperative, and competitive activities that are designed to expand their leadership and job related skills, while teachers and administrators who participate in CTSO activities gain greater exposure to the work conditions and demands of business and industry" (p. 2). CTE teachers play an essential role in the success of a CTSO by dedicating countless hours of work and support to the clubs. "These dedicated teachers are making a huge difference in the lives of their students, serving as teachers, mentors and role models" (Thompson et al., 2003, p. 2). Increased job satisfaction was found in teachers who participated in CTSOs connect to a personal fulfillment gained by helping students compete in CTSO events, participation in leadership activities and meetings, and contributions to school and community service activities. Recognition from peers, parents, and administrations also contributed to CTSO teacher job satisfaction (Thompson et al., 2003). Alfeld et al. (2006) found "evidence that the benefits of CTSOs can be enhanced the more a student participates, and the effects for academic engagement are particularly strong" (p. 148). Clearly, both teachers and students who participate in CTSOs reap positive and beneficial outcomes, especially when the students choose to compete in CTSO events and take part in CTSO leadership.

Although there are benefits for students and teachers who participate in CTSOs, Zirkle and Connors (2003) suggested that there was a lack of verifiable evidence that supported the claim that members develop essential workplace skills through involvement, and as a result, there has been increased attention and encouragement for these organizations to develop an authentic assessment procedure which measures the outcomes of participation. Alfeld et al.

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(2006) also noted that "there has not been as much research conducted on the effects of CTSOs, as opposed to academic or out-of-school activities, on young people's development" (p. 123). Career and Technical Education provides students with relevant academic and technical instruction that is enhanced by the opportunities available in CTSOs where career skills can be learned and expanded. Fletcher (2006) suggested that "one of the most important outcomes to measure is the rate at which CTE students matriculate into post-secondary education institutions, their retention rates, and successful graduation rates" (p. 168). In an era of emphasis on 21st century learning objectives, it is imperative that CTE and CTSOs are held accountable through empirical research showing the positive relationship students enrollment in CTSOs and students' benefits and future success.

Alignment with Action Research Traditions

Career and Technical Education has a foundation in teaching students a technical skill or trade that will support the economic needs of the nation. Career and Technical Student Organizations enhance CTE learning through a value-driven experience that develops personal, workplace, and technical skills in a real-world setting. The benefits to students from the relevant and rigorous curriculum found in CTE and through CTSOs embodies the ideals of the pragmatist world view, highlighting a problem-oriented philosophy that takes the view that the best research methods are those that help to most effectively answer the research question (Creswell 2014).

Those involved in CTE and CTSOs must develop a way to collect empirical data to validate the spending of school district funds to support the CTSO experience. Through my research, I extended a practical approach to understand why CTSOs require funding, and why the view of participating in a CTSO is so vital. An exploratory research design was used in which CTE and CTSO data artifacts were researched, a faculty focus group interview was conducted,

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and a student Likert-scale survey was administered. I considered the multiple perspectives of teachers, students, and the current CTE administration in College Station ISD in order to first understand the benefits gained from participating in a CTSO. These perspectives informed a mixed-methods study to determine themes that were incorporated in designing an instrument for measuring the value in participating in a CTSO.

Conceptual Framework

A lack of empirical evidence regarding CTSOs across the state of Texas creates a deficit of direct support that validates the spending of CTE budgets on CTSOs. This deficit creates a need for research in this area which can justify CTSO spending. The conceptual framework for this study (Figure 1) directs that the research begins with a review of extant data in CTE, targeting CTSOs. This data collection consists of local evaluations and state-collected CTSO data. The information gathered from the extant data informs questions for focus groups interviews (see Appendix A) with teachers who currently participate and run a CTSO. Transcriptions of the teacher focus group interviews are analyzed and "coded into themes" (Creswell, 2014, p. 197) that develop a framework for the student surveys (see Appendix B). The full collection of data from the teacher focus group and the student surveys indicates how teachers and students find value in the CTSO experience. The goal of the study was the creation of an artifact instrument that will measure the benefits of the CTSO experience as it relates to student success.
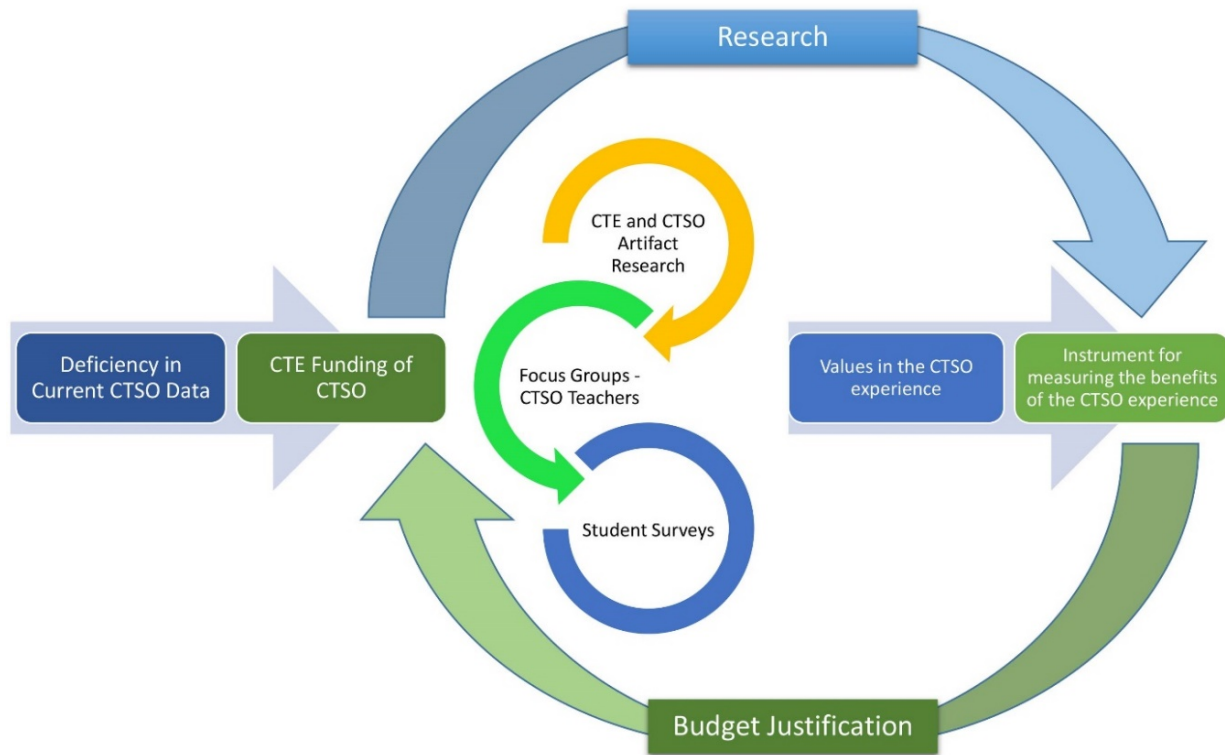
Figure 1. Conceptual Framework. This figure depicts a flowchart of the proposed research process.

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Significant Research and Practice Studies

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This mixed-methods study (Creswell, 2014) uses qualitative and quantitative data collection methods to explore and document the characteristics of CTSOs in CTE. Caruth (2013) states that mixed-methods research "can result in complementary findings and stronger results by combining quantitative and qualitative methods in a single synthesis" (p. 114). My exploratory research design (Creswell, 2014) begins with research into extant data about CTE and CTSO funding. The extant data drives the focus group interviews that are conducted with faculty who participate in the school district's CTSOs. This data informs the survey instrument given to students who participate in CTSOs in order to gather information about their experiences in the

organizations. These data represent a wide range of viewpoints on similar experiences, which lends diversity to the results (Caruth, 2013). By implementing coding techniques to analyze these data (Creswell, 2014), I developed themes to create an intervention that led to the development of a final artifact that measures student experience in the organizations. By implementing a mixed-method approach, increased validity in the data was achieved through triangulation and cross validation (Caruth, 2013). School districts will be able to use the instrument to gather data about the students' experiences. Annual and longitudinal data will be used to provide evidence for validating the funding of CTSOs.

Intervention Information

Before the intervention, I will gather data that describe the current CTSO framework. I intend to collect extant data in order to develop questions that will lead to the development of a semi-structured focus group interview (see Appendix A). Examples of extant CTSO data include school district Performance-Based Monitoring Analysis System (PBMAS) data for CTE, local CTSO enrollment data, local CTE student data, and any evaluative instruments that are used at the local district level. I will conduct focus group interviews with the teachers (Creswell, 2014) to explore and document the teachers' perspectives of the benefits of CTSO participation to their students. I will utilize the findings of the teacher interviews to design the quantitative Likert-scale that will be administered to the students participating in CTSOs.

During the intervention, I will administer a Likert-scale to the students who will have participated in a CTSO during an after-school club meeting. The teacher will allow two weeks to collect permission forms and administer the survey on the third week. I will analyze the Likert-scale quantitatively by deriving tables to interpret the data and gather information about the influences of CTSOs on student success. Finally, I will combine the quantitative findings from

the student scales with the qualitative findings from the teacher interviews to create themes (Creswell, 2014) that will guide my design of the CTSO evaluation instrument. The goal of this study will be to develop an instrument that will be used to capture and document the students' experiences in a CTSO. School districts can use the student experiences being reported to evaluate the budgets of CTSOs. The design of the instrument will be derived from the themes developed from the focus group interviews and student surveys.

Conclusions for Chapter II

The importance of Career and Technical Education has been a rich topic of debate throughout the history of education. Currently in 2018, we still see a divide when CTE is referred to as a second-class education. This divide between college readiness versus career readiness has had a profound impact on the 21st century educational system, and I believe that the importance of CTE, and the work of CTSOs, reflect that these differences need to cease if we are to move towards a progressive change in education. With the possibilities of the empirical data that could result from this study, new evidence could be utilized in state and local funding allocations. By employing a mixed-methods exploratory study, I found that the design of a final evaluative instrument generates tangible data that can be implemented within College Station ISD to ensure to the stakeholders that funding CTSOs is indeed in line with the vision and goals of the school district.

CHAPTER III

SOLUTION AND METHOD

Proposed Solution

I implemented a mixed-method (Creswell, 2014) study to address a deficiency in existing Career and Technology Education (CTE) data that support CTE funding to Career and Technology Student Organizations (CTSOs). I conducted an exploratory research design (Creswell, 2014) in which qualitative research into extant CTE and CTSO funding data, such as the PBMAS or local evaluation data were collected and coded to inform the questions used in a qualitative focus group interview (Anderson, Herr, & Nihlen, 2007). The interviews were conducted with faculty who participated in the school district CTSOs. The transcriptions from the focus group interviews (see Appendix A) were coded to generate themes (Creswell, 2014) that drove the student surveys. I designed a quantitative Likert-scale to be utilized with the students who participate in a CTSO in order to collect information on the impact that the CTSO has on their learning experience. I analyzed the data collected from the students to establish themes that led to the development of an instrument that will collect data on the experience students gain from the CTSO. The results from the instrument can result in tangible data that school districts can use to evaluate the funding of CTSOs.

Participants

The National Coordinating Council for Career and Technical Student Organizations currently recognizes nine CTSOs. The major CTSOs that were included in this research study were Business Professionals of America (BPA); Family, Career, and Community Leaders of America (FCCLA); FFA (formerly known as Future Farmers of America); HOSA Future Health

Professionals; and SkillsUSA. BPA is a student organization that contributes to the preparation of a world-class workforce through the advancement of leadership, citizenship, academic, and technological skills for students at the Secondary and the Post-Secondary level. Through co-curricular programs and services, members of Business Professionals of America compete in demonstrations of their business technology skills, develop their professional and leadership skills, network with one another and professionals across the nation, and get involved in the betterment of their community through good works projects (Career and Technical Student Organizations, n.d.). FCCLA is a student organization that helps young men and women become leaders and address important personal, family, work, and societal issues through Family and Consumer Sciences education. Involvement in FCCLA offers members the opportunity to expand their leadership potential and develop skills for life planning, goal setting, problem-solving, decision making, and interpersonal communication (Career and Technical Student Organizations, n.d.). FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education (Career and Technical Student Organizations, n.d.). HOSA is a national vocational student organization endorsed by the U.S. Department of Education and the Health Occupations Education Division of the American Vocational Association. The mission of HOSA is to promote career opportunities in the health care industry and to enhance the delivery of quality health care (Career and Technical Student Organizations, n.d.). SkillsUSA is a national organization serving high school and college students and professional members who are enrolled in technical, skilled and service occupations, including health occupations (Career and Technical Student Organizations, n.d.). The teacher focus group participants were sponsors from the five CTSOs: 1) BPA; 2) FCCLA; 3) FFA; 4) HOSA; and 5) SkillsUSA. The 22 teacher

participants had a diverse background in their classroom experience ranging from two years of teaching to 32 years of teaching. Four teachers participated from BPA coming from teaching in the Business, Management & Administration, Finance and Marketing career clusters. Three teachers participated from FCCLA coming from the Education & Training, Hospitality & Tourism, and Human Services career clusters. Five teachers participated from FFA coming from the Agricultural, Food & Natural Resource cluster. Two teachers participated from HOSA coming from the Health Science career cluster and seven teachers participated from SkillsUSA coming from the Architecture & Construction, Arts, A/V Technology & Communication, Information Technology, Law, Public Safety, Corrections & Security and Science, Technology, Engineering and Mathematics career clusters.

The student surveys targeted approximately 50-75 student participants and were selected from the same five CTSOs as the teacher focus group interviews. BPA students were recruited from courses such as Business and Marketing, Accounting and Computer Programming. FCCLA students came from courses such as Dollars and Sense, Ready Set Teach and Teen Living. FFA students came from courses such as Horticulture Science, Floral Design, Agricultural Mechanics and Animal Science. HOSA students came from courses such as Basic Medical Practices and Principles of Health Science. SkillsUSA students came from courses such Animations, Graphic Design, Information Technology, Video Game Design, Principles of Construction, Engineering Design and Audio/Video Production. The survey was offered to all student members of these CTSOs and ranged from students in their freshman year to students in their senior year. The university's Institutional Review Board (IRB) office has approved this study. All participants were asked to review and sign the human consent form prior to completing the research instruments.

Research Paradigm, Data Collection and Analysis

Figure 2 illustrates a three-phase exploratory mixed-methods study in which data will be collected and analyzed in stages. A data integration method (Creswell, 2014) was used in order to connect the qualitative data to the quantitative data to determine the relevance of CTSOs and their importance in CTE. The data were transformed into a new instrument that can be utilized by school districts to evaluate the CTSO programs within their school systems. The data from the instrument can also be used to validate the CTE funding of CTSO programs. The tasks within phase 1 consist of a qualitative research design that documented all extant data regarding the CTE and CTSOs. The extant data from the PBMAS system may also be analyzed using quantitative methods, such as coding for themes (Anderson et al., 2007). These themes drove the content of the focus group questions in phase 2 (see Appendix A). During the second phase, I conducted the teacher focus group interviews based upon participation in CTSOs. The goal of these interviews was to develop an understanding of the experience students gain by participating in CTSOs. The qualitative data from the focus group interviews were coded and analyzed in order to develop themes (Anderson et al., 2007) for the student Likert-scale process and surveys in phase 3.

Students completed a Likert-scale during phase 3 (see Appendix B). The student sample was based upon participation in a CTSO. Student Likert-scale questions were derived from the themes developed in phases 1 & 2 and questions were categorized into 1) personal value; 2) educational value; and 3) career value. Within personal value, students were asked questions about how their CTSO benefits their learning, benefits their focus on learning while also finding inquiries for staying in school, staying out of trouble or valuing their time spent dedicated to the
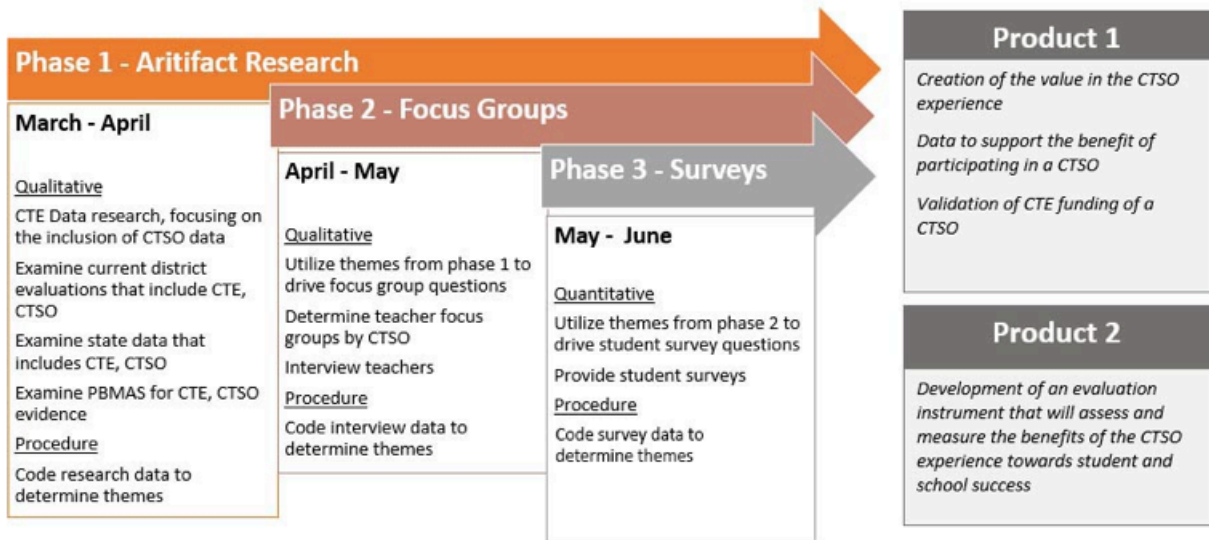
Figure 2. Phase Diagram. This three-phase exploratory study produced two products. Product 1 was the analysis of the data collected in the study. Product 2 was the development of an evaluation tool to measure the value in the CTSO experience.

CTSO. In educational value, students were asked if they joined the CTSO based upon organization success or reputations, as well as if the CTSO provided goal setting, real world experiences and formulated better study habits. The final category of career value asked students if their CTSO helped guide them in post-secondary goals such as college or trade schools, and inquired about career choice and professional networking. All survey questions were based on a 5-point scale from Strongly Disagree to Strongly Agree. In addition, participants' demographic data were collected. There was a two-week period allowed for the collection of student informed consent and parent permission. During the third week, surveys were administered to all students that acquired permission. All participating students in the CTSOs took the student survey in order to collect data relating to their experience in the CTSO. The Likert-scale process generated a set of results that provided a descriptive analysis of the survey to show range, and scope (Creswell, 2014). The summation of the three sets of data from phases 1, 2, and 3 led to the

creation of a CTSO evaluation instrument that produced measurable results that can be linked to funding CTSOs. School districts can use these results to endorse CTE expenditures on CTSOs. All participating students in the CTSOs completed the Likert-scale student survey in order to collect data relating to their experience in the CTSO. The Likert-scale student survey generated a new set of results that provided a descriptive analysis of the survey to show means, standard deviations, range, and scope (Creswell, 2014). The summation of the three sets of data from phases 1, 2, and 3 led to the creation of a CTSO evaluation instrument that produced measurable results that can be linked to funding CTSOs. School districts can use the CTSO evaluation instrument results to endorse CTE expenditures on CTSOs.

Timeline for Funding CTSOs

A timeline for this three-phase exploratory study is found within Table 1. This study produced two products. Product 1 was the analysis of the data collected in the study. Product 2 was the development of an evaluation tool to measure the value in the CTSO experience.

Table 1.

Timeline for the Study in Spring 2018

Mo	Wk	Contact/Activity	Collect	Analyze/Action	Product/Audience
Phase 1 Activities					
Mar	2	Contacted CTE director – collection of all available CTSO data	Extant data	Content analysis	Extant data
	2	Contacted TEA CTE director – collection of all available CTSO data	Extant data	Content analysis	Extant data
	2	Contacted CTSO directors – collection of all available CTSO data	Artifact Data	Content analysis	Extant data

Table 1 Continued

Mo	Wk	Contact/Activity	Collect	Analyze/Action	Product/Audience
Phase 1&2 Activities					
Mar	2-4	Analyzed and coded artifact data		Developed themes from artifact coding	Phase 1 themes
Mar	1	Contacted CTE teachers and request their involvement	ISD Permission slips		Communicated with principals
	2a	Held first organizational meeting – research overview	Open-ended information sheets	Content analysis	
	2b	Sent poll to CTSO teachers to organize focus group meeting times	Available group meeting times		
Apr	1-2	CTSO Teacher Focus Group Meetings	Qualitative data from interviews	Transcribed interviews and code data	
	3	Additional CTSO Teacher Focus Group Meetings needed	Qualitative data from interviews	Transcribed interviews and code data	
	3-4	Analyzed CTSO Focus Group Data		Coded content	Phase 2 themes
Phase 3 Activities					
Apr	1	Contacted CTSO students and request their involvement	Informed Consent Permission		Communicated with principals and parents
	2	Contacted CTE teachers and planed for student surveys	Informed Consent Permission		Communicated with teachers and parents
	3	Administered CTSO student survey	Quantitative data	Analyzed Survey results and prepared data charts	Survey Result data
May	1-2	Analyzed Phase 1-3 Themes		Analyzed and charted all theme data	Student Survey
June	1-4	Analyzed all research data	Qualitative data and Quantitative data	Transformed all data into an evaluation instrument	Final CTSO evaluation instrument

Justification and Validity Approaches

Establishing validity is an important step in the process of research. In this three-phase exploratory study, a mixed methods approach was utilized (Creswell, 2014). Qualitative and quantitative data were collected, analyzed, and used to create an analysis tool for school districts to evaluate the spending of CTE funds on CTSOs. The areas where questions of validity of data arose during this study were connected to the teacher focus group interviews and Likert-scale student survey sample selection, sample size, bias and inadequacies in weighted data comparison. To assure that all data were presented equally to avoid inadequacies in data comparison, all findings were presented with clear and precise rationale.

The point of view of the stakeholders within a research project should be considered to create democratic validity (Anderson et al., 2007). This allows for the collection of multiple perspectives to present a varied voice. The purpose of my Record of Study (RoS) research is to design and develop an instrument to capture the CTSOs' student participants' experiences in order to validate the allocation of school district funds in their support. To address democratic validity, my RoS allows for a three-phase collection of data that spans multiple stakeholders. Within the first phase, I collected pre-existing extant data from College Station ISD in regard to CTE and CTSOs. In collecting this data, I gained an understanding of district stakeholders' points of view as I met with them to find what data existed. The second phase of my study was to employ focus group interviews with existing CTSOs teachers, and the third phase was to collect Likert-scale survey data from students that participate in a CTSO. These two phases allowed for the perspectives of the teachers and students within a CTSO to be heard, and thereby allowed me to address democratic validity.

Outcome validity looks to determine if the outcome of the data collected created a

resolution that was the intent of the research (Anderson et al., 2007). Even if the initial data

gathered leads to a new direction, the purpose of the study should address a new direction for

intervention. The collection of data in my RoS follows an exploratory research design where my

collected data directly affected the next set of data. I took the findings from the existing extant

data to influence the questions for my teacher focus group (see Appendix A). The data collected

from the focus group influenced the student Likert-scale survey (see Appendix B) that was

administered. The findings from all of the data was then analyzed to determine if there is a

measurable way to collect empirical data in regard to student success from participating in a

CTSO. (So was the answer yes or no? Or did you design an instrument to capture the students'

experiences?) Since these three sets of data drove the research, the design of my RoS helped to

ensure outcome validity.

Process validity questions the research to see if the methods and adaptations utilized were

fit for the realities of the setting (Anderson et al., 2007). This type of validity asks if the research

used correct approaches and adapted the research for the proposed intent of the research design.

It's similar to outcome validity, but it focuses on the process and not the result. Because my RoS

was exploratory in design, my research process allowed for me to adapt my research based upon

the results of the data gathered. The data drove the direction of my RoS, but each process still

pointed toward the intent, which was to develop a way to measure student success from

participation in CTSOs to validate the allocation of school district funds in their support.

The process of making sure the research design is correct for the research methods and

setting is called dialogic validity (Anderson et al., 2007). It allows for the research to showcase

that they have a full understanding of their research topic, and because of their expertise, they

can design a research process that will discover true data that will make sense to others in the research setting. Since my RoS revolves around CTSOs and CTE, I must be able to show all persons within CTE that my research and findings will make sense. Since I have over seventeen years of experience in CTE and participating in CTSOs, my level of knowledge and experience can justify my research design and give me confidence that my methods and my results will make sense to those within the realms of CTE. Similar to dialogic validity, catalytic validity deals with the depth of the research, again trying to showcase that the researcher has efforts in perspectives, knowledge, and understanding of the intent of their work (Anderson et al., 2007). By digging deeper into a research area, the researcher can create new findings or new realities and develop a transformative learning experience. There are nine nationally recognized CTSOs within the United States, and there are five CTSOs that are established within College Station ISD. Because my research includes three phases of data collection and includes all five CTSOs within the scope of my work, I show that I am adding depth in my work, while at the same time adding breadth.

Potential Ethical Concerns

I have reviewed AERA's Code of Ethics and identified several potential ethical concerns in relation to the conduct of my study:

1. This study involves CTE faculty perspectives on the benefits of CTSOs. Faculty were interviewed in focus groups in order to gain insight into the value of the CTSO experience. These perspectives were used to guide student survey questions.

2. This study involves CTSO student participants. Students will be administered surveys. The survey questions will be derived from the themes found in the

CTE/CTSO extant data research as well as the findings found in the faculty focus

groups.

3. Faculty interviews will be audio recorded.

All faculty identities remained confidential and student identities will remain anonymous.

Participating faculty were provided IRB-approved informed consent, and students received IRB-approved informed consent for their parents that were collected before any surveying took place.

In the light of these ethical considerations, College Station ISD has approved this research study and IRB approval has been obtained.

Conclusions for Chapter III

I found that the research methods proposed for my Record of Study were appropriate to discover the meaning and definition to the purpose of my work. By using a mixed-method exploratory approach, I was able to develop qualitative and quantitative data to discover a framework that created the foundation for an evaluative instrument that can capture the experience of students that participate in a CTSO. By addressing all five CTSOs within College Station ISD, and by employing teacher focus groups and a student Likert-scale survey, the voice of stakeholders was heard, and depth to the study was established. I will be able to use the resulting CTSO evaluation instrument developed from the study to highlight the benefits of student participation in a CTSO, and help College Station ISD find validation in the funding allotment for CTSOs.

CHAPTER IV

ANALYSIS AND RESULTS/FINDINGS

Introduction to the Analysis

In an effort to generate empirical evidence that helps to support the designation of

funding to student organizations in Career and Technical Education (CTE), I implemented a

three-phase exploratory research design within College Station ISD to investigate this need. To

begin, I had to determine the key stakeholders within College Station ISD that would be most

affected by the results obtained from this mixed-methods study (Creswell, 2014). College Station

ISD has two high schools that participate in Career and Technical Student Organizations

(CTSOs), and from the nine nationally recognized CTSOs, only five are established within these

two schools. The teachers and students who participate in these five CTSOs make up a major

portion of the key stakeholders, however, it is important to consider the College Station ISD

Director of CTE, both high school principals and local community members as stakeholders in

this study.

To begin the first phase of my study, in March 2018, I contacted the Director of Career

and Technical Education, the Director of Business and Finance, the Director of Curriculum and

Instruction, and the principals at both high schools to determine if any extant CTE or CTSO data

within College Station ISD existed and that if they were available for me to collect. After

realizing that there existed a limited amount of data regarding CTE and CTSOs, I decided to

extend my outreach. Next, I contacted the Statewide CTE Coordinator for the Texas Education

Agency and the Executive Directors of SkillsUSA and FFA in Texas. I was able to access a few

additional reports to help support my first research question: "What extant data on CTE and

CTSOs are available from the state of Texas and College Station ISD?" I analyzed these data and reports that were received and organized the findings into tables to help determine areas of needs and areas of concern that could be addressed in the second phase of my study.

My second research question investigated the perceptions of College Station ISD teachers who have participated in the district's five CTSOs. To accomplish this, I contacted twenty-nine CTSO teachers and asked them to participate in focus group interviews that took place in April of 2018. The semi-structured focus group interview questions (see Appendix A) were developed by the end of March 2018 and were derived from the data collected in phase 1 of this study. The phase 1 data yielded information about CTSO membership, travel funding and participation. These data were used in the development of the semi-structured interview questions regarding membership enrollment, recruitment efforts, and the benefits of participation in a CTSO. The intent was to conduct semi-structured focus group interviews that would be separated by school and CTSO, so only the CTSO teachers from one high school would be interviewed one group at a time. The interviews took place either during a one-hour block of professional development time or during after a CTSO club meeting in April 2018. In total, seven focus group interviews were conducted; they lasted an average of 22 minutes. Four teachers attended the interview for BPA sponsors, three attended the interview for FCCLA teachers, and two were interviewed for HOSA. FFA and SkillsUSA each had two interviews. The FFA interviews hosted two teachers in the first meeting, and three in the second meeting. The SkillsUSA interviews hosted three teachers in the first interview and four in the second interview. The teacher participants were asked to review the IRB approved human consent form and confirm their participation as volunteers. All participants provided their written consent. The focus group conversations were audio recorded, transcribed, and coded into categories and finalized into overarching themes

(Anderson et al., 2007). A content analysis method was employed to categorize the narrative data and identify themes (Renner & Taylor-Powell, 2003). An emergent method was employed which allowed for the focus group interview themes to develop as the data were analyzed (Renner & Taylor-Powell, 2003). Patterns in the themes were identified and data points were grouped into larger categories in an effort to show common relationships within the data (Renner & Taylor-Powell, 2003). The interpretation of the themes and overarching categories were used to design the student Likert-scale survey in phase 3.

Understanding students' perceptions of CTE and CTSOs was the most crucial portion and the main focus of my research study. In April 2018, I introduced my study to the five CTSO student groups during after school club meetings. These CTSO club meetings are held once a week for FFA, and bi-weekly for HOSA and SkillsUSA, and on an as needed basis for BPA and FCCLA. Meetings take place after school in designated classrooms and are student led for FFA and SkillsUSA, and teacher led for BPA, FCCLA and HOSA. I introduced the purpose of my study to the students and invited them to volunteer as participants with parental consent. I handed out the informed contest form and asked the students to review it with their parents. Students who decided to participate provided their signed consent. The informed consent was sent home with 350 CTSO students; the group returned 56 signed forms. Each CTSO at both high schools was allowed two weeks to return the form; however, I allowed for late forms to be returned and I informed the students that the survey would be administered at their next club meetings in May 2018. The surveys were administered at two separate times during after club meetings. The Likert-scale questions (see Appendix B) were administered to all 56 students via an online survey. The Likert-scale was created with a secure Google form, and all participants remained anonymous. Students were only allowed to take the survey one time. The findings from the

student Likert-scale were organized into four graphs to showcase the results of each question. The graphs were designed to reflect overarching themes developed from the coding of the teacher focus groups in phase 2.

The final analysis of my research combines all results from all phases in order to answer the final research question of which characteristics will be used to identify students as participants in CTSOs. This was accomplished by finding commonalities and connections between phases that address gaps within the extant data and by extracting new identifiers that could be used to describe the value found within CTSO participation (Creswell, 2014). The answers derived from my final research question are what will be used to create a valid and reliable CTSO evaluation instrument to determine the value of the students' experiences in CTSOs (see Appendix C). Because College Station ISD supports CTSOs with a significant financial commitment, the CTSO evaluation instrument can be used for the purpose of exploring and documenting the students' experiences and the benefits of participating in the organizations.

Presentation of Data

The need to identify and document the existing data in regard to Career and Technical Education (CTE) and Career and Technical Student Organizations (CTSOs) was the fundamental starting point of my research. When collecting these extant data, I found that there were minimal data sources that were dedicated to CTE. The following series of data and tables reflect the resources found within College Station ISD and from the Texas Education Agency. Table 2 defines the direct funding budget for the CTE department in College Station ISD for the 2016-2017 school year. A total budget of $733,081.36 was allotted for CTE expenditures, and $2,031,932.66 was allocated for salaries. The funding that directly impacted students and

Table 2

College Station ISD Local Budget for CTE Expenditures

Budget Item	Amount
CTE Salaries	$2,031,932.66
CTE Budget	$733,081.36
Contracted Services (*tuition*)	$16,524.58
Supplies (*textbooks, gas, equipment, technology*)	$242,901.76
Travel & Miscellaneous (*field trips, teacher travel, CTSOs*)	$171,962.67
Capital (*vehicles, other direct CTE assets*)	$40,528.50

Note. Adapted from a report by the College Station ISD Director of Career and Technical Education, 2018. CTE salaries are separate budget from the local CTE budget.

teachers in CTSOs was drawn from the budget item Travel & Miscellaneous with an allocated amount of $171,962.67. College Station ISD spends $16,524.58 on contracted services such as tuition. Examples of tuition expenditures include fees associated with Adobe software, educator learning resources, and other membership fees associated with tutorial-based curriculum. The "Supplies" budget reserves budget funding for textbooks, vehicle gas, new technology, and new classroom equipment. The "Capital' budget designates money to purchase new assets to the CTE department such as trucks, vans, and large passenger vehicles. Table 2 reflects the CTE budget for College Station ISD; however, there were no distinctions on whether the money was from local funds or state or federal funding. For example, new technology and new equipment can be purchased with federal money received from the Perkins Grant.

Table 3 further defines the CTE budget by breaking down the "Travel & Miscellaneous" budget that was spent directly on CTSOs in 2016-2017. The table reflects how many students

Table 3

CTE Fiscal Budget 2016-2017 Travel Expenditures by CTSO

	BPA	FCCLA	FFA	HOSA	SkillsUSA
Number of students traveling	58	13	27	9	151
Number of teachers traveling	10	4	5	2	20
Airfare	$350.00	$0.00	$0.00	$0	$32,500.00
Registration	$5,293.00	$1,035.00	$1,805.00	$500.00	$32,641.00
Lodging	$18,116.00	$5137.00	$10,715.00	$2040.00	$27,800.00
Fuel	$800.00	0.00	$400.00	$400.00	$0.00
Chaperone meals	$2018.00	$271.00	$800.00	$270.00	$4257.00
Student meals	$0.00	$0.00	$0.00	$0.00	$4,340.00
Vehicle rental	$4498.00	$1,266.00	$1,490.00	$956.00	$15,946.00
Incidentals	$536.00	$0.00	$0.00	$200.00	$1,000.00
Total	$31,611.00	$7,709.00	$15,210.00	$4,366.00	$118,484.00

Note. Adapted from a report by the College Station ISD Director of Career and Technical Education, 2018.

and teachers traveled to CTSO events and includes the cost of airfare, registration, lodging, fuel, chaperone meals, student meals, and vehicle rentals. These data, however, only represents CTSO costs that were associated with competition travel and does not account for leadership trips or teacher conferences. The total money used for 258 students and 41 teachers for CTSOs competitions was $177,380.00.

The Director of CTE for College Station ISD started collecting CTSO enrollment data in 2016-2017. Table 4 displays the number of students who participated in each of the five CTSOs as members. The data do not determine if the student was actively engaged in the CTSO, so there

is no way to know if the student in each CTSO participated in any organizational activities. FFA has chosen to enroll all students within the Agriculture & Food cluster by paying one affiliation fee, whereas all the other CTSOs have enrolled the student members based on the student's choice to join. Table 5 represents demographic information collected from the Public Education Information Management System (PEIMS) report provided by College Station ISD (College Station ISD, 2017). The PEIMS report encompasses all data requested and received by the Texas Education Agency about public education, including student demographics, academic performance, personnel, financial, and organizational information. In addition, Table 6 uses PEIMS data as a resource to display a breakdown of student enrollment by career cluster (College Station ISD, 2017).

Table 4

College Station ISD CSTO Participation Counts

CTSO	Count
BPA	75
FCCLA	119
FFA	439
HOSA	112
SkillsUSA	187
Total Enrollment	932

Note. Adapted from a report by the College Station ISD Director of Career and Technical Education, 2018.

Table 5

College Station ISD Disaggregation of PEIMS Student Data

Demographics	Total Enrollment	CTE Enrollment
White / Caucasian	53.57%	55.24%
Hispanic American	22.15%	21.91%
Black or African American	12.51%	12.01%
Native American or American Indian	0.32%	0.40%
Asian / Pacific Islander	8.12%	7.38%
Two or More	3.33%	3.06%

Note. Adapted from the 2017 TSDS PEIMS report by the College Station ISD Director of Career and Technical Education, 2018.

Table 6

College Station ISD CTE Course Student Enrollment

Course Type	Count
Career Development	551
Agricultural, Food & Natural Resource	477
Architecture & Construction	190
Arts, A/V Technology & Communication	365
Business, Management & Administration	468
Education & Training	24
Finance	139
Health Science	611
Hospitality & Tourism	164

Table 6 Continued

Course Type	Count
Human Services	322
Information Technology	266
Law, Public Safety, Corrections & Security	176
Marketing	156
Science, Technology, Engineering and Mathematics	257
Total Enrollment	4,166

Note. Adapted from the 2017 TSDS PEIMS report by the College Station ISD Director of Career and Technical Education, 2018.

The Director of Career and Technology Education in College Station ISD also provided PMBAS data that highlight indicator levels on certain CTE areas such as standardized testing performance and enrollment. The PBMAS is an automated data system that reports annually on the performance of school districts in selected program areas, such as CTE (Texas Education Agency, 2018b). The report showed that there are no areas of concern for the College Station ISD CTE department; however, in 2016, there was an indicator warning for non-traditional genders in the respective CTE course; for example, not having enough females in Information Technology courses. The federal Carl D. Perkins law requires states to measure participation in non-traditional courses. Non-traditional courses are defined as occupations or fields of work, including careers in computer science, technology, and other emerging high skill occupations, for which individuals from one gender comprise less than 25 percent of the individuals employed in each such occupation or field of work (Carl D. Perkins, 2006). This importance of these data

can help assure that the CTE teachers in College Station ISD are utilizing recruitment efforts that help to support non-traditional course alignment.

The final extant data for CTE came from the Statewide CTE Coordinator for the Texas Education Agency who found a reference to CTSOs in the Texas Consolidated Annual Report (CAR). The CAR contains one accountability question about CTSOs which was "during the reporting year, did your state use Perkins funds to support career and technical student organizations?" The response for the State of Texas was a yes. The CAR also added a data statement that:

> "Texas recognizes that career and technical student organizations (CTSOs) play a key role in keeping students engaged in school by providing opportunities for the development of leadership and academic skills and technical knowledge and skills. CTSOs also provide scholarship opportunities. Texas CTSOs awarded members more than $4.1 million in scholarships in 2015-2016. Texas provided $375,430 in Perkins funds to the state offices of nine CTSOs. These funds support CTSO leadership development activities for 236,040 members statewide" (Texas Education Agency, 2018a, p.2).

This final report, although brief, does show that Texas recognizes the importance of CTSOs and provides state and federal Perkins grant money, to fund these organizations.

During the second phase of my study, I sought to capture the teacher perceptions of their own participation in their respective CTSO. I conducted seven semi-structured focus groups interview sessions and grouped teachers by their CTSO, thereby interviewing the FFA teachers together, the HOSA teachers together, etc. There were four teachers who participated for BPA, three for FCCLA, five for FFA, two for HOSA, and seven teachers for SkillsUSA. The

interviews were transcribed verbatim and analyzed using the emergent content analysis method (Renner & Taylor-Powell, 2003). I used aliases (pseudonyms) for the participants' names. My analyses revealed 12 themes that describe the teachers' perceptions of their own participations in the CTSOs:

1) LDR – Leadership Development

2) ELD – Enhanced Learning Development

3) CAR – Career Development

4) DIV – Diversity in Collaboration

5) PG – Personal Growth

6) COM – Community Development

7) CUR – Curriculum Development

8) PER – Performance Gauge

9) IND – Industry Collaboration

10) TRAV – Travel Experience

11) NET – Networking

12) REL – Relationships

These themes were then organized into three overarching categories: 1) Personal Development; 2) Professional Development; and 3) Program Development. I grouped PG, TRAV, NET, and REL to create the Personal Development category; CAR, DIV, PER, and IND to create Professional Development; and LDR, ELD, COM, and CUR to create Program Development. Figure 3 details the percentage that each category represented in the focus group data.
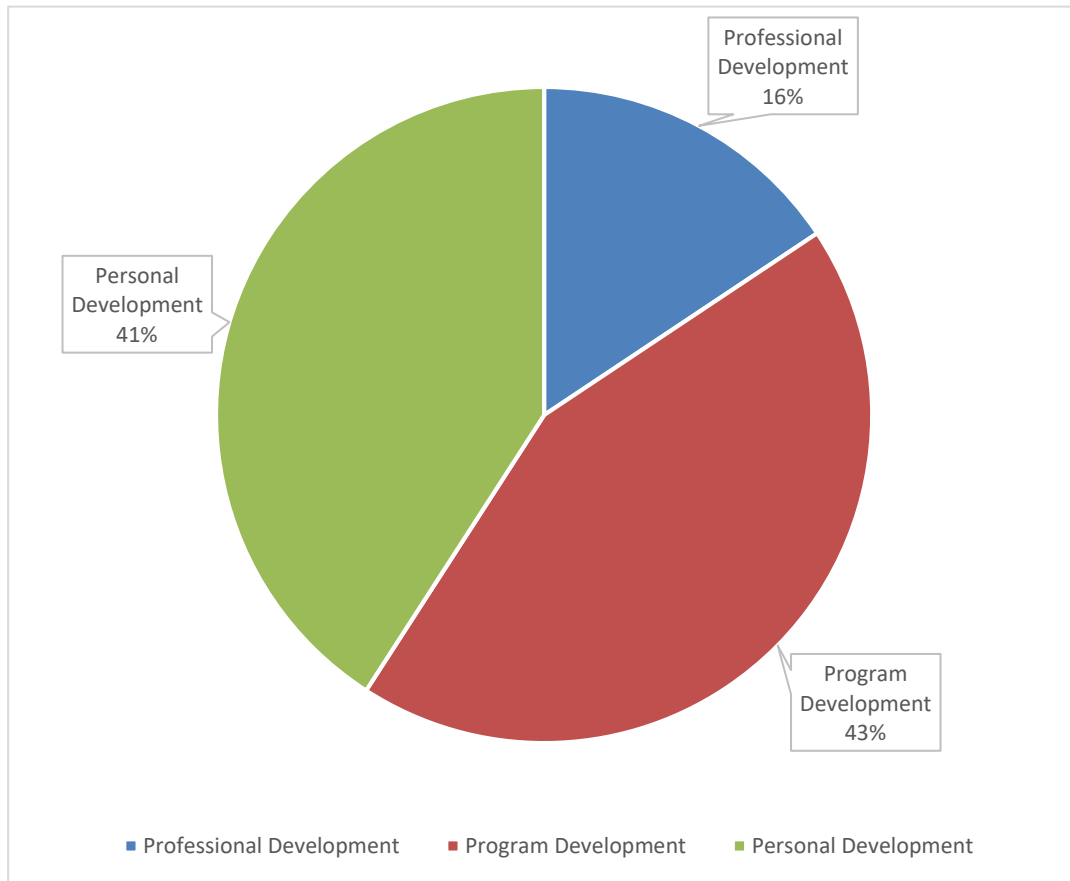
Figure 3. Focus Group Graph. This figure shows the representation of each focus group category.

At the third phase of my study, I administered a Likert-scale to the students who participated in the five CTSOs in College Station ISD to find out the students' perceptions of the CTSOs. There were 56 student responses to the survey. Figure 4 details the breakdown of participation by CTSO and students' demographics (i.e., gender and ethnicity). Students were not required to answer all questions, so some questions did not have a full set of responses (e.g., few students did not report their CTSOs). In addition to the data collected in Figure 4, students were asked a series of 17 questions on a 5 point Likert-scale (1 representing a "strongly disagree" position and 5 representing a "strongly agree" position). The questions were administered in a
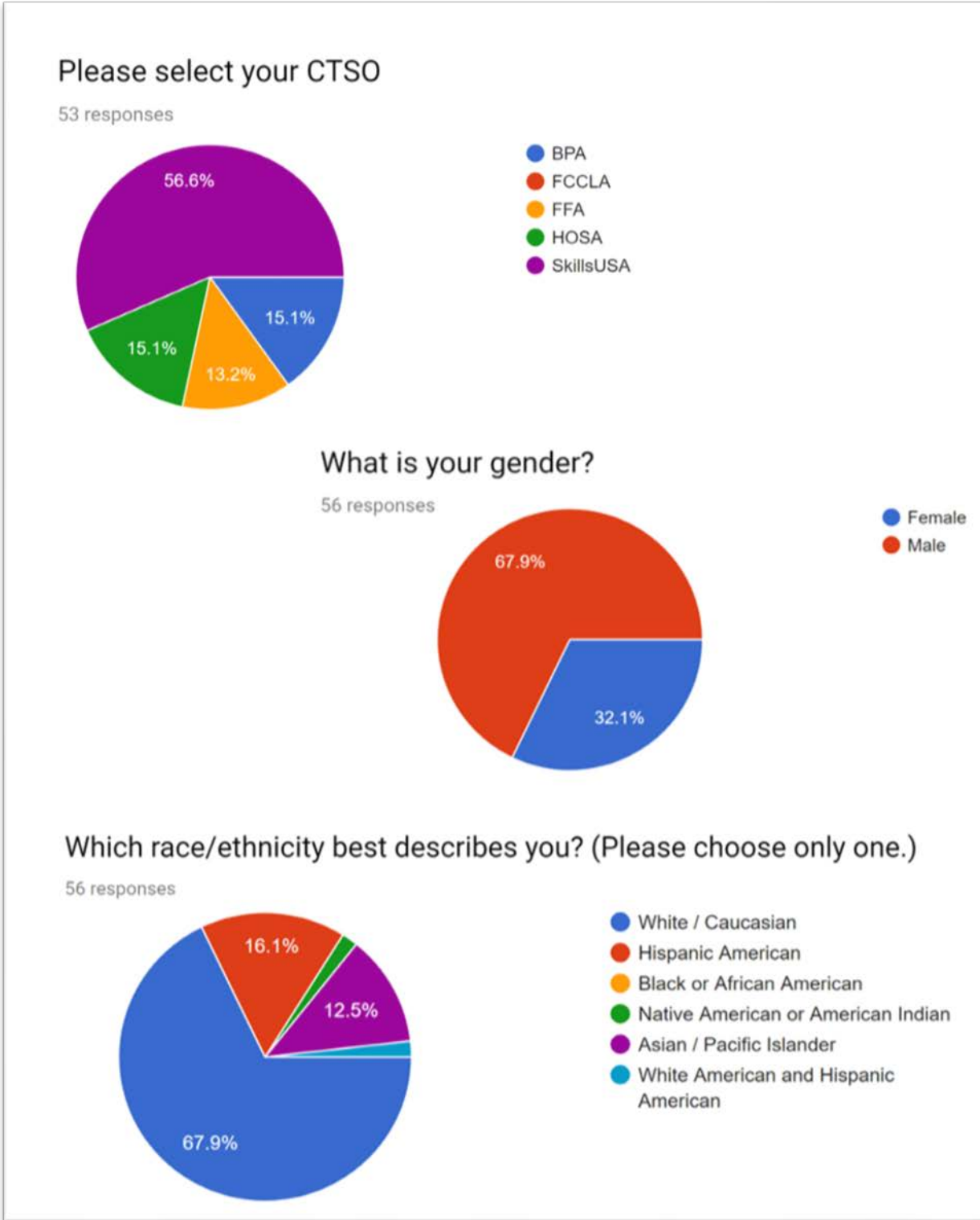
Figure 4. Likert-scale Introductory Graphs. Student participants' CTSO memberships and demographics (i.e., gender and ethnicity).

random order on the survey; however, I organized each question to be representative of one of the following categories: 1) Personal Value, 2) Educational Value, and 3) Career Value. Figure 5 presents the data associated with the eight questions in the Personal Value category, displaying the frequency of each Likert-scale response for each question. In addition, Table 7 displays mean

Figure 5. Personal Value Frequency Results. The frequencies of the students' responses to the items in the personal value dimension of the student Likert-scale.

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values of the students' responses for the Personal Value dimension. This table substantiates the

varying degrees to which students feel strongly about their answers.

Table 7

The Mean Value of the Students' Responses in Personal Value

Survey Question	Mean
I joined my CTSO because of the benefit to my learning.	4.10
Participating in my CTSO helps me focus on learning.	3.82
My CTSO helps me learn my CTE curriculum better.	4.40
I feel that my participating in my CTSO has been a direct benefit to my school success.	3.96
Participating in my CTSO has made me a better student.	4.29
Participating in my CTSO has helped me stay in school.	3.59
Participating in my CTSO has helped me stay out of trouble.	3.69
I have valued my time dedicated to my CTSO.	4.52
Personal Value overall mean	4.04

Note. Adapted from the student Likert-scale survey (Appendix B).

Figure 6 lists the questions associated with the Educational Value category, and Figure 7

displays the questions associated with the Career Value category. Both figures present the

frequency per question of the percentage value of responses versus the Likert-scale points.

Additionally, Table 8 and 9 display the mean value of the student response for the Educational

Value and Career Value dimensions.

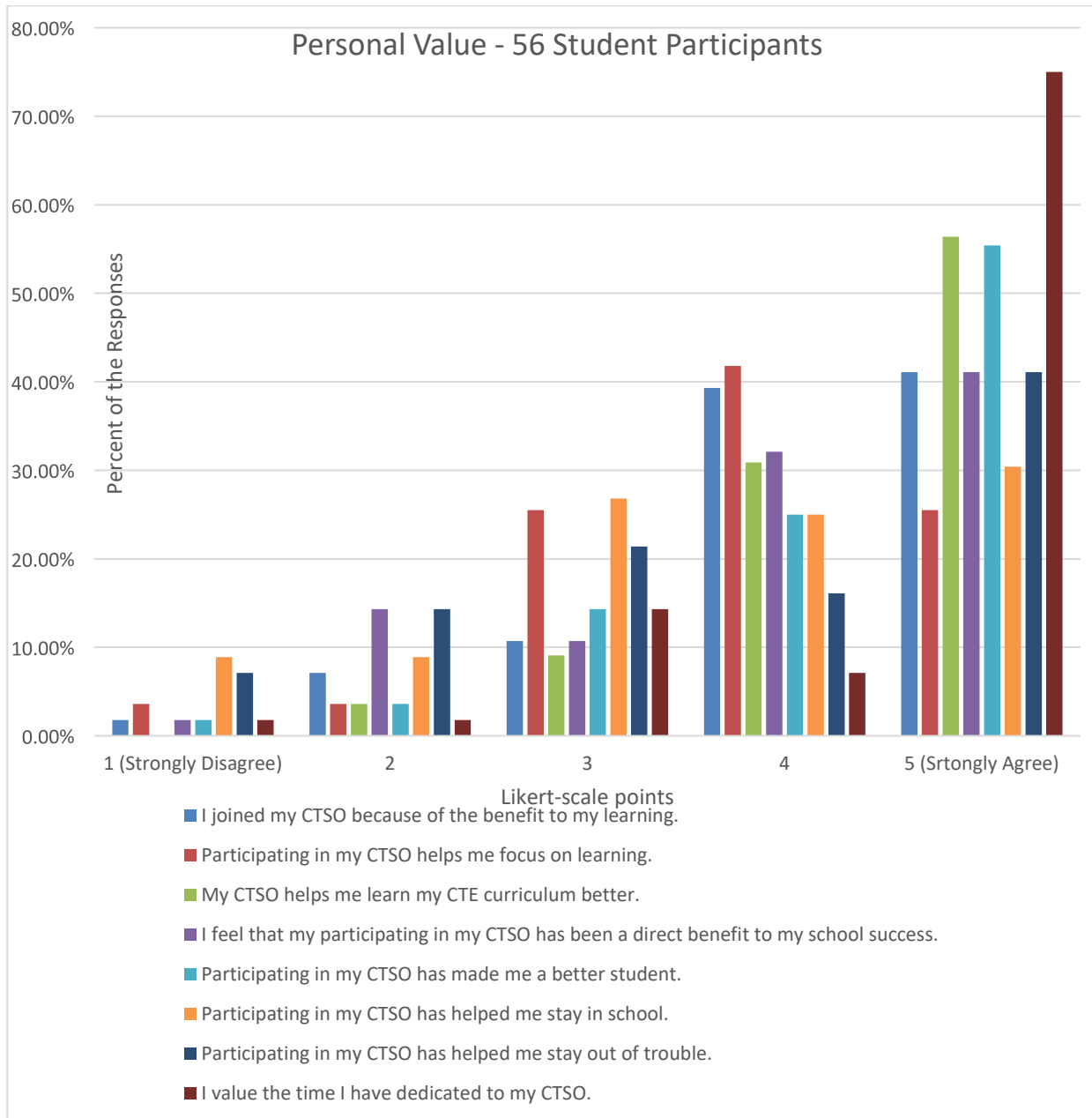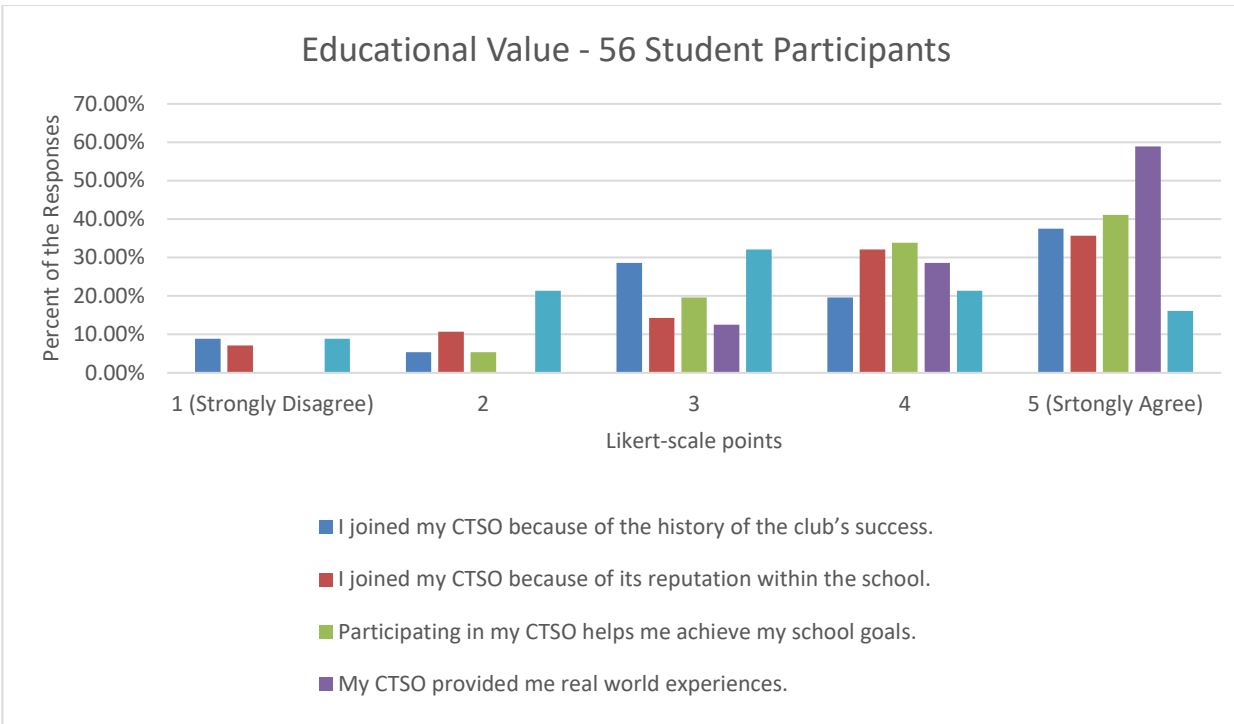**Figure 6.** Educational Value Frequency Results. The frequencies of the students' responses to the items in the educational value dimension of the student Likert-scale.
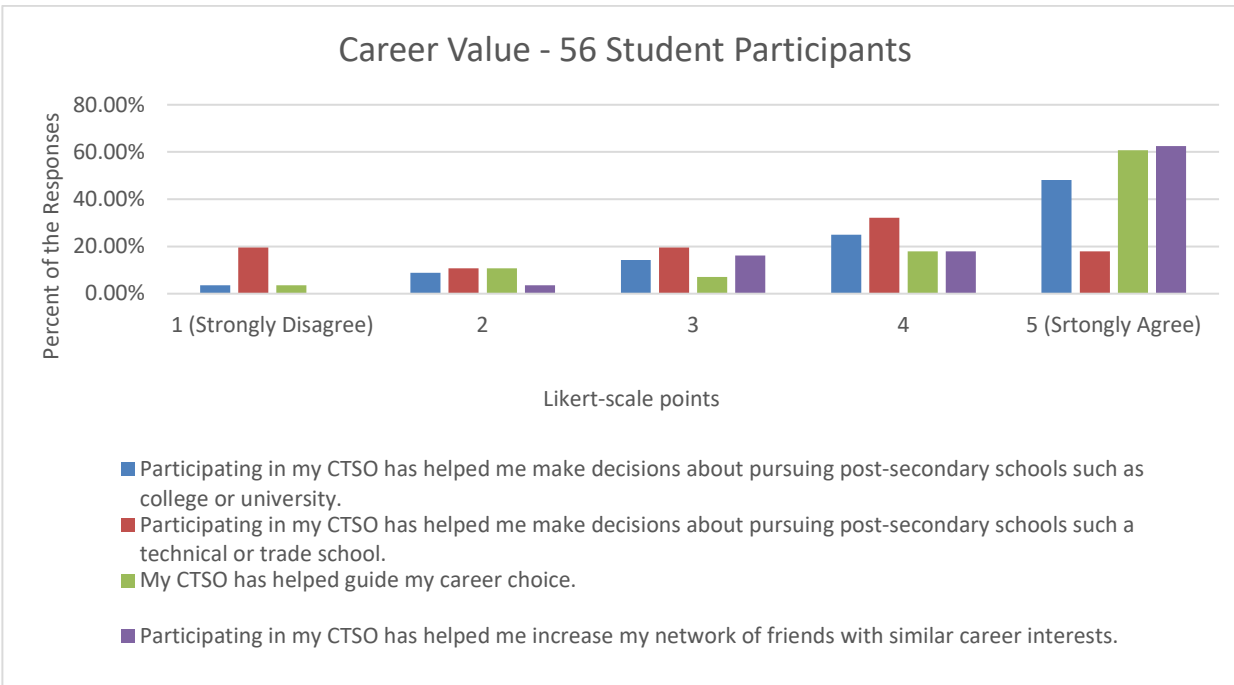
Figure 7. Career Value Frequency Results. The frequencies of the students' responses to the items in the career value dimension of the student Likert-scale.

Table 8

The Mean Value of the Students' Responses in Educational Value

Survey Question	Mean
I joined my CTSO because of the history of the club's success.	3.71
I joined my CTSO because of the reputation within the school.	3.79
Participating in my CTSO helps me achieve my school goals.	4.11
My CTSO provided me real world experiences.	4.46
Participating in my CTSO has helped me create better study habits.	3.14

Note. Adapted from the student Likert-scale survey (Appendix B).

Table 9

The Mean Value of the Students' Responses in Career Value

Survey Question	Mean
Participating in my CTSO has help me decide on pursuing post-secondary schools such as college or university.	4.05
Participating in my CTSO has help me decide on pursuing post-secondary schools such a technical or trade school.	3.18
My CTSO has helped guide my career choice.	4.21
Participating in my CTSO has helped me increase my network of friends with similar career interests.	4.39

Note. Adapted from the student Likert-scale survey (Appendix B).

Results of the Research

The process of piecing together extant data over CTE and CTSOs resembled a giant jigsaw puzzle, where all of the pieces were scattered from multiple locations. The relevant information was dispersed across multiple sources and protected by various stakeholders. Examining Table 2 and the budget for CTE in College Station, and disregarding salaries, $733,081.36 is allocated for funds that directly impact students. From Table 6, there are 4,166 students enrolled in CTE, averaging $175.97 spent per CTE student. From Table 3, $177,380.00 is spent on 258 students participating in CTSOs, averaging $687.52 per CTSO student. The overall amount spent on CTSOs calculates to be 24% of the College Station ISD CTE budget; however, this does not factor in student leadership trips or teacher conferences related to CTSOs. For example, CTSOs participate in student leadership conferences; additionally, students that hold a state or national officer position require travel for training. From Table 4, 932 students or 22% of those students participating in CTE, are enrolled in CTSOs. Therefore, College Station ISD financially supports 22% of students in CTE with 24% of the overall CTE budget, a rather large investment.

Each CTSO comprised students in different career clusters. BPA pulls from students in the Business, Management & Administration, Finance, and Marketing clusters. FCCLA pulls from Education & Training, Hospitality & Tourism, and Human Services clusters. FFA draws from the Agricultural, Food, & Natural Resource cluster alone. HOSA draws from Health Science cluster alone, and SkillsUSA draws students from Architecture & Construction; Arts; A/V Technology, & Communication; Information Technology; Law; Public Safety; Corrections & Security; and Science, Technology, Engineering, and Mathematics. Table 10 displays the CTSO enrollment with each associated CTE cluster enrollment. Among the CTE students

Table 10

College Station ISD CTSO vs. CTE Course Enrollment

Demographics	CTSO Enrollment	CTE Enrollment
BPA	75	763
FCCLA	119	510
FFA	439	477
HOSA	112	611
SkillsUSA	187	1,254
Total Enrollment	932	3,615

Note. Adapted from a report by the College Station ISD Director of Career and Technical Education, 2018.

enrolled in the courses that comprise BPA, only 9.8% participate in CTSOs. With FCCLA, 23.3% participate, 92% for FFA, 18.3% in HOSA and 14.9% in SkillsUSA. The problem with these data is that they do not show active participation versus non-active. FFA pays an affiliation fee for all students in the Agricultural, Food, & Natural Resource; however, we do not know if all members actually participate in FFA activities. From Table 3 and 10 we can see that 77.0% of students in BPA participated in state and national competition travel and 10.9% participated in FCCLA, 6.2% in FFA, 8.0% in HOSA, and 80.7% in SkillsUSA. We can also see that from Table 3, 17.8% of the funding for CTSOs is spent on BPA, 4.3% spent on FCCLA, 8.6% spent on FFA, 2.5% on HOSA and 66.8% spent on SkillsUSA. These percentages begin to build a picture of where College Station ISD money is being spent, and on how many students. We can see that SkillsUSA spends the most money in CTSO funding, however over 80% of the student members see the financial investment. SkillsUSA may also be reaching more active members,

but they are still only reaching nearly 15% of the students that could enroll in SkillsUSA. FFA, on the other hand, reaches nearly 92% of their possible student enrollment, but only has 6% active participation. The data found from CTSO enrollment and expenditures should be viewed by the CTSO teachers as it tells a more complete story about the relationship between budget and CTSOs. The data can allow CTSO teachers to discover new opportunities and inefficiencies and allow for better planning for their CTSO strategies. These data can also open the door to conversation between CTSOs to discuss best practices.

The final interesting piece found in the extant CTSO data was there are local and state accountability reports that briefly mention CTSO or CTE; however, there is a lack of evidence of how these data relate to the benefits of time and financial investment in CTE and CTSOs. The PBMAS report used by College Station ISD can identify areas of concern for CTE accountability in standardized testing and in non-traditional gender enrollment in CTE programs. These data may be useful in planning campus-wide professional development programs to help CTE plan to support student populations in testing, but there is no correlation on how effective the influence of CTE or CTSO participation can have on student performance outcomes. Additionally, according to the CAR report, the Texas Education Agency recognizes that CTSOs play a key role in student engagement (Texas Education Agency, 2018a); however, they only state that the federal Perkins grant money is allocated to support CTSOs but do not define whether this support is a local level or state level of support. I believe a record of how these funds were allocated is needed, as well as a breakdown of funding per CTSO enrollment.

Capturing the teacher perspectives on CTSOs required a different approach. Hence semi-structured focus group interviews were conducted. The interview data were coded into 12 themes that were combined to create three overarching categories (Renner & Taylor-Powell, 2003). Out

of the participant remarks, 41% of the transcribed interview content were identified to relate to Personal Development, 16% for Professional Development, and 43% in Program Development (100% referring to the entirety of participant remarks). Throughout the progress of the interviews, all teachers expressed a passion for their students, CTE, and their CTSO. All teacher participants referred to their students as their "kids," which may be over looked by some, but this personal inference towards family, struck a note with me. There was a certain level of emotional investment engaged by each teacher in the interview, so I knew I was investigating a topic that would reflect honest and impactful responses from each person.

Teachers discussed positive experiences for students and teachers in participating in a CTSO connected to Personal Development. This category was influenced by comments associated with personal growth, travel experience, networking, and relationship themes. The following excerpts were associated with personal growth theme:

> SkillsUSA3: So it's these time management skills, the self-discipline, and work ethic, to make sure that they get that job finished, just like they would at the post-secondary and industry levels.

> BPA2: Employers always ask for and tell us they want people with good communication skills and independent learners, and independent researchers was some of the topics in BPA, and are beyond our classroom, and our students get together as a team and do their own research to put together some pretty good presentations. They've done that on their own.

> SkillsUSA6: One huge benefit is, I'll pick an individual - I have a young man that I got last year as a freshman that wouldn't even shake your hand, even when I met him at the door every day. But now when he wouldn't shake my hand, here at the end of the year he's shaking my hand without any effort. He's going to step out on his own and make that challenge. I thought that was pretty darn awesome, and he's a sophomore, so I have him for two more years.

> SkillsUSA3: Just the responsibility and the communication that they get from being in skills. There's an obvious difference between the kids that are in CTSOs, to those that are not.

There is a humble sense of worth that students build within themselves that is an underlying tone in all of these comments. The teachers attest to the success in confidence that students are able to build, which inadvertently reflects in the teacher's own self value. We have teachers that witnessed the benefit from participating in their CTSO when they were in high school, and now as a teacher, they can continue in the joy of the experience. The sense of growth and building of personal skills is evident through learning decision making, socialization, commination skills, independent research, and overcoming low self-esteem. The following comments are some sample focus group interview excerpts associated with the travel experience theme:

> FFA2: For a kid that's never been away from home, never spent the night in a hotel, it's really a lot of change in their life. You know, saying it's a big deal to just see how those kids react seeing a different part of the state, or react from seeing kids all over the state, you know I think that's a really good thing.

> FCCLA2: The weekend also gives students the opportunity to learn to budget their money, while trying make their money last for three days, and to learn cost of consequences, how to behave on a trip, how to behave in a hotel, how to behave in a conference and a meeting.

> SkillsUSA2: From the first night staying in a hotel, to the first night being away from home, we think here in College Station we are small, but some kids never leave this town, so to go to places like Corpus Christi, or to go to Galveston, or to Dallas and see these things for the first time, it's a lot for them.

The teachers reported a benefit from taking students on travel experiences. They found that there is a real-world value in student travel that brings unique opportunities and growth for their students. There is a social benefit and a difference in what is gained personally from traveling and seeing and staying in new places. Students learn money and behavior management, and some witness new experiences from outgoing teachers. The following comments are some sample focus group interview excerpts associated with the networking theme:

> SkillsUSA2: You get to collaborate with other teachers across the state, so the professional network of collaborators is worth it, absolutely worth it.

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SkillsUSA3: I think the only other thing that I witness over the last six years is just the network, getting involved, and meeting other teachers that teach the same thing that you teach. Getting contact information, sharing, communicating with each other, I've had multiple teachers over the last several years shoot me messages, to say hey what are you doing with animation on this subject, or do you know how are you running your game design program?

SkillsUSA6: Just having that ability you know, spread it out even further, having that opportunity for some of us to run competitions, to meet with more industry people that commit to judge and do those kinds of things, there's multiple layers for benefits for the students and the teachers I think.

There was a benefit found among the teachers in the power of professional networking. The collaboration of educators from across the state and nation allowed for CTSO teachers to become more engaged and involved in the overall experience. The conversations about curriculum, planning and competitions allowed for each teacher to gain advantages for their programs as well as for their students. The following comments are some sample focus group interview excerpts associated with the relationships theme:

FCCLA1: Being in a CTSO helps you build a good rapport outside of the classroom because in the classroom, you have so many things for the students to do, but in the CTSO you have many club meetings to do—you have those trips, so there is some bonding and rapport that goes with it. It helps facilitate that relationship piece.

FFA5: The benefit is the relationships you get to build with those students, and you get to see them have those really cool moments. It's so fulfilling, and you know I love agriculture, and I get to share that with them, and I get to teach them to be excited, then I watch them become advocates for agriculture. Then you see kids go off to study in college or get jobs in that field. It's super cool

SkillsUSA6: I just noticed it's not just the bonding with the students, and not just bonding with me, but the bonding with each other—the team building for kids that never worked together. They are all of the sudden meeting after school, challenging each other to do something that they've never done before.

The teacher to student relationship is one of key components of creating student success, but the relationship that blooms from the CTSO experience is unparalleled. Teachers report that there is

a deep sense of rapport and camaraderie among the CTSO students, and they learn to rely on one

another's' strengths while challenging one another to new learning. Teachers gain an internal

motivation through an intrinsic experience of building relationships with their CTSO students.

Teachers discussed positive experiences for students and for themselves while

participating in a CTSO related to Professional Development. This category was influenced by

comments associated with diversity in collaboration, career development, performance gauges,

and industry collaboration. The following comments are some sample focus group interview

excerpts associated with the diversity in collaboration theme:

> SkillsUSA3: I got my computer nerds that are getting to know SkillsUSA6's construction guys, so these kids are meeting each other because they would never have met each other outside of their schedules. So, SkillsUSA has bridged this demographic of kids coming together. So, just getting those kids together, and putting them in an unfamiliar situation, and training them to get familiar in the unfamiliar, to me, that's what it's all about,

> FFA5: They learn about themselves as a person and as a leader, and other people, and how to work with those differences or similarities on how to make a team fit in the world.

> FCCLA3: Our CTSOs should reflect our student population. I think that when it doesn't is when the teacher should be very concerned or look very critically at their own recruitment and retention practices. I find that there are student programs and organizations on campus, that are systematically designed to keep or make it difficult for certain kind of people to be involved, but it's those certain kinds of people that benefit the most from our programs.

The experience of participating in a CTSO offers student an opportunity to be in a diverse

organization that will challenge their personal integrity. The programs offer a sense a multi-

culture learning that bridges the gaps between cultural diversity and high school identity.

Teacher responses indicated that it was no longer about the computer students working on their

own, or construction students staying to their parts of the school. As reported by the teachers, the

CTSOs are bringing these students together and paving the way for diversity. The following

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comments are some sample focus group interview excerpts associated with the career

development theme:

> BPA1: CTSOs help kids explore the possibilities in certain career fields, in the workforce, and in the industry, to showcase leadership and technical skills.

> SkillsUSA4: So, the fact that so many kids are able to find something that matters to them, is the hook into their future, but also back into their education as well.

> SkillsUSA5: CTSOs, in terms of it being a great motivator, and a great hook, I feel like the kids that are in the classes also in make the jump into these careers, and become better kids, because they have more to strive for, I guess, a goal in mind.

The goal of all education is to have students find their place in the workforce whether that be a

college or technical school career, a military career, or a job right out of high school. The

students that participate in these CTSO programs can locate a new connection to learning,

through relevant projects in real-world settings. The CTSOs allow for teachers to provide that

anticipatory reaction to link their curriculum to a career. The following comments are some

sample focus group interview excerpts associated with the performance gauge theme:

> SkillsUSA7: And of course, it's nice to see what other people are doing. To see how they compete at those levels, and to make sure that we are implementing things right.

> SkillsUSA5: I would also say that I kind of see SkillsUSA competition, I don't know what I'm looking for, but I get a gauge for what other students from other schools are doing, and what other programs are doing, and I get to compare if I am in the right place when compared to other people and what other programs are doing. That's a really great gauge for me.

> BPA3: We can look and see how many students you have advance to state or go to nationals, or how many regional presidents, or state leaders that year, or leadership roles, but it's totally different for each kid.

There are no standardized tests in CTE that allow for CTE teachers to gain an understanding of

the impact of their programs in academia. They have no way to check their performance on a

state or national scale. The fact that CTE teachers found their own type of performance gauges

within their CTSOs is remarkable. This added benefit may be overlooked by many, but there is value within knowing how a program rates among similar programs across the state. Comparison allows for the teachers to self-assess their curriculum to learn if they are doing enough or if they are in a place for growth. The following comments are some sample focus group interview excerpts associated with the industry collaboration theme:

> SkillsUSA6: As I increase my knowledge about what was needed in the industry; my kids increase their knowledge and increase their desire to learn.

> SkillsUSA7: CTSOs make sure that we are implementing projects that are industry based.

> SkillsUSA2: Industry talks about the importance and need for soft skills, but soft skills really need to become core skills that all kids need to have these skill sets, and they get that through their CTSO.

The backing of industry in the CTSO programs allows for real-world experiences for the students. This adds a sense of relevancy to the CTE programs because students understand that what they are learning and doing all relates back to what the workforce industry is demanding. Partnerships with industry helps build a robust program of learning in the CTSO classroom and ultimately benefits participating students.

Teachers discussed positive experiences for students and for themselves while participating in a CTSO related to Program Development. This category was influenced by comments associated with leadership development, enhanced learning development, community development, and curriculum development. The following comments are some sample focus group interview excerpts associated with the leadership development theme:

> FFA4: I would say with even a lot of things that we do for kids, we encourage kids to step into leadership roles. Like with judging teams, the kids are responsible for packing the gear, and as they advance, they take on leadership roles and decision-making skills.

> FCCLA3: It's really to make what we're doing and little more meaningful, and also gives them a forum to exercise leadership, group work, problem solving.

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> SkillsUSA1: I see my kids grow and develop leadership skills in kids that I would never ever seen otherwise; it's been impressive - seeing kids stepping out of their own comfort zone.

The concept of leadership development can encompass a wide variety of skills. From public speaking and decision making to problem solving, students who take on the task of student leadership can expect a life-changing experience within their CTSO. The teachers found benefits in these leadership skills because it provided their students an additional avenue of personal growth and opportunity to develop new skills that will carry over to leadership in their careers. The following comments are some sample focus group interview excerpts associated with the enhanced learning development theme:

> SkillsUSA3: SkillsUSA kind of enlightened me to what was possible. I've seen students grow so much from freshman year to senior year because of their CTSO. It had nothing necessarily to do with the class or athletics, but to see them find that one thing that they were actually passionate about, and to be able to have a go other than just this idea of a career, 8 to 10 years from now, to have something to actually work for, like I'm actually working for this competition to show that I'm better than the other person; that is the motivation that gives them, or I guess it's buy in for them to put in the effort in the class.

> SkillsUSA5: It's just an opportunity to sort of develop a skill set that you normally can't do in an artificial type classroom. It enhances what you do.

> SkillsUSA3: SkillsUSA follows our curriculum, our kids get ready for contests by just going through the class. My SkillsUSA kids don't get any different treatment than kids that are just in the regular class. The only difference is that we will have extracurricular practices, and then have the extra practice to hone their knowledge into their skills and become better. We also give up Saturdays just to come in and practice.

The CTE teachers find that the CTSO experiences provide their student with opportunities to learn beyond the classroom. The learning experiences range from curriculum reinforcement to leaning parliamentary procedure. The teachers reported finding value in their students gaining critical thinking skills and increasing student motivation to hone skill sets. The following

comments are some sample focus group interview excerpts associated with the community

development theme:

> HOSA2: CTSOs gives them an opportunity for community service. It gives them a
> challenge from outside academics.
>
> FFA2: We can look up when kids go off to work and then how many come back to speak
> about how they are going to come back to support state and local education.
>
> FCCLA3: I think the purpose of the CTSO is to give kids the opportunity to take what
> they're learning in class out into the community.

CTSOs allow for students to gain opportunities to apply what they have learned in their

classrooms into projects that impact their local communities. This service aspect of the CTSO

helps build a program that supports internal growth as well as community growth. The following

comments are some sample focus group interview excerpts associated with the curriculum

development theme:

> BPA2: I will tell you that I've used some of the problems and prompts that our students
> have been given through BPA, and I have used those prompts and problems in the
> classroom. They are good problems. They are good extensions.
>
> FFA2: I think it's hard for us to say what we don't use in the classroom and how it's
> everything we do from our curriculum to everything we do in FFA - is all about our
> CTSO reinforced in the classroom. It's not a detriment to use a practice for CTSO contest
> during a classroom or curriculum time, it's a hands-on application of learning.
>
> FFA4: FFA is not extra-curricular it's co-curricular. The SAEs look different for kids that
> are super involved versus kids that aren't, but every kid is required to have one.

This idea that the CTSO experience is indeed co-curricular rather than extra-curriculum is

ingrained in all the CTE teachers. They convey an understanding that their CTSOs help their

classroom curriculum become more robust because they can utilize classroom time in

preparation for competitions, or CTSO events causing no detriment to non-participating CTSO

students. The CTSO become an extension of learning and provides the CTE teacher with another resource to aide in curricular development.

The perceptions of the CTSO teacher were made evident through the results of the the semi-structured focus group interviews. These testimonies helped derive three overarching categories: 1) Personal Development; 2) Professional Development; and 3) Program Development. Though analyzing the transcribed interviews, there was a natural emergence of themes. As each interview was conducted, the commonalities in responses appeared as each question was asked, and the foundation of these common themes developed almost naturally. I was able to locate common relationships among the statements from the teachers, and the unity within answers reinforced the development of the final categories.

The testimony of the CTSO teachers builds a sense of understanding regarding the importance of recruitment efforts for students to join and participate in the opportunity. Teachers undeniably found positive aspects about the inclusion of the CTSOs into the classroom and were not defrayed from the benefits of CTSO incorporation from the added work and time. Teachers found benefits in personal development where students were gaining a positive experience from travel, increasing professional networks, building relationships, and increasing personal growth. Teachers also found importance in professional development because they could increase personal and student experiences connected to diversity inclusion, career development, industry collaboration, and program performance gauges and evaluation. Finally, there was strong teacher advocacy for program development because through the CTSO, students could have opportunities for leadership development, enhanced learning, community outreach, and curriculum development.

The final set of data found from the Likert-scale student survey helps to define students'

perceptions of CTSOs. The survey results were categorized into 1) Personal Value, 2)

Educational Value, and 3) Career Value. Tables 11 and 12 compare some of the initial results of

the survey with CSISD PEIMs data. Table 11 defines a gender breakdown of the total enrollment

of the high schools to the results of the student survey. There is a gender discrepancy between

the CTSO results compared to the enrollment of the schools. In addition, Table 12 showcases the

demographic breakdown between the CSISD total enrollment to students in CTE and then

students in CTSOs. We see that the demographic data match between total enrollment and CTE

enrollment; however, there is a demographic discrepancy among students who participate in

CTSOs. The CTSOs appear to contain more White/Caucasian students, very few Black or

African American students, and a larger number of Asian/Pacific Islanders than supported by the

PEIMs data. The survey data only reflect 6% of the overall CTSO enrollment for College

Stations ISD, so this may not necessarily mean that there is a direct issue with gender or

demographic recruitment for the CTSOs, but these numbers should still caution CTE teachers

that they need to focus on ensuring that they are equally promoting the CTSOs as inclusive for

all students.

Table 11

Disaggregation of PEIMS Gender Data with CTSO Survey Results

Sex / Gender	Total Enrollment	Research Survey
Male	51.11%	67.90%
Female	48.89%	32.10%

Note. Adapted from the 2017 TSDS PEIMS report by the College Station ISD Director of Career and Technical Education, 2018.

Table 12

Disaggregation of PEIMS Student Data with CTSO Survey Results

Demographics	Total Enrollment	CTE Enrollment	Research Survey
White / Caucasian	53.57%	55.24%	66.40%
Hispanic American	22.15%	21.91%	15.70%
Black or African American	12.51%	12.01%	1.80%
Native American or American Indian	0.32%	0.40%	1.80%
Asian / Pacific Islander	8.12%	7.38%	12.50%
Two or More	3.33%	3.06%	1.80%

Note. Adapted from the 2017 TSDS PEIMS report by the College Station ISD Director of Career and Technical Education, 2018.

The idea that students find a gain in personal value from participating within a CTSO is made evident by the results found within Figure 5. When examining these results, we find that a majority of the student's responses fall within the 4-5 range. This displays a sense that students agree that they are gaining benefits from their CTSOs in their personal learning and understanding of the classroom curriculum. In addition, students were asked if CTSO participation benefitted their school success, helped them stay in school, and if participation made them a better student. These dimensions all received high ratings with a mean of 4.04 found within Table 7, supporting the value found from CTSO participation. The final question asked students if they found value in their time dedicated to their CTSO, resulting in nearly 90% strongly agreeing. The results from the student surveys clearly show that students find an overall benefit to their personal learning and time commitments in their CTSOs. When asked about the educational value of CTSOs, students responses fell within the 3-5 range. These questions were

designed to obtain an understanding about the reputation of the club within the school as compared to school success. Many students found it positive that the CTSOs were a successful part of the school, but this did not appear to be a major motivating factor. The only question that received the highest responses was 68% of the students strongly agreed that they gained real-world experiences from participating in their CTSO. The final set of questions were designed to gain an insight into the career value of CTSOs for students. Students were asked if their CTSO helped them find a future career within college or career readiness. The responses showed that within College Station ISD, more students were preparing for college careers versus technical or trade learning; however, students did respond highly (value?) that their CTSO helped with career interests.

When piecing together the data from phase 1-3, the data help define which characteristics will be used to identify students as participants in CTSOs and how this can affect the funding spent directly on CTSOs for College Station ISD. From the extant data, we gather that there are several gaps, so what is necessary is a financial report that represents all funds spent on CTSO events including leadership and competitions. In addition, student demographics need to be accounted for each year along with the tracking of active versus non-active membership. The focus group interviews yielded three overarching categories of personal development, professional development, and program development. These categories closely resemble the categories derived from the student surveys of personal value, educational value, and career value. When examining how to define characteristics that will measure the benefit and value of the CTSO experience, we can combine these overarching categories from the focus group interviews and student surveys into the following areas: 1) Personal Investment, 2) Professional Development, and 3) Educational Impact. Personal investment focuses on the value found within

the CTSO experiences that help students and teachers gain personal insights to lifelong learning, value of time, travel experiences and personal relationships and networking. Professional development focuses on data that will show career guidance, career choice, industry support, and performance gauges. Educational impact highlights relevancy in the program, importance of leadership, and application of CTSO experiences to real-world learning. These three overarching categories create a framework to define the CTSO experience. Figure 8 presents a diagram showcasing this framework of the three-tiered CTSO experience model. These categories may be broad, but in an effort to showcase data to the stakeholders in College Station ISD that validates the funding of CTSOs, the bigger picture needs to be defined.

Figure 8. CTSO Experience Framework. A framework model for the CTSO experience as defined by personal investment, professional development and education impact.

Interaction Between the Research and the Context

The study of CTE and CTSOs within College Station ISD may have been a small targeted research, but the impact of the findings can be applied to schools across Texas. Finding extant data within CTE and CTSO was difficult, as there is no one place where these data can be found, and I felt like a CTE data archeologist trying to locate any evidence or records. Even though I found some data, the numbers were incomplete. The budget data do not account for all CTSO spending. Travel for CTSO leadership events was left out, and the money reported was not designated as local, state or federal funding. The need to define how much money is spent in specific categories is vital for to maintain an equitable and efficient CTE and CTSO budgets. Another limitation to this study was that not all students participated. Because a parent signature was required for the Likert-scale student survey, many students did not return a permission form and were not able to participate. This resulted in only 6% of the students in CTSOs participating in the research study. Because the survey was anonymous, future researchers should develop an alternate way of collecting signed consents. The final challenge in the research was a small level of resistance from the CTSO teachers to participating in focus group interviews. Because the research was out of their normal context and conversations, they were reluctant to engage in a conversation about their perspectives on CTSOs. However, once teachers realized that the interview was an outlet to discuss their CTSO experiences and perspectives, they were very open to the conversation.

Initial data were shared with the College Station ISD CTE administration and teachers. The data were eye opening in the fact that, once pieced together, the results from the research showed teachers and administrators the overall impact of their time dedicated to their CTSOs and how it relates to student benefits and district funding. There are some hard truths about

demographics and student recruitment, as well as challenges regarding active members and non-active members. Other teachers were astonished about the funding of some CTSOs over others and wanted to know why so much was spent on SkillsUSA over others. These questions were valid, but only reinforced the need for this research study and the recommendations I have found. Their input also supported my ideas for future research. A demographic study is needed in all CTSOs to determine if student membership matched that of the school's population. I believe that a further study on CTSO active members and non-active members is needed to examine the effectiveness of affiliation fees. Further research is needed to define what is meant by leadership in CTSOs. Additionally, researchers need to develop best practices in CTE budget reporting for local and state agencies. Future researchers need to highlight best practices for teacher implementation of a CTSO. They should also highlight best practices for school district implementation of a CTSO. Finally, researchers need to develop a set of standardized reports for CTE and CTSOs to help CTE teachers gauge the effectiveness of their curriculum on a state and national scale.

Conclusions for Chapter IV

There is a vast amount of work that is needed in highlighting data for CTE and CTSOs. The collection of extant data was difficult, but these data exist and is important for stakeholders. My study for College Station ISD showcased data that show that teachers and students find a benefit in participating in their CTSO. The amount of funding spent on CTSO is a large amount; however, with the proper documenting and reports in place, this funding can be validated by considering the benefit of the activity to the student experience.

CHAPTER V

CONCLUSIONS

Summary of Findings from Chapter IV

The analysis of my three-phase, mixed-method exploratory study allowed me to

synthesize data to validate the funding used in Career and Technical Student Organizations

(CTSOs) in College Station ISD by showing that there is a benefit in the student experience. To

answer what extant data on Career and Technical Education (CTE) and CTSOs are available for

the state of Texas and College Station ISD, I contacted key College Station ISD administrators,

key personnel from the Texas Education Agency and the executive directors of FFA and

SkillsUSA in Texas. From the reports and documents that were provided to me, I was able to

determine results about CTE funding, CTSO funding, enrollment data, and demographic data.

Approximately 24% of the College Station ISD CTE budget was spent on CTSOs, which

accounts for 22% of the total CTE enrollment. This is a large investment, making the data

discovered in this research study relevant. The extant data showed a need for better accounting of

budget and finances to help distinguish if the money spent was from local, state, or federal funds.

Furthermore, because the State of Texas directly funds the state level CTSOs, expenditure

reports are needed from the state level CTSOs as well. The extant data also showed that some

CTSOs have higher student participation than others; however, there is a discrepancy in

distinguishing active members versus non-active members. For example, FFA reaches 92% of

their possible student enrollment, however only 6% show active participation, whereas

SkillsUSA has 80% active participation, but only reaches 15% of the student enrollment. The

budget that was supplied to me for this study was also found to be incomplete. This budget did

not report travel costs for student leadership events in the CTSOs. The inclusion of these costs needs to be reported, and a clear definition of what is meant by leadership events in a CTSO needs to be defined. This demonstrates a need for further research to locate best practices within CTSOs, discovering better efficiency in spending, and creating more effective outreach for student participation.

To uncover the teachers' perceptions of the CTSOs, I conducted semi-structured focus group interviews with the teachers who had participated in a CTSO. Teachers were interviewed in groups separated by their respective CTSO. The interview protocol included six questions (see Appendix A). From the analyses of the transcribed data, twelve themes were emerged that were aggregated into three overarching categories: (1) personal development, (2) professional development, and (3) program development (Renner & Taylor-Powell, 2003). The teachers spoke with passion about their students and their CTSO, and a common bond of relationships and relevance was the undertone of the conversations. What was discovered concerning personal development was that teachers found positive attributes about their CTSO from student travel, increasing professional networks, building relationships, and increasing their personal level of growth and learning. From professional development, teachers reported an importance in finding benefits in diversity experiences for the students, career development, industry support, and performance gauges for their programs. The benefits gained from program development included opportunities for leadership development, enhanced learning opportunities, community outreach, and curriculum development. The testimony of the teachers spoke to the importance of CTSOs in relation to their classroom curriculum and showcased that the CTSO experience is co-curricular, rather than extra-curricular. The CTSO teacher found positive benefits and impacts from their CTSO, and regardless of time commitment or extra cost, the benefits outweighed the workload.

The student perceptions of the CTSO were explored by administering a Likert-scale survey (see Appendix B). The students who participated in a CTSO for the 2017-2018 school year completed the survey. The survey results were categorized into three parts (1) personal value (2) educational value, and (3) career value. The survey also collected basic demographic information about the students and the CTSOs. A discrepancy in the CTSO demographics was found when compared to the overall enrollment of CTE in College Station ISD, and this discrepancy was concerning to the CTSO teachers. One of the FCCLA teachers stated:

> Our CTSOs should reflect our student population. I think that when it doesn't is when the teacher should be very concerned or look very critically at their own recruitment and retention practices. I find that there are student programs and organizations on campus, that are systematically designed to keep or make it difficult for certain kinds of people to be involved, but it's those certain kinds of people that benefit the most from our programs. (FCCLA3)

The College Station ISD CTSOs reported to have more White/Caucasian students (55.24%), very few Black or African American students (12.01%), and a higher number of Asian/Pacific Islanders (7.38%) than represented by enrollment. However, the Likert-scale student survey data only reflected 6% of the overall CTSO enrollment for College Stations ISD. These data numbers may not necessarily mean that there is a direct issue with gender recruitment or demographic recruitment efforts for CTSO membership, but the data should raise awareness for CTSO teachers to assure that they are equally promoting the CTSOs to be inclusive to all students. Beyond the demographics and gender information, the students reported a positive benefit in the time spent in their respective CTSOs. The students agreed that their participation increased their personal value because it benefited their school success, helped them stay at school, and showed

value in their time dedicated to the organization. There was also a benefit in educational value, where the CTSOs helped the students find real-world experiences that added to the relevancy of the classroom learning. Finally, the students found a benefit to their career value by helping them focus on post-secondary educational or workplace goals and career interests.

When examining the data from phases 1-3, we can define the CTSOs experiences and how they will affect the direct funding spent on these organizations for College Station ISD. There are commonalities within the categories from the student survey and teacher focus group interviews. By combining these themes, we can create an evaluation instrument that follows three general categories: 1) personal investment, 2) professional development, and 3) educational impact. The evaluation instrument should be a reflective survey designed to have teacher and student input administered at the end of their respective CTSO season. The questions in personal investment should measure the benefits found within the CTSO experience that help students and teachers gain insights to lifelong learning, value of time, travel experiences, and personal relationships and networking. The questions in professional development should measure the benefits found within career guidance, career choice, industry support, and performance gauges. The questions in educational impact should measure data that will highlight relevancy in the program, importance of leadership, and application to real-world learning.

Discussion of the Results in Relation to the Review of the Literature

The Career and Technical Student Organizations (CTSOs) offer an unparalleled learning experience when partnered with the Career and Technical Education (CTE) courses. They have been described as being a co-curricular experience, rather than an extra-curricular experience. A testimony of a CTSO teacher in College Station ISD clarifies:

"I think it's hard for us to say what we don't use in the classroom and how it's everything

we do from our curriculum to everything we do in FFA - is all about our CTSO

reinforced in the classroom. It's not a detriment to use a practice for CTSO contest during

a classroom or curriculum time, it's a hands-on application of learning" (FFA2).

The College Station ISD CTE teachers found that participating and preparing for CTSO

competitions help drive the curriculum in their classrooms. Many of them use contest prompts

for classroom projects, or even utilize classroom time for CTSO contest preparation. This

inclusion of the CTSO into the daily classroom scheme does indicate that students are gaining an

enhanced learning experience, that is only supported further by the CTSO, so these unique

opportunities are playing a vital role in a student's success while enrolled.

The National Career Clusters Institute (2016) developed 16 career clusters that represent

more than 79 career pathways to help students identify career options, and College Station ISD

offers 15 of these clusters (see Table 6). Additionally, the U.S. Department of Education

currently recognizes eleven CTSOs at the secondary level with College Station ISD offering five

career clusters (see Table 4). It may be ideal to offer all career clusters and all CTSOs within a

school, but the actuality is that the school should only offer what is reflected by the need of the

local industry and community. Oftentimes, the CTSOs that are offered are only established

because of the CTE teacher's knowledge or prior experience from that organization. College

Station ISD offers a wide variety of CTE courses that provide the students the opportunities to

participate in a CTSO regardless of the career cluster the students may be enrolled in.

The Carl D. Perkins Act was established to offer federal finances to local education in an

effort to support CTE. In addition, each local school in Texas receives weighted funding for each

eligible full-time equivalent (FTE) student in an approved CTE program. From the 2016-2017

fiscal school year, College Station ISD had a total budget of $733,081.36 allotted for CTE expenditures and $2,031,932.66 is allocated for salaries (see Table 2). The funding that directly impacts the students and the teachers in the CTSOs is drawn from the budget item Travel & Miscellaneous with an allocated amount of $171,962.67 (see Table 2). The CTSO funding makes up 24% of the overall CTE budget; however, further delineation is needed on whether the funding spent was local, state or federal Perkins Grant funding. With the proper funding, school districts can increase the relevancy of their CTE programs, further enhanced by the CTSOs. The literature reports that there are benefits for the students participating in the CTSOs, however empirical evidence is needed (Brown, 2002). Zirkle and Connors (2003) suggested that there was a lack of verifiable evidence that supported the claim that members develop essential workplace skills through involvement. The results from my research study found a starting point in collecting empirical data to support the suggestions for the collection of evidence from the benefits of the CTSO experience.

Discussion of Personal Lessons Learned

Throughout my research study, I have learned several things. First, there are several areas of concern that need to be addressed in CTE. The conversations about the impact of skilled and technical learning need to be brought to the forefront of academia, and the stigma of career readiness being a second-class education needs to be extinguished. CTE classrooms are robust centers of learning that are specific, agile, and relevant. CTE classes are driven by the needs of local, state, and national industry and are further enhanced by the vast opportunities offered in CTSOs. I have been humbled by learning more about the CTE teacher. Their level of time, dedication, and commitment to their students; their CTE curriculum; and their CTSOs are remarkable. Their passions for their craft drive the excellence in their work, and their personal

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testimony of the relationships developed within their CTSOs embodies the hearts of their programs. They work countless hours, and volunteer their time, most often without compensation or recognition; the CTE teachers and the work in their CTSOs need to be celebrated and made more apparent in the world. Another lesson I learned from this study is that there is apprehension among colleagues when asked to participate in a study. I believe that if the directive to contribute to a focus group conversation came from the school district administration, or even from an outside source, the CTSO teachers would have been less reluctant to share. It appeared that in the planning stages of the interviews, teachers were less apt to participate because it was time being asked of them outside of their normal routines. There were more questions as to why they were being asked to participate in the focus groups, and there was less understanding of how this research study could impact or make connections to their own work. Perhaps it was my approach, or the wording of my informed consent, but I know that for future studies, an administrative approach would have been better received. This leads me to the final lesson I have learned in this study, which is the need for proper planning. When I first established my research idea, I had a larger scope in mind. At the time, it seemed as if I could have easily accomplished the task. However, it is essential to have great leadership and guidance throughout this journey, and with that, I was able to focus my idea and target a research method that would help me solidify my research questions. A record of study is a practical solution to a current issue, and the right plan needs to be established by reviewing, reworking, and revising it before you can set the details into action.

Implications for Practice

With all of the data combined, we can start to gather an idea of how to define which characteristics will be used to identify students as participants in CTSOs and how this can affect

the direct funding spent on CTSOs for College Station ISD. The significant financial commitment College Station ISD spends to support CTE programs and their CTSOs demands a valid and reliable instrument to determine the value of the students' experiences. Initially, I believed that one evaluation instrument could be designed that would capture the student experience for purposes of exploring and documenting the benefits of participating in these organizations; however, the results of my research warrants more. First, I believe that there are several gaps in the data that need to be connected through a series of reports that could be established within College Station ISD. Financial reports are needed that fully identify all CTE and CTSO funding, delineated by local, state, or federal funds. Because Perkins funding can only be spent on very specific items such as new equipment technology or innovative classrooms, the need to distinguish financial reports that separate each area of budgetary spending is necessary. This report should track all CTE and CTSO expenditures as well. The data that I received were not inclusive and did not incorporate travel associated with leadership activities. If we considered that my research records indicated that 24% of the CTE budget was spent on CTSOs, knowing that leadership activities were not included, we know that this percentage will only increase, which is an important factor for the stakeholders to understand. To build an accurate picture of how the College Station ISD budget is spent on CTSO, the report should also include student and teachers in attendance on these trips, costs of travel, registration, meals, and transportation. Overall, this report will help College Station ISD be more accountable in its record keeping and allow for a self-analysis of CTE and CTSO cost. Teachers can begin to gain an understanding of where their funding is coming from, how it is being allocated, and how many students they are affecting. This information will allow for teachers and administrators to more effectively plan and examine for best practices in CTSO preparation and procedures. Furthermore, it is important

that the State of Texas begin to prepare similar financial reporting in regard to CTSOs, because they directly finance CTSOs at the state level with Perkins funding. The State of Texas needs to assess how much money is spent per CTSO alongside data that reflect overall membership versus members that were in attendance at district, regional, or state level events and different levels of active membership. The State of Texas should require CTSOs to submit financial reports as well as comparing the costs associated with memberships to the experience that active membership lends to students. All of these reports can allow the stakeholders across the state to make more informed choices about CTSOs and allow school districts to understand the overall investment in the CTSO co-curricular experience.

In addition to the financial reporting, College Station ISD should continue to gather CTSO enrollment data as well as basic demographic data. A breakdown within gender can help with CTE analysis of gender representation in courses and will help to ensure that CTE teachers are not excluding any sub groups from participating in their CTSOs. The demographic data will allow teachers to help overcome barriers that may inadvertently exist within student populations and allow for more inclusive recruitment efforts. The collection of these data can take place during initial enrollment at the beginning of the school year, but it would garner better results as a post CTSO season evaluation. Based on the findings from this research study, an evaluation instrument has been developed from the following categories: (1) personal investment, (2) professional development, and (3) education impact (see Appendix C). The instrument attempts to collect student input based on the value of their time, participation, and interests gained from participating in their CTSO. In addition to the student survey, I felt as if teacher input was also needed in post CTSO seasons, so an additional survey was created focusing on the same three

overarching categories (see Appendix D). The teacher survey will attempt to evaluate their value

of time, commitment to learning, growth, industry support, and relevancy to their classroom.

In summary, the implication for College Station ISD is that there are some areas of

growth needed in data reporting, specifically in the area of CTSOs. There is currently some data

reporting in place, but a focused effort is needed that will generate a series of reports allowing

CTE teachers to gain a better grasp of their own programs, allowing effort in understanding the

effectiveness of their work in CTSOs. Teachers can then look to find efficiency in spending and

collaborating to discover best practices among the CTSOs with the purpose of raising the level of

excellence across all groups. The implications for the State of Texas include a more sophisticated

growth needed in reporting. If the State of Texas funds CTSOs, stakeholders should have

accurate documentation of this investment and the effectiveness of the CTSOs from a state-level

perspective. The outcome could drive a new way the State of Texas could account for best

practices within CTE and allow for teachers to measure their own programs by using a standard

or means to assess their own curriculum and programs.

Recommendations

After examining an in-depth review of extant data for CTE and CTSOs in College Station

ISD, interviewing the teachers, and surveying the students, my study has yielded several gaps in

CTE and CTSO data practices. I have the following six recommendations.

I recommend a study analyzing CTE teacher supplemental pay for their time spent

supporting a CTSO. Currently in College Station ISD, several teachers receive a small stipend,

while others are on an extended twelve-month contract. This practice is common across the state

of Texas; however, the amount of stipend or length of contract varies greatly. Some school

districts have a merit-based system, where the more a teacher participates, the more stipend they

will receive. Further research would help CTE directors across the state find a balance of monetary support for CTE teachers and their time commitments and allow for the CTE teacher to feel valued in the time spent in their CTSO.

I also recommend a study of CTSO demographics. This should be collected at the local, state, and national levels. It is important that CTSO demographics demonstrate that these organizations are not excluding certain populations, but it is also important to determine if there are any correlations to certain groups towards a specific CTSO. For example, do more Hispanic American students tend to join FCCLA or SkillsUSA? This type of study would assist schools in determining if their recruitment practices are inclusive for all students and if the CTSOs are bridging any barriers for certain population demographics in the school.

I recommend a study detailing what it means to be an active member versus a non-active member of a CTSO. With the high cost of funding, it is important to understand how many students are gaining a positive experience from participating. With some CTSOs offering affiliation fees, which guarantee all students within a cluster are a member of their particular CTSO, we must determine if this expenditure is worth the cost. Defining what it means to be an active member will assist teachers in finding best practices to allow students to become more engaged with the overall CTSO experience. The active member study should also extend to the state level to locate data on overall membership versus those students who participate in the district, regional, and state level events. These data can then be compared to the CTSO expense reports to determine how much money is invested per active member versus non-active. This will benefit the State of Texas in analyzing the effectiveness and outreach of a CTSO.

I recommended a study to define the meaning of the leadership in CTSOs. Many of the teachers in the focus group interviews attested to the power and benefit of leadership events

within their CTSO; however, the breadth of what encompasses leadership is vague. This type of study will help define what is meant by leadership in these organizations as well as how many students are affected from the benefit of participating in leadership events.

I recommend a review of best practices for CTE and CTSOs. This study would aide CTE directors with documentation that could help bolster failing programs or ignite new opportunities. One of the best practices that should be studied is in finding a standardized financial reporting method for CTE and CTSO budgeting at the local and state level. This would afford stakeholders with a means of comparing expenditures across the state and matching school districts. Another best practice would be to examine the implementation of a CTSO and how teachers are recruiting, establishing, and incorporating their CTSO into the classroom and community. This could include membership reports, showcasing active membership to assist educators in learning ways to gain higher student investment and engagement in the organization.

My final recommendation would be to develop a study to determine a standardized reporting method for school districts to chronicle the effectiveness of CTE and CTSO programs. This should include curriculum, certification testing, equipment, software used, and more. This report could help foster a way for teachers to assess their own programs and to gauge their levels of performance. School districts could easily see a snapshot of programs in other schools to see if they are meeting the needs of their local industry and economy in ways that adhere to certain standards. These reports could also provide the stakeholders within school districts a way to see how their CTE and CTSO programs compare to similar ones among the state and at national levels.

Conclusions for Chapter V

Throughout the course of my study, my eyes were opened to new possibilities of growth and research for Career and Technical Education. I believe that the results found from this study are just the tip of the iceberg and will lay a foundation and groundwork for future research. There is an unknown passion in the CTE teacher and their heartbeat is through their work in their CTSOs. It is evident that the CTSO experience yields numerous benefits for students. Through piecing together extant CTE data, I found that there is valuable information out there, but it needs to be organized into yearly reports. These reports would make data more accessible to all stakeholders and provide CTE teachers with opportunities to assess their own programs and optimize their efforts. I determined that there are three overarching themes for data collection from the teacher focus group interviews and the student Likert-scale survey. By implementing evaluation instruments (see Appendix C and D), data can be gathered in personal investment, professional development, and educational impact. The evaluation should occur after CTSO season as a reflective survey into their engagement and investment of time throughout the school year. The results of these surveys, combined with the recommendation to produce yearly CTE reports, can further be utilized by school districts to explore the benefits of CTSOs for their students and to better operationalize the findings into data-informed financial support.

REFERENCES

A guide to career & technical student organizations. (n.d.). Retrieved from

    http://www.ksde.org/Portals/0/CSAS/CSAS%20Home/CTE%20Home/CTSO/Kansas_C

    TSO_WEB2[1].pdf

Alfeld, C., Aragon, S., Hansen, D., & Stone, J. (2006). Inside the black box: Exploring the

    value added by career and technical student organizations to students' high school

    experience. *Career and Technical Education Research*, *31*(3), 121-156.

Anderson, G. L., Herr, K., & Nihlen, A. S. (2007). *Studying your own school: An educator's*

    guide to practitioner action research. Thousand Oaks, CA: Corwin Press.

Brown, B. L. (2002). CTE student organizations. *ERIC Digest No. 235*.

Camp, W. G., Jackson, R. S., Buser, B. R., & Baldwin, E. T. (2000). *Vocational student*

    organizations and student achievement. Working Paper.

Career Clusters. (n.d.). Retrieved from https://careertech.org/career-clusters

Career and Technology Education Allotment. (2016). Retrieved from

    http://tea.texas.gov/Finance_and_Grants/State_Funding/Additional_Finance_Resources/

    Career__and_Technology_Education_Allotment/

Career and Technical Student Organizations. (n.d.). Retrieved from

    http://www2.ed.gov/about/offices/list/ovae/pi/cte/vso.html

Carl D. Perkins CTE improvement act of 2006, Pub. L. No. 109-270, 120 Stat. 683 (2006).

Caruth, G. D. (2013). Demystifying mixed methods research design: A review of the

    literature. *Mevlana International Journal of Education*, *3*(2), 112-122. Retrieved from

    https://eric.ed.gov/?id=ED544121

College Station ISD. (2017). *2017 PEIMS data report*. Not publicly available.

Creswell, J. W. (2014). *Research design qualitative, quantitative, and mixed methods approaches.* Los Angeles, CA: SAGE.

Expanding career readiness through career and technical student organizations. (2011). ACTE career readiness series. Retrieved from https://www.acteonline.org/general.aspx?id=1964#.WCs24-YrKUk

Fletcher Jr., E. (2006). No curriculum left behind: The effects of the No Child Left Behind legislation on career and technical education. *Career and Technical Education Research*, *31*(3), 157-174.

Guest, A., & Schneider, B. (2003). Adolescents' extracurricular participation in context: The mediating effects of schools, community, and identity. *Sociology of Education, 76*(2), 89-109.

Hull, D. M. (2004). Career pathways: The next generation of tech prep. *National Tech Prep Network.* Waco, TX: CORD Communication

Lankard, B. A. (1996). Myths and realities: Youth organizations. *ERIC Clearinghouse on Adult, Career, and Vocational Education.*

Lynch, R. (2000). High school career and technical education for the first decade of the 21st century. *Journal of Vocational Education Research*, *25*(2), 155-198.

Manley, R. A. (2011). The decentralization of Perkins: History, impact, and recommendations for future CTE legislation. *Career and Technical Education Research*, *36*(2), 119-152.

McNally, K. M., & Harvey, M. W. (2001). Career and technical student organizations: A perfect path to self-determination and successful transition. *Preventing School Failure: Alternative Education for Children and Youth*, *45*(3), 114-118.

Reese, S. (2008). Today's students, tomorrow's leaders. *Techniques: Connecting Education and Careers*, *83*(1), 17-22.

Renner, M., & Taylor-Powell, E. (2003). Analyzing qualitative data. *Programme Development & Evaluation, University of Wisconsin-Extension Cooperative Extension*. Retrieved from http://nde.ne.gov/afterschool/Data_Collection/Analyzing_Qualitative_Data.pdf

Rojewski, J. (2002). Preparing the workforce of tomorrow: A conceptual framework for career and technical education. *Journal of Vocational Education Research*, *27*(1), 7-35.

Texas Education Agency. (2018a). *2016 Texas Consolidated Annual Report (CAR) narrative and data*. Retrieved from https://tea.texas.gov/WorkArea/DownloadAsset.aspx?id=51539618382

Texas Education Agency. (2018b). *2017 College Station ISD PBMAS district report*. Retrieved from https://rptsvr1.tea.texas.gov/cgi/sas/broker?_service=marykay&myear=8&_program=pbm.master.sas&_debug=0&prgopt=maskpdf17.sas&search=distname&namenum=college+station+isd&submit=Continue

The National Career Clusters Institute. (2016) Retrieved from https://careertech.org/institute

Thompson, C., Thompson, D. E., & Orr, B. (2003). A factor analysis of variables affecting CTSO advisors' satisfaction. *Journal of Family and Consumer Sciences Education*, *21*(2), 1-9.

Threeton, M. D. (2007). The Carl D. Perkins Career and Technical Education (CTE) Act of 2006 and the roles and responsibilities of CTE teachers and faculty members. *Journal of Industrial Teacher Education, 44*(1), 66-82.

Threeton, M. D., & Pellock, C. (2010). An examination of the relationship between SkillsUSA

    student contest preparation and academics. *Journal of Career and Technical*

    Education, *25*(2), 94-108.

What is CTE?. (2016). Retrieved from https://www.acteonline.org/cte/#.WCtkpuYrKUl

Zirkle, C., & Connors, J. J. (2003). The contributions of career and technical student

    organizations (CTSO) to the development and assessment of workplace skills and

    knowledge. *Workforce Education Forum, 30(2),* 15-26.

APPENDIX A

A SEMI-STRUCTURED FOCUS GROUP INTERVIEW PROTOCOL

The major CTSOs that will be included in this research study will be Business Professionals of America (BPA); Family, Career, and Community Leaders of America (FCCLA); FFA (formerly known as Future Farmers of America); HOSA Future Health Professionals; and SkillsUSA. The teacher focus group interview participants will be selected from these five CTSOs with a target of 20 participants. Semi-structured focus group interview questions include:

1. What is the purpose of a CTSO?

2. How do you implement your CTSO into your curriculum?

3. How are students enrolled in your CTSO?

4. What student information is collected by your CTSO?

5. What are the benefits to you as a teacher in participating in a CTSO?

6. What are the benefits to your students from participating in a CTSO?

APPENDIX B

STUDENT LIKERT-SCALE SURVEY QUESTIONS

The following are sample questions were used in the student survey, however the purpose of the research was to utilize data collected in the teacher focus group to drive the student survey questions. An addendum will be uploaded to IRB after the final survey is completed. Student surveys will be handled over a three-week process. The CTSO teacher will pass out the student informed consent and parent permission and allow for two weeks to collect the forms. During the third week, surveys will be administered to all students that acquired permission.

All survey questions will be on a 5-point scale from Strongly Disagree to Strongly Agree. In addition, participants' demographic data will be collected.

1. I joined my CTSO because of the benefit to my learning.

2. I joined my CTSO because of the history of the club's success.

3. I joined my CTSO because of its reputation within the school.

4. Participating in my CTSO helps me focus on learning.

5. Participating in my CTSO helps me achieve my school goals.

6. Participating in my CTSO has helped me make decisions about pursuing post-secondary schools such as college or university.

7. Participating in my CTSO has helped me make decisions about pursuing post-secondary schools such a technical or trade school.

8. My CTSO has helped guide my career choice.

9. My CTSO provided me real world experiences.

10. My CTSO helps me learn my CTE curriculum better.

11. I feel that my participating in my CTSO has been a direct benefit to my school success.

12. Participating in my CTSO has made me a better student.

13. Participating in my CTSO has helped me create better study habits.

14. Participating in my CTSO has helped me increase my network of friends with similar career interests.

15. Participating in my CTSO has helped me stay in school.

16. Participating in my CTSO has helped me stay out of trouble.

17. I value the time I have dedicated to my CTSO.

APPENDIX C

CTSO EVALUATION INSTRUMENT FOR STUDENTS

The following are sample questions that are suggested for a student survey to be administered at the end of the respective CTSO season. Survey are suggested to be anonymous. *All survey questions will be on a 10-point scale from 1 to 10, with 10 being the most positive. In addition, participants' demographic data will be collected.*

Student Demographics
- Which race/ethnicity best describes you? White / Caucasian; Hispanic American; Black or African American; Native American or American Indian; Asian / Pacific Islander
- What is your gender?
- Please select your CTSO: BPA; FCCLA; FFA; HOSA: SkillsUSA

Personal Investment
- I joined my CTSO because of the benefit to my learning.
- My CTSO helps me learn my CTE curriculum better.
- Participating in my CTSO has made me a better student.
- Participating in my CTSO has helped me stay in school.
- Participating in my CTSO has helped me stay out of trouble.
- I value the time I have dedicated to my CTSO.
- How would you rate your active participation in your CTSO?

Professional Development
- Participating in my CTSO has helped me make decisions about pursuing post-secondary schools such as college or university.
- Participating in my CTSO has helped me make decisions about pursuing post-secondary schools such a technical or trade school.
- My CTSO has helped guide my career choice.
- Participating in my CTSO has helped me increase my network of friends with similar career interests.
- How would you rate your leadership participation in your CTSO?

Education Impact
- I joined my CTSO because of the history of the club's success.
- I joined my CTSO because of its reputation within the school.
- Participating in my CTSO helps me achieve my school goals.
- My CTSO provided me real world experiences.
- Participating in my CTSO has helped me create better study habits.

APPENDIX D

CTSO EVALUATION INSTRUMENT FOR TEACHERS

The following are sample questions that are suggested for a teacher survey to be administered at the end of the respective CTSO season. Survey are suggested to be anonymous. *All survey questions will be on a 10-point scale from 1 to 10, with 10 being the most positive. In addition, participants' demographic data will be collected.*

CTSO Demographics
- Please select your CTSO: BPA; FCCLA; FFA; HOSA: SkillsUSA
- Do you participate in CTSO leadership events?

Personal Investment
- I joined my CTSO because of the benefit to my personal learning.
- I joined my CTSO because of the benefit to my student learning.
- Participating in my CTSO has made me a better teacher.
- I value the time I have dedicated to my CTSO.
- Do you feel that your time dedicated to your CTSO is valued by the school district?

Professional Development
- Participating in my CTSO has helped me prepare my students to make decisions about pursuing post-secondary schools such as college or university.
- Participating in my CTSO has helped me prepare my students to make decisions about pursuing post-secondary schools such a technical or trade school.
- Participating in my CTSO has helped me increase my professional network.
- How active would you rate your leadership participation in your CTSO?
- Participating in my CTSO helps me by learning best educational practices.
- Participating in my CTSO helps guide my career goals.

Education Impact
- My CTSO helps me prepare a more relevant CTE curriculum.
- I feel the school district values me CTSO because of the history of the club's success.
- My CTSO has a good reputation within the school.
- Participating in my CTSO helps me achieve my goals.
- My CTSO provided my curriculum with real world experiences.
- My CTSO provided my curriculum with industry support.
- The relationship made with CTSO students are more impactful than non-CTSO students.