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Jandrin, Lucas P. *The Impact of Career and Technical Student Organizations on Student Career Pathway Choices at One Mid-Western Urban Public High School*

Abstract

Career and Technical Student Organizations (CTSO) provide quality learning opportunities for students to explore future career pathways. The urban midwestern public high school case study in this research had students participating in four Career and Technical Student Organizations; FBLA, FCCLA, DECA, and SkillsUSA. The purpose of this study was to determine the impact CTSOs had on student choices in career pathway planning. It was first determined that the school did not have a method to collect data on the effectiveness of student organizations and how they correlated to student's career choices. This mixed-methods case study focused on the impacts CTSOs had on career choices for students. As well as the perceptions participants had upon graduating from high school. A literature review provided background content for CTSOs and career pathways. A quantitative demographic survey was sent to twenty-three past graduates in which seventeen responded and provided demographic data. A qualitative semi-structured interview was also conducted with five of the survey respondents which each provided a narrative of their experiences in CTSOs and how they impacted their career choices. Overall it was determined that CTSOs have a positive impact on student's career pathway choices through a number of hands-on experiences and opportunities.

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Chapter I: Introduction

The Wisconsin Department of Public Instruction defines Career and Technical Student Organizations (CTSOs) as a “quality component of career and technical education programs that support and enhance school-based and work-based learning. They provide value to students through various opportunities that allow them to showcase their skills and knowledge” (Wisconsin Department of Public Instruction, 2018). CTOS in Wisconsin consist of students being involved with organizations related to marketing (DECA), technology and engineering (SkillsUSA), business (FBLA), health science (HOSA), family consumer science (FCCLA), and agricultural education (FFA) (Wisconsin Department of Public Instruction, 2018). Together, these organizations can be found in 88% of Wisconsin public schools and consist of nearly 47,000 student members each year (Wisconsin Department of Public Instruction, 2018).

CTSOs are beneficial for students in many ways. Not only do they foster the exploration of different career pathways, prepare students for leadership roles, guide them into becoming better citizens, and close gaps in skills, they also prepare them to meet occupational and academic standards, and link school-based learning to the real world (Wisconsin Department of Public Instruction, 2018; SkillsUSA, n.d.). Student organizations are aptly described as being “co-curricular” instead of “extra-curricular.” In this regard, Career and Technical Education (CTE) engages students by exposing them to skills that can be applied to real-world applications, and student organizations enhance those skills by allowing students a hands-on competitive approach to applying the skills and knowledge learned throughout their coursework (Alfeld, Hansen, Aragon, & Stone, 2006).

As students navigate their educational career, it becomes evident that each step they take deepens their career identity, thereby advancing their academic and career pathway (ACP). Many

states, including Wisconsin, stress the importance of academic and career planning to providing a strong foundation of career exploration and individual planning for all students. It is through such work that Wisconsin was awarded grant money to increase and scale the career pathway model for the entire state. This model embraces the seamless transition from secondary through postsecondary education, and into occupational positions; it also seeks to unite three partners—secondary, postsecondary, and industry—to achieve the common goal of providing opportunities for students to become successful. Forming and maintaining a strong partnership is important, as students are enabled to explore, learn, grow, and have work-based learning opportunities in a given career pathway (Dubenske, Van Doren, & Kornell, 2018).

Minnesota State's CAREERwise program defines Career Pathways as "small groups of occupations within a career cluster" (n.d.). Each career or occupation is first broken into 1 of 16 different career clusters. For the midwestern public high school under consideration, Architecture and Construction, Arts, Business Management, Finance, Health, Hospitality, Marketing, Manufacturing, IT Network Systems, and Science-Technology- Engineering-Math are the career clusters in which courses are offered (Wisconsin Department of Public Instruction, 2017). Inside each of these clusters are various career pathways and options that students can explore and within which they can gain skills.

For this research, the midwestern public high school alluded to above was used as a case study to determine the effectiveness of CTSO programs in career pathway planning. The school's district is home to over 1,100 students in grades 9–12. This high school has a diverse population of students, where 75% of the students are white; 9%, Asian; and 5.5%, African American, with a small amount of Hispanic and Native American students attending as well. The

school's district is home to over 150 students with disabilities and another 29% economically disadvantaged students (Wisconsin Department of Public Instruction, 2017).

In addition, this high school has been involved in CTSOs for many years. Currently, it has active membership in FBLA, FCCLA, DECA, and SkillsUSA. In each of these programs, students participate in state and national competitions as well as community service projects, and they attend monthly meetings and activities.

Statement of the Problem

Although CTSOs have been implemented in this midwestern public high school for many years, there is no evidence to support whether CTSO involvement impacts a student's choice of career pathway. Currently, there is no system in place to determine the impacts or perceptions students have when participating in a CTSO. Thus, there is a need to collect evidence and data in order to analyze the overall effectiveness of CTSOs at the high school level.

Purpose of the Study

The purpose of this study is to determine the impact of CTSOs on student choices in career pathway planning at one urban midwestern public high school. Because the expectations for students to be college and career ready are so great, a goal of the high school is to ensure that programs of study are tightly connected to a student's ACP (Central High School, n.d.). To complement this goal, the current study aims to identify the ways that CTSOs contribute to students' ACP. Specifically, the high school students participate in SkillsUSA, DECA, FBLA, and FCCLA. For the purpose of this study, only the organizations associated with this midwestern high school were analyzed, and therefore only students within the school participated in the research.

Research Questions

The following question structures this study: *How do students involved in career and technical student organizations perceive their participation in relation to their academic and career planning?*

Significance of the Study

The National CTE Research Agenda encourages school districts to provide activities and opportunities for students to gain experience in leadership and organizational development. According to Lambeth, Elliot, and Joerger (2009) as well as Rojewski and Hill (2014), a suggested activity to ensure that leadership opportunities were being met was the support of CTSOs. Conducting research on CTSOs and documenting their impact on student career choices will lead to a better understanding of the importance of CTE and CTSOs in high schools across the United States.

In June 2013, Wisconsin Act 20 provided funding for schools to begin implementation of Academic Career Plans (Wisconsin Department of Public Instruction, 2017). Every school district is now required to implement and ensure adequate plans for each student with regard to future academic and career opportunities (Wisconsin Act 20, n.d.). The research conducted in this study focuses on determining the CTSO factors that help students make informed decisions about future career pathways.

Limitations of the Study

Limitations of this study include:

1. The study is restricted to one high school and the career pathways related to Technology Education, Businesses, Marketing, and Family Consumer Science.

2. The study is further limited by the subjects being able to project their academic and career set in their future.

Definition of Terms

The following terms are used frequently throughout the research paper and are defined to provide background on the topics discussed.

Academic and career plan (ACP). An individual, customizable, and career-focused plan for each student to navigate high school courses and postsecondary opportunities (Wisconsin Department of Public Instruction, n.d.).

Career and technical education (CTE). Provides students of all ages with the academic and technical skills, knowledge, and training necessary to succeed in future careers and become lifelong learners (Career Technical Education, n.d.).

Career and technical education subject area programs. Includes a sequence of courses and/or competencies across secondary and postsecondary education that includes technical, academic, and employability knowledge and skills (Imperatore & Hyslop, 2017).

Career and technical student organizations (CTSOs). Content-specific organizations in which groups of students come together to further develop skills such as leadership, citizenship, and teamwork as well as those specifically related to a given career field (Wisconsin Department of Public Instruction, 2018).

Career pathway. A grouping of specific jobs within a given career cluster. A career pathway will often have multiple jobs within its scope, all with similar requirements for skills, knowledge, and personality traits (Career Pathways, n.d.).

Distributive Education Clubs of America (DECA). This organization “prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality, and management” (DECA, n.d.).

Family Career and Community Leaders of America (FCCLA). Family Career and Community Leaders of America is a student organization that focuses on personal growth and leadership through family consumer sciences education (FCCLA, n.d.).

Future Business Leaders of America (FBLA). The Future Business Leaders of America is an organization that focuses on all aspects of a business. “FBLA inspires and prepares students to become community-minded business leaders in a global society” (FBLA, n.d.).

Participation. A student who has been involved in a CTSO for at least one full year and attends events, meetings, and competitions (Wisconsin Department of Public Instruction, 2017).

SkillsUSA. A state and national organization that encompasses “a partnership of students, teachers, and industry, working together to ensure America has a skilled workforce” (SkillsUSA, 2014).

Chapter II: Literature Review

The purpose of this study was to determine the impact of Career and Technical Student Organizations (CTSOs) on student choices in career pathway planning at a midwestern public high school. The following literature review identifies the purpose of CTSOs and how they contribute to the students' career decision-making process. The theories and history centered around CTSOs are discussed, and literature focusing on the importance of and need for a study correlating career choices to student organizations is examined.

Theoretical Foundation for Research

Many reports mention the importance of workplace competencies, but limited research has been conducted on the competencies that CTSOs hold for students. One of the measures used in previous studies was a student's career self-efficacy. Self-efficacy is "one's belief in his/her competency to perform well" (Alfeld et al., 2007). When an individual measures low in self-efficacy, he/she tends to have negative beliefs in pursuing a specific career path. CTSOs assist students to develop the skills and confidence integral to having successful careers that align with their known skills or, at the very least, those skills they feel confident in building (Stipanovic et al., 2017).

The social cognitive career theory (SCCT) is often used to understand career choices and career development as well as to provide a framework within which career pathways may work (Stipanovic et al., 2017). Using the SCCT model, one can better understand how students develop career interests, make occupational choices, and achieve career success and stability. It is within the SCCT that self-efficacy beliefs demonstrate each student's capacity to execute and achieve career goals and correlate those goals within a given pathway (Stipanovic et al., 2017). Using the SCCT as a model, students can engage in both academic and career experiences,

including CTSOs, and are provided firsthand knowledge of how their interest and skills align with a desired career (Stipanovic et al., 2017).

Behavioral theory. Researchers have shown that “educational aspirations are shaped by forces in students’ family, peer, and school environment” (Aragon, Alfeld, & Hansen, 2013). When students are young, they often think of having the same careers as their parents or family members. Although this does play the largest factor in students’ career choices, psychosocial and behavioral variables have also been linked to educational achievement and future career choices. Aragon et al. (2013) point out that little research demonstrates a connection between extracurricular activities and grades. However, there is a link between career-orientated activities like CTSOs and an individual’s educational goals (Aragon et al., 2013). Typically, when students are held accountable in either an extracurricular or a co-curricular activity, their behavior and efforts toward school improve. Some students will spend the entire school year preparing for one event, and that motivation alone changes the way they make decisions about future career choices (Kosloski & Ritz, 2014).

Constructivism is another form of behaviorism that both directly and indirectly affects occupational education. “Constructivism describes how learners construct their own knowledge from experiences rather than such knowledge being transmitted from a teacher” (Kosloski & Ritz, 2014). The traditional education classroom often sets limitations on student engagement and achievement. CTSOs provide an alternative solution using the concept of constructivism, which allows students to learn new knowledge and skills through real-world applications (Kosloski & Ritz, 2014). Students are not able to accurately choose career paths without, at the very least, exposure to them. As pointed out in the literature, students simply need the chance to

be exposed to the content; they will decide whether it is worth exploring further, as they take charge of their learning and create new experiences.

Career and Technical Student Organizations

CTSOs have existed for more than 90 years. Earlier forms of CTSOs, called Vocational Student Organizations (VSOs), were founded in 1928, with the Future Farmers of America (FFA) being the first recognized student organization related to vocational education (Kosloski & Ritz, 2014). CTSOs grew in relevance with the passing of the 2006 Carl D. Perkins Act, which states the tremendous need for workers to have some college experience in order to be prepared for the occupational changes to occur in the 21st century (Kitchel, 2015). Section two of the Carl D. Perkins Act promotes strong service and activities integrated with rigorous academic and career technical instruction, which benefit the growth of CTSO programs (Kitchel, 2015).

The purpose of CTSOs. CTSOs are co-curricular organizations aimed to enhance the quality of education and learning opportunities for students at both the secondary and postsecondary levels (Wisconsin Department of Public Instruction, 2018). There are seven nationally recognized Career and Technical Education programs, each having at least one student organization based on standards from industry and education (Kosloski & Ritz, 2014). These standards assist students and advisors to ensure a high-quality education that matches high quality work/learning opportunities. Many schools model their CTSOs toward a more intense involvement with a career field. CTSOs are thought to be an extension of the curriculum students learn in the classrooms (Kosloski & Ritz, 2014). Thus, it is through the various learning experiences that students are taking part in competitive events, expanding their leadership and job competencies, and experiencing an educational curriculum that either directly or indirectly affects students' achievement, the transition to postsecondary education, and employability

(Alfeld et al., 2007). As a result, student organizations develop positive, lifelong traits including teamwork, decision-making, competitive proficiency, leadership, community awareness, career awareness, and personal and social development (Kosloski & Ritz, 2014).

CTSOs provide students with opportunities to explore career paths, and they prepare youth to become productive citizens and to take on leadership roles in the community (Alfeld et al., 2007). Leadership and career explorations were most linked with CTSOs through various studies and literature reviews. Students learn skills related to specific occupations and work through activities designed to expand leadership, job skills, and develop technical literacy in their chosen career fields (Alfeld et al., 2007). CTSOs are often compared to other student body organizations such as student government or even sports; the major difference is that CTSOs are co-curricular, not extracurricular, activities. These co-curricular organizations allow students to see the relationship between academics and career opportunities through a hands-on learning approach (Saed & Scates-Winston, 2017). Research has shown that a major advantage of CTSOs over extracurricular clubs or activities is that CTSOs provide an opportunity for all students to participate, not just a few (Kitchel, 2015). Students can participate in CTSOs without being voted in or worry about being cut from the team for a lack of skill. Students of all abilities, genders, races, and economic backgrounds are welcomed and encouraged to participate in CTSOs (Kitchel, 2015). In fact, one of the major components of CTSOs is the ability to provide experiences that break down gender bias in a career field (Saed & Scates-Winston, 2017).

Each CTSO is designed with the same principles and ideals. Many of the organization's mission statements or purpose statements included thoughts such as developing leadership skills, self-confidence, connecting the classroom to the world of work, workplace skills, and youth development, among many other important skills (Camp, Jackson, Buser, & Baldwin, 2000). To

look at a few examples of CTSOs, the primary purpose of DECA is to “reinforce nationally recognized curriculum standards and provide realistic educational experiences with respect to marketing, management, and entrepreneurship” (Kosloski & Ritz, 2014). For FBLA, members conduct a deep exploration in order to learn about business careers, establish occupational goals, and gain work experience with businesspeople through on-the-job training (Camp et al., 2000). The impact CTSOs have on educational and career readiness is a major factor in the success of each organization.

Work-based learning opportunities and professional development are other methods CTSOs use to gain career exploration for students. One component of another CTSO, SkillsUSA, is to ensure that students can participate in professional development activities including guest speakers, workshops, conferences, and on-the-job training or job shadowing (Alfeld et al., 2007). Work-based learning does not always mean students are leaving the schools. For example, members of DECA in many schools gain work-based learning through school-based enterprises such as a school store. This opportunity exposes students to a variety of career options and can help them to increase their confidence in occupational choices in order to better assist them in making the transition from school to work or school to college (Mobley, Sharp, Hammond, Withington, & Stipanovic, 2017).

Impact on student perceptions. The National Research Center for Career and Technical Education (NRCCTE) conducted a research analysis on student perceptions and motivations in conjunction with CTSO participation. Results concluded that students involved in CTSO activities had higher academic motivation and engagement, career self-efficacy, college aspirations, and employability skills (Saed & Scates-Winston, 2017). Students also felt that joining a CTSO increased their experiences and that participating in competitions better prepared

them for employment within a chosen career path (Kosloski & Ritz, 2014). A qualitative study on high school principals' perceptions and support of CTSOs was conducted, and the results showed a great need for high-quality student organizations. There was a strong response for the students to be provided leadership development, academic engagement, and college- and career-ready, all of which tie in with the ideals of CTSOs (Kitchel, 2015).

A more recent study of CTSOs found that students who participated in them had a higher level of personal and professional development and an increased understanding of the skills required for a career field, and they felt they were able to perform better academically in the classroom (Alfeld et al., 2007). In a quantitative survey, student responses to questions about CTSO experiences included how “this was the only organization they were part of and felt a sense of belonging, and the experience will be part of their professional career journey” (Saed & Scates-Winston, 2017). The national FFA organization conducted a survey in 2011, which concluded that 83% of students in the organization found their experience to be exciting, interesting, challenging, and rewarding (Kosloski & Ritz, 2014).

At the national level, one of the concerns in education today is the number of students who drop out of school. Many students who drop out each year do so because they do not feel engaged with the curriculum, that their education was not adequately preparing them for their future (Symonds, Schwartz, & Ferguson, 2011). Another problem is the dropout rate in postsecondary education. Only 30% of students successfully complete the preferred pathway of high school, college, and workforce, as “Every high school graduate should find viable ways of pursuing both a career and a meaningful postsecondary degree or credential” (Symonds et al., 2011, p.24). It is also important for students not to feel tracked or stuck on a pathway. As young adolescents learn and grow, their pathway of study also needs to be flexible.

CTSOs allow students the freedom to explore and try new opportunities without losing valuable time in the small window that comprises high school. To address these issues, CTSOs strive to impact students in various ways. The diversity in experiences through CTSOs are second to none and learning through a student organization can be very rewarding. Students seem to be more motivated and engaged in school when they participate in CTSOs; some students prepare all year long for a single competitive event, and the importance of the event is linked to an increase in student motivation to stay in school and perform well (Kosloski & Ritz, 2014). As a result, CTSOs increase classroom participation. Ninety-five percent of educators in a survey said CTSOs are an effective tool in keeping students engaged in the classroom. Research also shows that students in poverty have a lower risk of dropping out of school when they participate in extracurricular or co-curricular activities (Alfeld et al., 2006). Another 81% of dropouts claimed that a more real-world learning environment would have influenced them to stay in school (Saed & Scates-Winston, 2017).

The abovementioned study illustrates a difference in work versus school. According to Alfeld et al. (2006), “In School learning is abstract, theoretical, and organized by disciplines. The work environment is concrete, specific to the task at hand, and organized by problems and projects” (Alfeld et al., 2006, p.20). Therefore, utilizing CTSOs as an extension of the classroom can better link the learning styles of the work environment to the educational setting, which, in turn, would better position students for success.

Career Pathways

Across the country, studies have been conducted determining the outcomes and effects of students being more college and career ready in today’s high schools. A strong emphasis on career-focused education is being implemented in hopes to improve educational relevance,

improve career preparation, and increase student readiness for workplace demands (Mobley et al., 2017). South Carolina recently passed the South Carolina Education and Economic Development Act, which provides districts with funding for their efforts on career awareness, career exploration, and career planning (Stipanovic, Stringfield, & Witherell, 2017). In addition, the Carl Perkins Act of 2006 mandates schools to “integrate career and technical skills and knowledge with academic skills and knowledge showing accountability for this integration” (Kosloski & Ritz, 2014). The effort to provide funding and services for school districts so that they might offer a quality education that ensures all students are college and career ready entered Wisconsin in 2014. The Workforce Innovation and Opportunity Act (WIOA) challenged Wisconsin schools to create stronger partnerships with business and industry, educate students on labor market data, and focus on educating students to meet the needs of the future workforce (DuBenske et al., 2018). A vital component to the WIOA was a stronger emphasis on career pathways. Funding from the U.S. Department of Labor was allocated to scaling Wisconsin’s career pathway system, ensuring all students are not only aware of career opportunities but also have a plan to transition from high school to postsecondary education through a career pathway (DuBenske et al., 2018).

Function of career pathways. “Career pathways programs provide students with both academic and occupational knowledge and skills, serve as a link between high school and college, and are situated to prepare students for employment. Career pathways programs are career-based curricula and students need a viable means for preparing for both college and work” (Stipanovic et al., 2017). The career pathway model stresses the importance for students to have a plan and guidance to enter, transition, and complete college (Bragg & Rudd, 2007). The goal for all students—to eventually secure employment and a career pathway—is like a road map to

employment for students (Bragg & Krismer, 2016). Research shows students who are engaged in a career pathway or a program of study have increased self-awareness, a stronger career identity, and more explicit career goals (Mobley et al., 2017). A true career pathway connects academic coursework to work-based learning, providing students with opportunities to navigate the career planning processes, participate in CTSOs, and gain industry-recognized credentials that can advance them further in postsecondary studies (Bragg & Krismer, 2016).

Workforce preparation. The division of labor in the United States looks very different than it did 40 years ago. In 1973, almost one-third of the workforce was composed of workers who were high school dropouts, combined with another 40 percent that had a maximum of just a high school diploma (Symonds et al., 2011). In 2007, workers with a high school diploma or less made up only 41% of total jobs, with adults having no form of postsecondary schooling falling out of the middle class economically. In the year 2020, nearly half of the 14 million job openings filled by adults with postsecondary education will go to individuals with either an associate degree or occupational certificate (Symonds et al., 2011). Often these jobs are centered around Career and Technical Education such as electricians, construction management, dental hygienist, and police officer, to name a few (Symonds et al., 2011). Career pathways allow students to understand career fields and to know better the course of action each job requires. Not all jobs require four-year bachelor's degrees and knowing the correct pathway at an early age will help streamline the processes to gaining these high-paying, high-demand jobs. Another key component to ensuring that students are prepared for the workforce ahead is making sure they are being taught technical skills and knowledge as well as core content. "Over two-thirds US employers complain that today's young adults are not equipped with the skills they need to succeed in the 21st-century workforce" (Symonds et al., 2011, p. 4). This, combined with the

demand for skilled labor, poses a larger question: what can school districts do to better close the gaps between education and the workforce?

Career pathways impact. The literature that was reviewed pointed to the many benefits of ensuring that students are engaged and aware of their career choices. One of the benefits mentioned in multiple studies was the connection between career pathways and the motivation to do well in school. In a study in which students in Career and Technical Education (CTE) were compared to non-CTE students, results indicated that students in CTE scored considerably higher on the reading for information subtest of the ACT WorkKeys (Kosloski & Ritz, 2014). A similar study in 2002 found that students who earned at least three credits in each career pathway were three times more likely to graduate from high school than students who did not take courses in a pathway (Stipanovic et al., 2017). As mentioned by Stipanovic et al. (2017), “Course-taking patterns and attendance have also been linked to positive outcomes for students enrolled in career-focused education” (Stipanovic et al., 2017, p. 211). Students feel motivated and a sense of pride knowing they are on a path of education that is meaningful and relevant to their future career goals. A quantitative study concluded that students participating in a career pathway program felt more prepared to transition to college, and felt they had the knowledge, skills, and leadership abilities to compete in high-demand careers (Saed & Scates-Winston, 2017). The confidence and realistic solutions students encounter throughout CTE and a career pathway lead them to experience greater self-efficacy. Conflicting research shows that some successful pathways can lower student dropout rates both during high school as well as in continuing post-secondary education (Saed & Scates-Winston, 2017).

One of the major influences on students when it comes to college and career readiness is high-quality career counseling. Research shows that when students receive career counseling,

they are far more likely to be prepared for postsecondary education as well as the world of work (Stipanovic et al., 2017). The average ratio in America is almost 500 students per school counselor (Symonds et al., 2011). This poses a major concern that students are falling through the cracks and need additional supports like CTSOs to help fill the void in career counseling for all students.

Summary

As noted by Symonds et al. (2011), “The philosophy of education isn’t simply about learning: it’s also about how to enable young people to make a successful transition to working life” (Symonds et al., 2011, p. 38). The literature provided compelling thoughts and evidence in which utilizing career and technical student organizations can have a great impact on student’s career awareness, encouraging all students to better be college and career ready. After reviewing the literature and various studies, it has been determined that CTSOs provide students strong experiences; however, they do not work alone. Evidence pointed to CTSOs working in conjunction with quality career and technical education programs in order to have a better all-around inclusive education for students. It was through the literature review that a better understanding of career and technical student organizations was gained as well as the relevance and impacts they play in career pathway decisions. Much of the literature reviewed advocated the important benefits of CTSO; however, not all benefits were adequately verified in the reports. The purpose of this research was to analyze and provide evidence to support the findings of previous research to further connect career and technical student organizations and the impacts they play in student career pathway choices.

Chapter III: Methodology

The purpose of this study was to determine the impact career and technical student organizations have on student choices in career pathway planning at one midwestern public high school. The following question structures this study: *How do students involved in career and technical student organizations perceive their participation in relation to their academic and career planning?*

Research Method

To better understand the interworking of CTSOs at the high school level, a descriptive mixed-methods study was determined to be a good fit. According to Creswell and Creswell (2018), “Mixed method research is an approach to inquiry involving collaboration of both quantitative and qualitative data in both open-ended and close-ended data collection” (p. 213). Structurally, the study is designed through the lens of a case study. Gillham (2000) describes a case study as one that investigates a group of individuals in a real-world scenario. The case being studied conforms to a like grouping, organization, practice area, or structure in order to understand systems, processes, and practices that exist. Gillham (2000) describes this research approach as one that “identifies how people understand themselves, and what elements of a group or organization are deeper than the objective evidence displayed on a surface level.” Gillham’s take on case study research methods echo the Social Cognitive Career Theory presented in Chapter II of this research.

This approach is consistent with the purpose of the current study as well as the research question, which aims to understand the effect, if any, that career and technical student organizations have and their impact on student academic and career planning.

The study begins with collecting quantitative demographic data of subject participants, followed by a qualitative semi-structured interview. Employing a mixed-methods research approach allows for a deeper understanding of what, why, and how the respondents perceive the interaction between ACP and their involvement in CTSOs (Lichtman, 2013). The study moves from phase one (P1), a descriptive survey, to phase two (P2), a semi-structured interview.

Subject Selection and Process

Using the mixed-methods case study design outlined within the methods description, a two-phase process for selecting subjects and conducting research was utilized. A stratified purposeful sampling technique is typically employed when a subset of the larger population does not represent the focus of the study (Wiersma & Jurs, 2009, p. 325).

In P1, subjects were selected to participate in a descriptive quantitative survey. It was determined that the number of students at the high school that participated in a CTSO during the 2018/2019 school year was around 80 students, with some taking part in multiple CTSOs. Furthermore, it was determined that 25 of those students were seniors in the previous year and have since graduated, either furthering their education or joining the work force.

To have a greater depth of participants in the study, contact information for the subjects was gathered from each of the four CTSO advisors. Using the advisors as an inviter mechanism, they were able to email or personally invite past graduates to participate and aided as a liaison for a higher response rate. Subjects were contacted through a formal letter in which detailed information about the risks and benefits of participating in the survey were explained, to include a consent form to participate in the research.

Instrumentation

Referring to a mixed-methods research design in which there is a need for multiple instruments leads to the collection of data that is both qualitative and quantitative. P1 utilized a survey comprising specified criteria designed to guide and capture the contextual data that highlights descriptive data and statistics (see Appendix A). P2 consisted of semi-structured interviews to aid in the collection of a qualitative case study (see Appendix B). As identified previously, a case study examines the current structure or system and subjectively aims to find a deeper understanding of the current situation. The Social Cognitive Career Theory, focused on in Chapter II, identifies the importance of subjects to self-examine their experiences and draw conclusions on how these experiences impacted their future. Together, the survey and the interviews provide a more complete understanding of changes needed for the schools' CTSO programs, and a more informative evaluation of the relationship between CTSOs and ACPs.

Subjects were first asked to respond to a demographics survey, so that information was gathered to gain quantitative data about the organization's students participated in and their corresponding career pathways after graduating high school. Subjects were informed that their responses would remain anonymous. The information gained from the student respondents would be compiled into a data sheet, and names would be removed to protect their identities. Subjects were asked to respond truthfully and to the best of their abilities, as results of the data would help teachers and administrators at the high school determine the impacts and make more informed decisions about CTSO participation. The survey provided close-ended, descriptive information to later be analyzed and combined with data from P2, the qualitative case study.

The five-minute survey was developed in Qualtrics, a secure survey software, and distributed through the survey systems internal email database, which assures that all email

communications protects the anonymity of the respondent. It was launched after four CTSO advisors invited subjects to take part in a survey being distributed by the researcher. This was intentional to provide a more robust response rate, as CTSO advisors had direct advisement with all subjects and thereby were more likely to increase the survey response rate. A formal consent letter was also attached to the email, providing detailed information about the research, the benefits and risk of participating, and a consent form to participate in the research; this was further acknowledged within the online survey, where the respondent acknowledged consent (see Appendix A).

The survey's four questions included two selected responses and two short answer responses: which CTSOs were they involved in, how many years were the participants in the CTSOs, what they are currently doing now post-secondarily, and if they were willing to later participate in an interview case study. The survey questions were carefully selected to ensure alignment with the study's purpose and its guiding research, thereby increasing the assurance of its validity. A mixed-methods research design is a useful strategy, as it develops more contextualized measurement instruments when first collecting quantitative data, followed by the administering of a qualitative instrument to a sample (Creswell & Creswell, 2018). A copy of the survey can be found in Appendix A.

Phase two consisted of a semi-structured interview in which respondents from the initial survey were asked to participate in a case study interview. Those respondents that stated they would participate and provided contact information were then contacted for the interview. It is through this option that the final list of subjects was selected, reviewed, and analyzed in this research document. Interviews were conducted through online face-to-face technology such as Skype, Facetime, and Google Hang-Out video conferencing. Subject respondents were asked

permission to record the interviews so that a transcript could be formulated post interview.

Subjects were given the opportunity to decline an interview and were informed of the risk and benefits of assisting in the research. A copy of the interview outline can be found in Appendix B.

To ensure anonymity during the interview processes, a secure internet server was used while recording the interview. Participants were explained the risk and benefits before starting the interviews, which included detailed explanations of how their responses would be kept confidential and of the processes of data collection. The interviews were recorded to an external hard drive that was destroyed upon completion of the research. The recorded videos were submitted to an online web-based site called REV. The files are sent through a secure platform, and professionals, who are under a strict confidentiality agreement, transform the video files into a written transcript in which all names are removed for participant protection. The written transcript was sent back to the researcher through a secure platform and articulated into this research document. For all data collection purposes, personal identity including names, age, or any other personal identifying content were properly deleted from the research.

A semi-structured interview is unique in the way that it does not have a formal set of interview questions to follow. Instead, this type of interview process is intended for open-ended questions to open the interview into more of a discussion than an interview. This allows the interviewee to tell their story of how they felt CTSOs were or were not influential in their academic career plan. This type of semi-structured interviewing allowed for each respondent to tell their own story. A semi-structured interview is a reliable data collection method, as bias in question writing from the researcher is eliminated, and the freedom for the interviewee to tell their own story takes the research in unpredictable directions that allow for a deeper understanding of student perceptions and what the relationship between CTSOs and ACPs is

really like in the school district, from the perspective of the student (Barriball & While, 1994, p. 331). The freedom for the interview to flow to new directions is what makes this research a rich analysis on impacts of CTSOs as they relate to ACPs.

Data Collection Procedures

P1 began in the early part of November, with the surveys being sent to subject participants. It was determined that after allowing adequate time for students to respond to the Qualtrics survey, a follow-up letter was sent to subjects in order to ensure that all responses were collected. It was determined with the sample size of around 25 students that it was vital for all responses to be collected to accurately analyze and conclude the results. After two weeks, the survey was closed and ready to be analyzed. The Qualtrics software collected and housed the anonymous surveys, which provided valuable aid in organizing the responses. By mid-November, P1 was finalized, and the data collected from question number four regarding which subjects would be willing to conduct an interview were analyzed.

As survey results came in, respondents who provided contact information were contacted to set up interviews. The interviews were conducted over the course of two weeks in a time frame that fit with the respondent's schedules. An initial phone call or email was sent to confirm a date, time, and type of media format for conducting the interview. Respondents chose between Facetime, Skype, or a Google Hang Out video conferencing. It was necessary to do a video conference so that body language and gestures could be analyzed for research purposes. Each interview was scheduled for 30 minutes in length, and REV software was used with subject permission to record and create a written transcript of the interview to assist in analyzing the interview. All interviews were finished by the November holiday.

After collecting and analyzing the data from the Qualtrics software, it was determined which candidates were available for phase two, the interview processes. Subject respondents were contacted, and virtual face-to-face interviews were scheduled. These interviews took place through Skype, Facetime, and Google Hangs Outs video conferencing. REV software was used with subject permission to record and create a written transcript of the interview to assist in analyzing the interview.

Data Analysis

The survey in P1 was created to gain insight into past graduate's demographics in CTSO participation. Nominal data was collected through the survey, resulting in contextual data about the CTSOs subjects participated in, how long they participated, and what was their current status of post-secondary opportunity achieved. The information gained as nominal data was used to categorize individuals into groups to better understand which students from the survey were involved in which CTSOs.

Qualtrics is a web-based software that assisted in creating, disseminating, and analyzing data from the survey. The Qualtrics software collects participant responses in an anonymous fashion and provides the researcher with data analytics. Data that was analyzed in P1 was descriptive demographic background on subject participants. Central tendencies such as mean, median, and mode were analyzed to determine which CTSOs students participated in the most, and on average how long students were actively involved with the student organizations. Qualtrics also provided a tabled chart for a visual representation of the organization's respondents chose and the length of time involved. Responses for Q3, asking about a subject's current employment/education status, were categorized into four categories: employed and

related to their CTSO experiences, employed in a non-related career field, post-secondary education in a related degree, and post-secondary education in a non-related degree field.

P2 analyzed data gained from the semi-structured interviews. Upon completion of each interview, a video file containing the interview was sent through a secure server to a web-based analytics survey called REV. Professionals hired by REV, with a signed confidentiality agreement, upload the secure video file and transcribe each interview into a text transcript. All names and personal identities are taken out of the interviews, and the transcription provides a dialog between the researcher and the interviewee. Each interview was sent back to the researcher, again over the secure network platform, to be analyzed.

In order to interpret the meaning across the interview transcripts, a thematic analysis was implemented. Haltinner (2008) describes interpreting qualitative responses through a human sciences approach. This transcript reduction technique was adapted from the work Van Manen (1997) and Giogi (1997), as it provides a sequential process that allows continual back checking of the interviewees voice to accurately capture their meaning. Through the process, essential meaning units present themselves that are iteratively reduced to enduring themes. Figure 1 demonstrates the thematic reduction process.

Research Question Transformation (Trans)			
Trans 1	Trans 2	Trans 3	Trans 4
Listing and reading raw text	Eliminating extraneous words and clarifying meaning	Sorting and identifying common ideas	Declaring theme

Figure 1. Thematic reduction process.

The themes became the source of the narratives, presented as findings. These narratives are developed through a re-strying process, where the researcher carefully presents their meaning across the interviewees transcribed voices. In the process, the researcher judiciously refers to the transcripts to support the integrity of respondent meaning of their experience.

Limitations of the Study

Limitations of this study include:

1. The study is restricted to one high school and its career pathways related to Technology Education, Businesses, Marketing, and Family Consumer Science student concentrators.
2. The study is further limited by the subjects being able to project their academic and career plan set in their future.

Summary

In summary, this mixed-methods case study research was structured in two phases. P1 identified past high school graduates who participated in a career and technical student organization while in high school. Those subjects were given an opportunity to participate in a demographic survey. The surveys provided a descriptive survey analysis on which CTSOs students most participated in and a time frame that for subject involvement in a program. P2 provided a qualitative case study for participants who chose to participate in a semi-structured interview process. The interviews were recorded, and transcripts provide a cross-grouping narrative. The data collected in both phases are analyzed, and findings are provided in Chapters IV and V of this document.

Gaining insight into perceptions, demographics, and factors in career choices for students at this high school will greatly impact the future of CTSOs and recruitment into them. Conducting the survey, employing the interviews, compiling data, and analyzing the results certainly aligned with research gained throughout the literature review.

Chapter IV: Results

Using the mixed-methods case study outlined within the methods description, a two-phase process for conducting research was utilized. The study began with phase one (P1), a descriptive survey in which the research analyzed quantitative demographic data of subject participants. Phase 2 (P2) of the study consisted of a set of qualitative, semi-structured interviews in which a thematic analysis was performed to determine overall themes from the research. Combining the two research methods of the mixed-methods research approach assisted in creating a case study analysis of one midwestern public high school. This chapter of the research outlines the demographics of survey respondents and provides an analysis of the descriptive survey and the qualitative semi-structured interviews.

Demographic

The demographic survey was sent out to 23 participants, all of whom graduated the previous spring from high school. During their time in high school, all student participants were involved in at least one of the CTSOs offered at this midwestern high school. Out of the 23 participants that were invited to take the survey, 17 participated. All 17 participants gave consent through an online survey and gave permission to include their responses in this research. A total of five survey respondents chose to participate in phase 2 of the research and were contacted for semi-structured interviews. The following is a breakdown of each survey question, along with a thematic reduction of the interviews.

Research Questions

The following sections display the results of the survey based on respondent answers. Each question in the survey is broken into individual data results.

Organization involvement. The first question on the survey asked participants to respond to which CTSO they participated in throughout their high school experience, and they could check multiple CTSOs to indicate which ones they participated in. In total, the 17 survey respondents participated in a total of 22 organizations, with SkillsUSA, including FIRST robotics, being the highest, with 10 student participants, followed by FBLA with six, DECA with five, and FCCLA with one member responding to the survey.

Table 1

Student CTSO Involvement During High School

Organizations	DECA	FBLA	FCCLA	SkillsUSA (including FIRST robotics)	Total
Response number	5	6	1	10	22

Length of involvement. The second question in the survey asked participants to state the length of time, in years, that they were involved with the CTSOs they listed in question 1. Out of the 17 responses, 11 respondents stated they participated in their CTSO of choice for all four years of high school, with another six responding that they participated in them for three years. There were no participants that were involved for less than three years.

Table 2

Length of CTSO Involvement

Number of years	1 year	2 years	3 years	4 years	Total
Response number	0	0	6	11	17

Current educational and career status. Question number three is reported as a three-part question. Survey participants responded to their current education or employment status post high school. The responses are also analyzed and compared to the CTSOs participants were

involved in during high school. With 17 survey participants responding, 88% stated they are currently enrolled in college, while 12% have entered the workforce. Also, 64% of participants, both college and career, are currently in a pathway related to their CTSO participation, while 36% of the survey respondents are currently in a different pathway than their CTSO high school participation.

Table 3

Current College or Career Status

Current status	College or career	Related to CTSO participation
B.S. Construction	College	Yes
B.S. Construction	College	Yes
B.S. Human Development and Family Studies	College	Yes
B.S. Construction	College	Yes
B.S. Graphic Design	College	Yes
B.S. Marketing	College	Yes
B.S. Mechanical Engineering	College	Yes
Biomedical Engineering	College	Yes
Exercise Science	College	No
Graphic Design Degree	College	Yes
Motor sports sales, full-time job	Career	Yes
Pre-Med	College	No
Computer Science	College	No
Microbiology Major	College	No
MHR and Political Science	College	No
Bachelor of Health Sciences	College	No

Interview Analysis

Phase 2 started with the last question of the demographic survey, which asked survey participants if they would be willing to participate further with a semi-structured interview. Respondents were asked to leave a contact method so the researcher could get in touch with them. Only five of the 17 respondents agreed to be contacted for an interview. However, of the five that agreed, each of the four CTSOs in this study were represented, with some respondents representing multiple CTSOs.

Table 4

Participation Agreement

Agreeing to participate in phase 2	I agree to be contacted for an interview	I do not wish to participate in an interview	Total
Number of responses	5	12	17

Each of the five interviewees were contacted, and individual semi-structured interviews were scheduled. The interviews all started with the same prompt, which asked interviewees to talk about their experiences they had while participating in a career and technical student organization. From that point forward, each interview went in various directions, depending on the experiences that were shared. The researcher continued to listen intently and provided furthering questions that would give a deeper understanding of the experiences and perceptions each interviewee had about their time spent participating in a CTSO. The researcher was also focused on what the interviewees had taken for a career path one year out of high school and how it related to CTSO involvement. To allow respondents to remain anonymous, names have been changed in the following summary for each participant.

Interviewee 1. Josh was a recent graduate of the high school and is in his first year of college. While in high school, Josh participated in four years of DECA and SkillsUSA. Josh

described his experience as a freshman in high school being “scared and nervous,” as he had very little experience with either organization. Through the encouragement of his friends, he decided to join both organizations in hopes to gain experience with “job interview skills and a hands-on learning opportunity.” During this time, he was able to attend conferences, workshops, and competitive events. Josh found CTSOs to be “rewarding working within a time constraint to perform the best you possibly can.” It was through the various learning experiences that Josh realized the impact his experiences could potentially have on his future. “I realized I would miss what I was doing with robotics in SkillsUSA, and I thought it would be fun to continue to pursue that field of study.” Josh is now enrolled in a four-year university, where he is studying biomedical engineering in hopes to someday “work with robotics in the medical field.”

Interviewee 2. Claire was also a recent graduate of the high school in this study. Claire participated in her senior year in DECA; however, she was also actively involved with FBLA for all four years of high school. Claire enjoyed the conferences and workshops she attended, where she learned that “networking is key, not only to put your name out there for colleges and future employers, but also to network with other students who can help in various ways.” Claire spent much of her high school time exploring career potentials through CTSO participation as well as CTE coursework in which she was enrolled. Claire was able to take her knowledge and skills from the classroom and apply them into competitive events. She attended a national competition her senior year and was “extremely proud of the hard work my partner and I put in, and to be rewarded for that was incredible.” Claire found her passion for graphic design and is currently pursuing a bachelor’s degree in graphic design. “Being able to have the experiences I did allowed me to see what I really liked and didn’t like in high school.”

Interviewee 3. Taylor currently is attending a four-year university, pursuing a bachelor's in construction management. During his time in high school, Taylor was involved for three years with SkillsUSA. Taylor attended the state competition three times, with his last two competitions in the carpentry category. Taylor was encouraged to try this competition from his family members, and he learned quickly that he enjoyed "framing walls, doors, and windows as well as reading blueprints." Taylor gained experience working with the tools and equipment through his "woods, metals, and construction courses" that he enrolled in as well. Taylor had spent time during his summer break working with a local construction company, in which he does "the exact same thing I did in SkillsUSA." Taylor commented on the transferable skills that he was able to gain through his CTSO, as "safety while working around other people, working with people, listening, taking directions, and following a plan" were all skills Taylor found value in.

Interviewee 4. Katie is a recent graduate who was active in her FCCLA chapter for all four of her years in high school. Katie started her freshman year enrolled in a "general foods course." It was through this course that the teacher and her friends were talking about FCCLA, and it piqued her interest to try it, as "I thought it would be a fun way to meet new people." As the years progressed and Katie became a junior in high school, she "started thinking about the various experiences had in FCCLA and talking with like-minded friends in the organization," and she was able to find a career cluster of interest. Katie spent time and energy researching and indulging herself in the human development and family studies career fields. After high school, she enrolled in a four-year university and is currently studying human development. She commented that the relationship between the "courses that I took in high school and my involvement with FCCLA helped shape future career options for me." She was able to learn, grow, and explore her options before deciding to move on to a post-secondary education.

Interviewee 5. Alex was a student in the high school that found his “confidence to be a leader” while participating in SkillsUSA. Alex got involved his sophomore year with SkillsUSA after learning about it from instructors in his Technology Education courses. “Taking courses like robotics, small engines fabrication, and two engineering courses” helped Alex find his passion in life. Alex wanted to pursue a mechanical engineering degree upon finishing high school. It was through his experience with SkillsUSA that helped him “decide on what I want to do after high school and being in robotics showed me that it wasn’t the best choice for me.” Alex explained that “having the opportunity to decide” was important to him so that he was better prepared for his college and career plan. At that time, Alex chose a different career path, which also had been a passion of his for a long time—to attend a university to achieve a bachelor’s degree in exercise science. Even though Alex does not work with robots or build metal parts, he still found valuable skills that he uses in his life every day. Alex commented that “learning to work with a team and learning how to communicate” was an important skill that he intends to use for the rest of his life. As one of Alex’s future career goals is to become a college strength and conditioning coach, he saw that “the value in working in a competitive environment like robotics competitions is similar to the competitiveness in the coaching field.” The skill set that Alex took away from his CTSO is continuing to be a part of his daily life.

Thematic Reduction

Upon completion of each interview, video and audio files were saved, uploaded to REV, and transformed into a written dialogued transcript. The transcripts were edited to ensure interviewees were able to remain anonymous and to ensure transcript accuracy. Each interview transcript was placed into a reduction table. Figure 2, which can be found Appendix C, represents a sample of the reduction table used. Through the reduction processes, five

overarching themes were found to be consistent among the qualitative data collected. Table 5 represents the themes that describe the perceptions and experiences of five recent high school graduates, as described to the researcher.

Table 5

Overarching Themes

Students who participated in CTSOs tended to start early in their high school career and participated throughout all years.

Students who participated in CTSOs gained transferable skills.

Participating in a CTSO raised student awareness of career opportunities.

Students who participated in a CTSO also enrolled in a related CTE course each year.

Participating in a CTSO was rewarding, and students felt a sense of pride in belonging to an organization.

Theme 1: Students who participated in CTSOs tended to start early in their high school career and participated throughout all years. The two data sources in this study concluded that respondents participated for no less than three years in each CTSO. This indicated that the students had also participated throughout all their high school career. The qualitative data determined that student participation in a CTSO was driven by either family members, friends, or teacher advisors. The respondents articulated they “really did not know much about the organization but just knew it was something important” that they should do. Respondents all joined CTSOs in hopes of “gaining skills that I can use in anything later on.”

Theme 2: Students who participated in CTSOs gained transferable skills. The qualitative data shows that the respondents got much more out of a student organization than just content material. The transferable skills that respondents mentioned throughout the research were as follows:

- Communication skills

- Networking
- Leadership
- Confidence
- Time management
- Working in teams
- Problem solving
- Speaking

When asked why each interviewee chose to participate in a CTSO, 100% responded by saying they wanted to “gain transferable skills” that could relate to any type of education or career they chose beyond high school. These same respondents all mentioned specific times in their lives that they have used the skills learned in CTSOs. For example, “In my summer job I do the same exact thing, frame walls, read blueprints, and pour concrete forms.”

Theme 3: Participating in a CTSO raised student awareness of career opportunities.

In this study, there were four out of five respondents that are currently enrolled in a college degree closely related to the CTSO they participated in. The one respondent that is not in a career related to their CTSO explains, “having the opportunity to decide for myself based on the experiences I gained made me feel like I would not waste time and money in college.” Each respondent provided a narrative reflecting on how each chose to pursue the given career fields they are currently in. The overarching theme in each narrative was dated back to an experience or set of experiences that respondents had in which a spark was lit to a new world of career options they had not previously given thought to: “I had no idea what I wanted to do with my life, it was while talking with like-minded people at an FCCLA competition when I realized my passion in life.” Whether the CTSO reinforced related career options or turned students in a

different direction, both methods helped increase the awareness of all career opportunities. It is key for students to learn what they do not like to do as it is learning about careers they are interested in.

Theme 4: Students who participated in a CTSO also enrolled in a related CTE course each year. All five of the respondents in the qualitative study provided a narrative about the multitude of courses they took in high school that coincided with their involvement in a CTSO. Respondents described the relationship between gaining content specific knowledge in a CTE course and being able to apply that knowledge to the competitive edge their CTSO asked of them, as “the courses were material and knowledge based whereas the club was learning on the fly and had a learn by doing approach.” A respondent also describes “taking various art classes in which I was exposed to web design and then graphic design and this made me want to choose graphic design for my senior competition.” Another respondent mentioned the relationship between CTE courses and CTSO as “striving to want more.” This respondent explained he was “going into SkillsUSA blind,” that it was after that first year of competition that “I realized taking metals and woods classes would help teach me to weld, and work with the tools for the robot.” The qualitative data reflect that each respondent was enrolled in a CTE course concurrently with CTSO participation, furthering the educational experience the respondents gained throughout high school.

Theme 5: Participating in a CTSO was rewarding and students felt a sense of pride in belonging to an organization. The data that respondents provided revealed the fun and pride they had being involved in CTSOs. The last question of each interview asked interviewees if they had any final thoughts or advice for future students. Every one of the interviewees responded by saying that they enjoyed and had fun “working with others and being involved in

the competitive side of CTSO.” One interviewee responded by saying, “I would not be where I am today if it were not for those few small experiences I had in high school.” Other respondents commented on the pride they gained from placing well or “watching friends compete at a high level.” The overall response was they all wished they would have been more involved and would have tried even more things in high school. One respondent described being in FCCLA as “working with like-minded people allowed me to gain confidence and feel like I fit in with others. Some of my best friends today are people I met at competitions.”

In total, the five themes represent career and technical student organizations as impactful experiences for these respondents. Each narrative told a similar story about joining the organizations, meeting new people, working closely with related courses, and gaining career exploration. The overall impact was a positive one for these five respondents.

Chapter V: Discussion, Conclusions, and Recommendations

The purpose of this study is to determine the impact career and technical student organizations have on student choices in career pathway planning at one urban midwestern public high school. The study aimed to identify ways that CTSOs contributed to students' academic career plans, where students had previously participated in FBLA, DECA, FCCLA, or Skills USA, or a combination of those organizations.

This research was conducted through a two-phase case study that included collecting and analyzing demographic data through a quantitative survey as well as a semi-structured qualitative interview process. Information gained from both provided an analytical case study of perceptions and experiences of past high school graduates as they relate to their career plans. The analysis of the data collected, combined with a literature review, provide information in which the researcher drew conclusions from and provided recommendations for future use.

Discussion

In reflecting on the research conducted in this study, the following demonstrates the relationship between this research document and the findings that were presented.

Statement of the problem. Previously, there has been no evidence to support whether CTSO involvement impacts student's choice in career pathways. There is a need in which evidence and data need to be collected to analyze the overall effectiveness of CTSOs at the high school level.

After conducting and analyzing the interviews, it became evident that career and technical student organizations do, in fact, have an impact on career pathways for students. One hundred percent of the respondents who were interviewed stated that during their participation in a CTSO, they were either exposed for the first time to a career that they are currently pursuing,

or they gained insight into to a career that they were no longer interested in. As one interviewee stated, “I went into my senior year wanting to pursue an engineering degree, I liked doing that stuff but participating in SkillsUSA showed me that maybe it wasn’t the best choice for me. At least it gave me the opportunity to decide that on my own and not have to waste time and money in college.” Other interviewees stated similar ideas, speaking to the fact that they were unsure of what they wanted to do as a freshman or sophomore in high school, and that meeting new people and learning about career opportunities at an organizational level was a good hands-on learning experience that exposed them to a number of new possibilities.

Purpose of the study. The overall purpose of this study was to determine not only the impacts CTSOs have on career pathway planning, but also to see if CTSOs can be closely related to academic career plans.

It was determined that all the interviewees who participated in a career and technical organization also participated in at least one, and often many, CTE courses that coincided with the organization. A strong ACP allows and assist students in career exploration and transition from secondary to post-secondary education, and ultimately into a career. Some of the respondents in the research started out by taking a CTE course and then became involved with a similar CTSO, and others started out getting involved in a CTSO and then chose to join an aligned CTE course. It was determined in the analysis of this research that the relationship and experience students gain by participating in a CTSO and a concurrent CTE course led to a greater understanding of an ACP. As many interviewees pointed out, much of the classwork is centered around content-specific material. Learning the foundational knowledge to perform certain tasks in given career fields was helpful in having the confidence to perform at a high level in the CTSO competitions. However, as pointed out in the thematic reduction table (Figure

2), a majority of the interviewees thought that CTSOs provided an enhanced learning opportunity. Things such as learning by doing, being pushed out of their comfort zone, real-world application, or goal-driven competitions were just some examples that were mentioned throughout interviews. The marriage between CTSOs and CTE coursework proved to be a key component in this research as well as a key component to the implementation of ACP within the high school setting.

Research question. The question that structured and guided this research was: *How do students involved in career and technical student organizations perceive their participation in relation to their academic and career planning?*

To gain an understanding of student perceptions, this research was conducted in two methods. Phase 1 was a demographic survey that gained insight into what organizations students were participating in, the length of time involved, and what they are currently doing one year out of high school. One indicator that this researcher used to determine student perception was the length of time students were involved in the student organizations. With almost 65% of the respondents reporting they participated in all four years of high school and the other 35% participating for three years, this indicates that they were getting some value out of the organization. Interviewees confirmed that hypothesis by reporting that they found value in the skills and experiences they had while participating in CTSOs. As one interviewee stated, “With FBLA I got exposed to graphic design and that was helpful because that is what I ended up doing for college.” Another interviewee mentioned, “starting out in high school I didn’t know what I wanted to do for a career. With participating in SkillsUSA, I enjoyed the hands-on work and problem solving, so that is what drove me to apply those same skills and use them for my future education and career goals.” Overall, student perceptions are high to career and technical student

organizations. Many of the participants found lifelong friends and gained memories to last a lifetime, but in a specific sense the data also points to a highly thought of perception of CTSOs as it relates to academic and career planning. One interviewee mentions, “I would not be here today doing what I am doing if it were not for a few small experiences in high school that led me down this path.” That seemed to be true among all the interviewees and a common theme of the research.

Relationship to the literature. One of the theoretical foundations of this research was the social cognitive career theory, which provides a framework for which we understand how students develop career interest and make occupational choices. A large factor of this from the literature review is the term self-efficacy, which states, “one’s belief in his/her competency to perform well” (Alfeld et al., 2007). What the study has shown is that students take a lot of pride in being involved with a team and participating with like-minded individuals. One interviewee described how participating in FCCLA gave her “a sense of belonging.” Other interviewees described instances of great pride when either taking the podium themselves or watching close friends excel in a competitive event, knowing that they gave it their all. One interviewee described being persuaded to joining a CTSO based on the experiences of an older brother. Each respondent to this research had their own unique story to tell about how they started getting involved in student organizations, and they each had different motivations. A common thread among many of them was they wanted to participate in something with their friends and something that would give them skills to better their future. Even if they had no plans on gaining employment in a similar career field, they all found value in having transferable skills such as communication, leadership, time management, teamwork, problem solving, and networking. Just as the literature points out, students are motivated for various reasons. Once they can identify

their goals, aspirations, and motivations, they gain confidence and seem to thoroughly enjoy the experiences they had in high school.

It seems as though the respondents who participated in this research each enjoyed the constructivism approach that CTSOs offer, where students learn from experiences rather than from a teacher. One interviewee pointed out that one of the factors that pushed his skill level with SkillsUSA was how “the instructor stepped back and let the students deal with the problems at hand. If the instructor would have gotten involved all the time it wouldn’t have been as imperative for us to communicate and it really made our skills a lot stronger by messing up and learning from our mistakes.” The research conducted in this study simply reinforces information from previous studies compiled in the literary analysis.

Research methods. The mixed-methods case study proved to be a valuable analysis for the purpose of this study, as a 74% survey response for the demographic survey in phase 1 was found. Having a quantitative survey that produced information about which CTSOs students were participating in and what types of things they were currently doing provided insight as to the overall effectiveness of the high school in this case study. Out of 17 subject participants surveyed, four of those students participated in more than one CTSO. It was a bit surprising to see that number, as it was anticipated to be slightly higher. However, it was a pleasant surprise to note that so many students are getting involved for at least three years. There were no respondents that chose one or two years of participation, which is an indicator that each of the four programs were doing a good job of getting students involved early and retaining them throughout high school. The longer students were involved, the more exposure and opportunities they gained.

Another survey question that can be used to determine the overall effectiveness of CTSOs within high schools was question number 3 on the survey. Fifteen out the 17 respondents reported that they are attending college one year after graduating high school. The two respondents who reported that they are in a career setting are both participating in career fields that directly relate to the CTSO they were involved in. Also in that question, it was determined that 64% of the respondents are currently involved, either by college or career, in a pathway directly related to CTSO participation. That is an indicator of high overall program effectiveness, and that students were following through with their academic career plans.

Using the qualitative semi-structured interview processes in phase 2 really solidified the data that was collected in phase 1. Proving the mixed-methods case study approach was appropriate for this research. Allowing the interviewees to provide a narrative of their high school experiences ensured that bias was limited and validity of the data was accurate. Each respondent had a unique story and listening to them reminisce about their experiences and how that led to where they are now was rewarding as a researcher.

Overall, the consistent themes among the literature review, the demographic survey, and the semi-structured interviews were as follows:

- Theme 1: Students who participated in CTSOs tended to start early in their high school career and participated throughout all years.
- Theme 2: Students who participated in CTSOs gained transferable skills.
- Theme 3: Participating in a CTSO raised student awareness of career opportunities.
- Theme 4: Students who participated in a CTSO also enrolled in a related CTE course each year.

- Theme 5: Participating in a CTSO was rewarding, and students felt a sense of pride in belonging to an organization.

Conclusions

The literature suggested that much of today's workforce is struggling to find quality employees that possess the skills and knowledge necessary to being successful in the workplace. A large factor of this is the fact that students are not taking advantage of the proper coursework in order to succeed in given career fields. Not knowing what they want to do after high school or not knowing the proper pathway are two leading factors of students not being prepared for post-secondary opportunities. The behavior theories studied in this research suggest that students need to find their own confidence to make informed decisions about career opportunities, and that a majority of them make decisions based on experiences they previously had. Knowing these potential risks for students to fall through the cracks is even more reason for a strong academic career plan to be made for each student.

A part of the academic and career plan is having a diverse set of avenues for each student to travel down. Taking courses in high school is good for exposing students to skills and content knowledge. Enhanced learning experiences happen outside of the classroom for many, either through various work-based learning opportunities or through a CTSO. Both the literature as well as the research conducted suggest that students gain a deeper level of career exploration through CTSOs that they did not gain before in related courses.

As the purpose of this study was to determine the impact of CTSOs on student choices in career pathway planning at one urban midwestern public high school, upon completing a literature review, using a mixed-methods case study research approach, and drawing conclusions from the data, it is concluded that CTSOs do, in fact, have an impact on student choices in career

pathway planning. This study focused on the perceptions and experiences of recent graduates of the high school who participated in SkillsUSA, DECA, FBLA, or FCCLA, or a combination thereof.

Based on the information that was triangulated from the literature as well as the two phases of this case study, it is also concluded that the experience and exposure students receive through the participation of CTSOs has a direct impact on future career choices. The research objective was to determine how students involved in CTSOs perceived their participation in relationship to their academic career planning. Based on the information gathered in this study, it was determined that students perceived their CTSO as a learning resource that allowed them to gain experience and a desired skill set outside of their classroom work. Respondents in this study thought highly of the transferable skills that they gained, which they continue to use throughout their lives in a post-secondary setting. It was found that the students who participated in a CTSO in high school found their experience to be rewarding, which helped them to make informed decisions about future career options. The competitive events, workshops, communication skills, and networking were a few key components which respondents perceived as experiences that were rewarding, allowing them to gain confidence in their career choices.

Recommendations

Upon completion of this study, it has been determined that both the data and the limitations of the study offer quality recommendations for the practical implications of the data collected, future research recommendations, and future action from the research.

Recommendation related to this study. Based upon the findings and conclusions of this research, it is determined that career and technical student organizations do, in fact, have an impact on academic and career planning and students' career choices. The data that was

collected, although specific to one midwestern public high school, is believed to demonstrate consistency amongst other school districts of like stature. Now that the data have been collected and insight is provided as to the effectiveness of CTSO programs, the following recommendations are offered to the school district in this study.

1. Continue to provide high quality CTSO programs and ensure they are connected to a CTE course of similar relevance.
2. Promote and showcase CTSOs around the school. Several respondents from the research commented on the lack of student participation and funding for competitions.
3. Incorporate CTSOs into daily academic career planning resources.
4. Increase the number of CTSOs available within the district. Evidence in this research shows students rarely leave one CTSO to join another, that they will simply just participate in both. Having multiple experiences and options for students is highly recommended.

Recommendations for further study. Due to the limitations of this study, it is recommended that this study be replicated further to include other CTSOs in rural school districts, both public and private, and locations around the country. Another avenue for future studies would be to compare and contrast other student organizations outside of CTEs to determine career pathway impacts. Clubs such as debate club, forensics, and Chinese club, to name a few, are all potential organizations to study in order to gain a larger picture.

One theme that continued to arise throughout this study, both in the literary analysis as well as the mixed methods case study, was determining the importance of learning specific content versus having experiences and exposure to a broad career field. To provide an example

from the study, many respondents mentioned that the courses they were involved in provided foundational content knowledge that prepared them for being able to perform in each career field. They also mentioned collaboratively, as a whole, that they felt they got more out of the experiences that CTSOs offered, and they seem to have been exposed to more career options, which ultimately allowed them to choose various pathways. A recommendation for a future study is to isolate the primary factor(s) for career pathway choices. In this study, all participants who were in a CTSO were also in multiple CTE content classes. It is not determined in this research whether CTSOs or the CTE courses are the primary factor that impacts student career choices. A future study would have three controlled groups: one group that has taken only CTE courses, another group that only has CTSO experiences, and a third group, like this study, where there is participation in both. Isolating the three groups would ultimately lead to the true impactful variable that would lead to student career choices.

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Appendix A: Survey Questions

CTSO Participants

Start of Block: Default Question Block

UW-Stout Signed Consent Form for Research Involving Human Subjects Consent to Participate In UW-Stout Approved Research

Title: The Impact of Career and Technical Student Organizations on Student Career Pathway Choices at Central High School

Research Sponsor: Dr. Urs Haltinner University of Wisconsin Stout haltinneru@uwstout.edu

Investigator: Lucas Jandrin Central High School La Crosse, WI (608)789-7900

Description: The purpose of this study is to determine the impact career and technical student organizations have on student choices in career pathway planning at the High School level. The study focuses on student perceptions and experiences over time to determine the impacts and outcomes of CTSO's. This research was designed to gain information from past CTSO participants to better inform future decisions for Career and Technical Student Organizations at Central High School. The following questions will structure this study: How do students involved in career and technical student organizations perceive their participation as a contribution to their academic and career planning? The research will be compiled into a plan B thesis paper to fulfill graduation requirements at the University of Wisconsin Stout. The research will also provide insight for La Crosse Central High School in determining future program experiences centered around Career and Technical Student Organizations. The research will be gathered, analyzed and lastly report the impacts student organizations play in career pathway choices. Information from the research will be gained through a descriptive mixed methods study in which student participants will be surveyed and interviewed, to determine how effective Career and Technical Student Organizations are in overall career pathways within a high school setting

Risks and Benefits: The results of the research will help teachers and administrators at La Crosse Central High School make informed decisions about career and technical student organizations as they relate to academic career plans. This research will have an impact on many students looking to further their educational career and gain employment in a variety of career fields. The benefits of participating in this research is having input for future students to have opportunities for career exploration through a variety of student led organizations within the high school setting. Your input is valuable and may be used outside of the school district as this research will be a public record for others to use and similar research to be based from.

Time Commitment: It is estimated that the survey will take less than five minutes to complete. The dedication of time to this research is greatly appreciated, and your responses will help researchers understand the career and technical student organization impact on career choices.

Confidentiality: Your name will not be included on any documents. We do not believe that you can be identified from any of this information. This informed consent will not be kept with any of the other documents completed with this project. The information provided in this research

will be recorded anonymously and there will not be a link between you and the answers you provide on the survey.

Right to Withdraw: Your participation in this study is entirely voluntary. You may choose not to participate without any adverse consequences to you. Should you choose to participate and later wish to withdraw from the study, you may discontinue your participation at that time without incurring adverse consequences.

IRB Approval: This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study, please contact the Investigator or Advisor. If you have any questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

Investigator: Lucas Jandrin ljandrin@lacrossesd.org (608) 789-7900

IRB Administrator Elizabeth Buchanan Office of Research and Sponsored Programs 152 Vocational Rehabilitation Bldg. UW-Stout Menomonie, WI 54751 715.232.2477
Buchanane@uwstout.edu

Advisor: Dr. Urs Haltinner University of Wisconsin Stout haltinneru@uwstout.edu

Statement of Consent: By clicking the consent button below, you agree to participate in the project entitled, *The Impact of Career and Technical Student Organizations on Student Career Pathway Choices at Central High School*

- I consent (1)
- I do not consent (you will be exited from the survey) (2)

Skip To: End of Survey If UW-Stout Signed Consent Form for Research Involving Human Subjects Consent to Participate In UW... = I do not consent (you will be exited from the survey)

Q1 Which of the following student organizations were you involved in?

- Skills USA (including First Robotics) (1)
- FBLA (2)
- FCCLA (3)
- DECA (4)

Q2 How many years were you involved in the organizations selected above.

- 1 year (1)
 - 2 years (2)
 - 3 years (3)
 - 4 years (4)
-

Q3 What is your status after completing high school? If employed full time state your job title, if attending post-secondary education please state your intended degree, if other please explain below.

Q4 Would you be willing to participate in an online interview to discuss your experiences as a member of a career and technical student organization. If yes please state your name, available times, and a contact method best to reach you.

- Yes I will participate in an interview (list below name, and contact information to set up an interview, ex: email or phone number) (1)

- No, I do not want to participate in an interview (2)

End of Block: Default Question Block

Appendix: B Interview Outline

The Semi-structured interview

Study Question: How do students involved in career and technical student organizations perceive their participation in relation to their academic and career planning?

Purpose: The purpose of this study is to determine the impact of career and technical student organizations have on student choices in career pathway planning at the Mid-western High School.

Risk and Benefits: Conducting research and documenting the impacts Career and Technical Student Organizations have on student career choices will lead to a better understanding of the contribution and importance of Career and Technical Education and Career and Technical Student Organizations in a High school setting. Results of the research may have implications on future education and curriculum decisions for the school district. Having a better understanding of various opportunities students have in secondary school can impact the transition into post-secondary options. Your input is valuable and may be used outside of the school district as this research will be a public record for others to use and similar research to be based from.

Confidentiality: To ensure anonymity during the interview processes a secure recording device will be used that is only accessible to the researcher. Participants will be explained the risk and benefits before starting the interviews which include a detailed explanation of how their responses will be kept confidential and a detail explanation of the processes of collecting the data will be explained. The interview recordings will be destroyed upon completion of the research.

The REV transcribed interview files will be stored on the researcher's computer with all names redacted and pseudonym names assigned. For all data collection purposes personal identity including names, age, or any other personal identifying content will be deleted from the research.

Right to withdraw: Your participation in this study is entirely voluntary. You may choose not to participate without any adverse consequences to you. Should you choose to participate and later wish to withdraw from the study, you may discontinue your participation at that time without incurring adverse consequences.

Permission: This interview will be audio recorded and used to assist in an analysis of career and technical perceptions through your experiences. Do you grant permission for the researcher to record this interview?

Interview prompt

1. *Tell me about your experiences while involved in (skills USA, DECA, FBLA, FCCLA) and how do you see it having connected with your academic and career planning.*
2. *The researcher will listen and based on interviewee responses deepen the descriptive level by asking participants to expand on thoughts.*
3. *Thank participants for their contribution and time and end recording.*

Appendix: C Reduction Figure

Interview Transcripts		Reduction	Meaningful Units	Overarching themes
<p>Researcher: Before we begin, I want to thank you for your participation in this interview. I'm just going to start out with an overall question and then go from there. So with that, we'll get started.</p> <p>Researcher: So, you were involved in DECA and Skills USA during high school. Can you tell me a little bit about your experiences in high school with those two programs?</p> <p>Interviewee: Yeah, so I originally started out, I didn't know much about either. I had just heard some from friends and didn't really have much interest in them outside of just the clubs. And first with DECA, I was really scared going into it. I didn't have much</p>	<p>Being involved in DECA and Skills USA during high school. Tell me about your experiences with those two programs.</p> <p>Starting out I didn't know much about either. DECA..., Heard some from friends..., was scared going into it at first..., didn't have much experience with anything related to business or social skills..., or that type of career..., or any job interview skills. Past three years helped develop my skills with interacting with other people..., employers..., teachers...,also built confidence...,gained skills that can assist both in education and future careers. Skills USA: Same situation..., didn't know to much about it...,ended up enjoying it..., helped me..., find what I really wanted to do..., future. Fun..., hands-on..., work physically..., developed a lot of skills.</p>	<p>How did you get started with CTSO's</p> <ul style="list-style-type: none"> Started as a freshman Was scared to start Did not have any experiences with either DECA or SkillsUSA Heard friends talking about it Wanted to get social skills and job interview skills. <p>Skills Gained from participating</p> <ul style="list-style-type: none"> Interacting with other people Gained confidence Job skills Working in teams with time constraints Problem solving Communication skills <p>Impacts on Career pathway</p> <ul style="list-style-type: none"> SkillsUSA competition helped determine what they wanted to do for the future 	<p><i>Students who participate in CTSO tend to join at the start of their high school career and participate throughout all the years.</i></p> <p><i>Students who participate in CTSO's gain a high level of transferable skills.</i></p> <p><i>Participating in a CTSO raises student awareness of career opportunities.</i></p> <p><i>Students who participate in CTSO are likely to enroll in a related CTE course each year.</i></p> <p><i>Participating in CTSO is rewarding and students find a sense of pride in belonging to the organization.</i></p>	