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The Dissertation Study of Ebon Brown is approved, and is acceptable in quality and form for publication on microfilm and electronically:

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2015
DEDICATION

I would like to express my sincere appreciation for each and every professor in the JDP at the University of California San Diego and California State University San Marcos. They have pushed my thinking on this topic and have helped improve my academic skills while providing mentorship and guidance. I want to thank my committee members for their help in shaping this study to be something that is valuable for the field of Career Technical Education. I especially would like to thank my committee chair Dr. Erika Daniels for being there for me every step of the way. Without her encouragement and support, I would have never been able to complete this project.

I would like to extend my gratitude to my Cohort colleagues for their support and feedback as we ventured through the JDP together. A special thank you goes to Bryan Brocket, Kiki Bispo, and Terrence Davis for their constant encouragement, friendship, and sense of humor. Over the course of three years, these friends have helped me grow as a writer and researcher.

I want to thank my friends and my family for their support and understanding. Most importantly, I want to dedicate this dissertation to my wife Emily for sacrificing three years of her life so that I may pursue this goal. Her relentless support and love allowed this project to be possible. I want to thank my children Kayen, Adrick, Liam, and Allannah for their understanding and source of inspiration to complete this study. Without them, I would be completely lost.
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VITA

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ABSTRACT OF THE DISSERTATION


by

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Doctor of Education in Educational Leadership

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The purpose of this dissertation was to explore the lived experiences of Career Technical Education (CTE) concentrators. In order to accomplish this, the study utilized a narrative inquiry design to understand the experiences of CTE concentrators.
from the perspective of the students themselves. The objective was to fill a large gap in the existing empirical research surrounding CTE.

This dissertation utilized a semi-structured interview protocol and solicited the input of 13 study participants at one traditional high school in Southern California. Each participant was a high school 12th grade student enrolled in the final course of their CTE Program of Study (POS). Students were asked questions regarding how they arrived in their CTE-POS, what their academic and social experiences were, and how their POS has influenced their future career aspirations. Students were asked a series of 30 questions investigating the intrinsic and external factors that contributed to the participant’s actions of enrolling and maintaining their commitment through their CTE POS.

The data were reduced down to four major themes representing the significant findings of the study: External Factors that Drive Student Connections, Intrinsic Motivators, Curricular Relevancy, and Self-Assessment. Additional findings included a significant lack of early and sustained career counseling, a focus on college entrance eligibility requirements versus career counseling, and 100% of participants being on track to graduate high school. Furthermore, each participant had a positive connection to their CTE teacher, their school, and other students due to their experiences in CTE.

Unfortunately, there were very little academic connections from one class to the next. Participants had a difficult time seeing the relevance of their non-CTE classes and many of them looked forward to attending their CTE classes because of a strong desire to learn something new in a course they chose. These findings resulted in a need for CTE teachers and academic teachers to collaborate in order to establish relevant
academic courses that directly relate to student’s career interests. Additionally, the need for high quality CTE-POS was established. Schools that strive to connect their students academically and socially would benefit greatly from making CTE-POS available to all students.
CHAPTER ONE: INTRODUCTION

In his 2012 State of the Union Address, President Obama described education as the inextricable link to a solvent and thriving U.S. economy. He made clear mention that in times of economic hardship and struggle, the American workforce would need to be skilled, adaptable, creative, and equipped for success in a global marketplace (U.S. Department of Education, 2012). Educators, policymakers, and public officials have made it their business to ensure that every single American student graduates high school and is a successful contributor of society. These educational goals are central to sustaining the U.S. economy and ensuring the U.S. workforce is equipped to meet the demands of the 21st century.

Just as President Obama focused on education as the catalyst to solve the country’s economic strife and declining numbers of skilled workers, many presidents and policymakers preceding him have done the same. Throughout history, there have been numerous comprehensive school reform initiatives suggested to help improve the nation’s educational system. One such initiative created by policymakers is Career Technical Education (CTE): a comprehensive school reform action designed to play a critical role in preparing all students, regardless of their backgrounds or circumstances, for further education and highly skilled careers (Aliaga, Kotamraju & Stone, 2012).

The purpose of CTE is to marry academic and technical skills in order for students to gain the skills and knowledge necessary to compete in the global marketplace by either entering into employment or continuing to postsecondary education (Gentry, Peters & Mann, 2007). It was designed as a program to help all students gain access to highly technical career training with a priority of service for
students in minority groups, students with special needs and/or students who are Low Income (LI) (Plank, DeLuca, & Estacion, 2008).

While there is still a focus on meeting the needs of special populations through various legislative acts that allocate federal funding for CTE, there is a greater focus on meeting the needs of industry and supplying an educated workforce. In order to accomplish this task, there is more of an emphasis placed on linking traditional academic studies to 21st century occupational skills providing students with relevant and employable skills in an underprepared and shrinking workforce (Daggett, 2010).

Federal Legislation for CTE began with the passing of the Smith Hughes Vocational Education Act in 1917. This act established vocational education with its own separate funding stream, teacher preparation and certification programs, students, segregated curriculum, and its own school board (Hayward & Benson, 1993; Lynch 2000). In 1984, Congress would pass the first Carl D. Perkins act giving vocational education parameters and guidelines in which to operate (Lynch 2000). It would be reauthorized four times over the next 22 years resulting in the Carl D. Perkins Act IV of 2006.

The first Carl D. Perkins Vocational and Applied Technology Act had two main objectives: (1) the improvement of vocational programs and (2) better services and increased access to vocational education for students with special needs (Hayward & Benson, 1993). This act along with the following two reauthorizations would set a precedence of service that CTE is attempting to escape today. In many schools, there is a presumed negative perception or stigma associated with the field of CTE that can be largely attributed to the period of time in which current students’ parents were in high
school and the targeted focus of vocational education was for students who were deemed non-college bound (Brown, 2003).

With the reauthorization of the Carl D. Perkins Act of 2006, CTE is operating under new federal legislation that increases accountability for academics, industry credentialing, teacher preparation and technical skills attainment. Programs of Study (POS) or Pathways of courses along with mainstreamed CTE programs, and postsecondary training have taken the lead in regards to CTE’s new mission and priorities (P.L. 109-270). Even with the guidance of federal legislation, there remains minimal local program oversight with large gaps in empirical evidence that explores the impact of CTE.

The majority of available research conducted about CTE is primarily anecdotal. Most studies discovered throughout this dissertation provided a glimpse into student experiences from CTE advocates with very little research eliciting the perspectives from the students themselves. The existing literature has failed to engage policymakers and educational leaders about the current picture of CTE as it functions in 21st Century schools (Conti, 2014). This research study focused on a very specific population of students who were designated by the state of California as CTE “concentrators”. Because the study took place in California, the definition of a CTE “concentrator” provided by the California Department of Education was utilized:

A secondary CTE concentrator is a student who has completed 50 percent of a planned program sequence (in hours or credits) in a state-recognized CTE sequence or Program of Study (POS) and is enrolled in the next course in that sequence, or has completed 50 percent of a single state-recognized multi-hour course and is enrolled in the second half of that course (California Department of Education, 2013).
The researcher explored this particular group of students because they were fully vested in their CTE-POS and if any student had a story to tell about their CTE experience, it was them. By exploring this particular population of student, the researcher would gain a better understanding of CTE and the impacts, if any, CTE has had on CTE concentrators.

**Statement of the Problem**

One of the most foundational obligations of our society is to educate all youth to ensure that students leave our compulsory K-12 educational system with the skills needed to prosper and succeed in a rapidly evolving technological society (Symonds et al., 2011). Public high schools have a duty, if not a mandate, to provide students with opportunities in the given career path that they choose (Stone & Aliaga, 2003). With alarming numbers of high school dropouts and staggering graduation rates, this narrative inquiry contributed to the ongoing discussion about whether CTE is having an impact on student retention, engagement, academic success, future educational goals, career aspirations, and social experiences in high school.

There is a large gap in empirical research demonstrating whether CTE has proven to be a viable educational approach for students. In addition, there is very little empirical research documenting the experiences of CTE concentrators who have completed their POS from the perspective of the students themselves. Educational research has long been conducted “on not with students” (Cook-Sather, 2006, p. 376) but has only started to recognize the importance of student voice in the past twelve years (Jagersma, 2010). There is very little qualitative research seeking student voice of CTE concentrators that elicit personal experiences with the program and how it has
affected their educational and career goals. This study filled two important gaps in the research about the lived experiences of CTE concentrators using the theoretical framework of student voice and Self Determination Theory (SDT) as the foundation of the study.

Of the limited empirical research available, most is quantitative in nature utilizing longitudinal methodologies such as course-taking patterns of CTE students, labor market trends, and comparisons between CTE and non-CTE student test scores. The leading research organization conducting the majority of the limited empirical research is the National Research Center for Career Technical Education (NRCCTE). In terms of overall CTE research, it is widely documented that the field of CTE is generally understudied making further research valuable for this emerging reform initiative (Alfed & Bhattacharya, 2012; Bragg & Rudd, 2007; Gray, 2004; Castelleno, Stringfield & Stone, 2003; Lewis, Kosine & Overman, 2008; Rykan, 2006; Stipanovic, Lewis & Stringfield, 2012).

In a recent national longitudinal study, leading CTE researchers Aliaga et al., (2012) estimated that in 2011, 27% of all CTE students nationwide were considered concentrators and of those students, nearly 50% of them were designated as LI, minority, or special needs students. This data directly correlates to the traditional student body served in vocational education that will be discussed in detail in Chapter 2 of this study. This research study may lead to future studies adding to the dearth of empirical research within this particular topic.

While federal legislation has worked to make CTE programs more mainstreamed, high schools tend to have their own internal logic in terms of student
placement. Despite years of reform efforts designed to close the achievement gap, many high schools revert to de-facto tracking placing students on purely academic tracks while others deemed as entering the labor market early on are placed in vocational tracks (Stone & Aliaga, 2005). This internal logic has caused years of stigmas and stereotypes that resulted from the structure of the previous vocational education model - once regarded as the “dumping ground” for students who are LI, minority, or special needs seen as not having the skills or intellect required to attend college (Grubb, 2011). This belief appears to be born out by the disproportionate numbers of CTE concentrators being minority, LI, or having special needs (as mentioned above).

These stigmas may still exist in schools throughout the country and would impact the new focus and priorities of CTE outlined in the Perkins IV of 2006. Furthermore, if these stigmas and stereotypes are present, they may play a role in student choice, student connectedness to school culture, and placement of increased numbers of LI, minority and/or students with special needs into CTE by school counselors. This study explored the perspectives of the students themselves who were immersed in these programs partially to determine if these stigmas and stereotypes still exist.

It is important to understand student demographics that are traditionally served in CTE as the demographics selected for this study correlate directly with the national CTE concentrator statistics (described more in Chapter 3). The study will help to inform policymakers and educational leaders of the new mission and priorities of CTE and if it is working for students who generally under-perform in schools. Finally, the
study bridged the research gap that exists regarding the perceived academic and social successes of CTE concentrators.

**Purpose of the Study**

The purpose of this study was to explore the lived experiences of CTE concentrators in order to determine the perceived academic and social impacts of CTE from the perspectives of the students themselves. With the implementation of the Common Core State Standards (CCSS), and California’s Local Control Accountability Plan (LCAP), education is experiencing its greatest overhaul in recent decades. These changes are creating significant discussions surrounding CTE on student academic achievement and are materializing as an important topic in the public high school arena (Kotamraju & Mettille, 2012). At this point, little research exists to determine if CTE concentrators feel that the CTE has benefitted them in anyway (Bragg & Rudd, 2007).

Earlier studies show that many students enter CTE courses via their high school counselor who enrolled them in that particular program because of a perceived notion that they did not have the skills necessary to complete traditional course requirement(s), i.e., art, math, science, social studies, academic elective etc. (Stone & Aliaga, 2005). Conversely, in a qualitative national longitudinal study, Hernández-Gantes and Sanchez (1996) found that 82 students in five occupational/career oriented programs under the umbrella of CTE (Tech Prep, Youth Apprenticeships, Career Academies, Schools That Work (STW) and Work Based Learning (WBL)), reported that vocational-based learning experiences facilitated acquisition and production of new knowledge, application of knowledge to real-world situations, and motivation for taking personal responsibility for their own learning and career development.
In keeping with the notion that over half of all CTE concentrators are disadvantaged students, it is important to note that the U.S. Department of Education’s National Center for Education Statistics (NCES) (2013) reported that LI, minority, and students with special needs are our most vulnerable and disadvantaged youth. In addition, a large majority of minority students in 2009-10 had drastically lower high school completion rates: 71.4% for Hispanic students and 66.1% for Black students compared to 93.5% of Asian/Pacific Islander and 83% White (http://nces.ed.gov/fastfacts). According to Gentry, Hu, Peters, & Rizza (2008), the decrease in high school completion for this particular population was because of a lack of school connectedness, a feeling of disenfranchisement with the school they attend, and a lack of relevant curriculum keeping students engaged.

Research has shown that when students have a feeling of belonging and they know that someone cares for them at their school, they have increased chances of academic success and social health and are less likely to engage in risky behavior such as early age sexual activity, acts of violence, and substance abuse (McNealy, Nonnemaker & Blum, 2009). Educational leaders are continually trying to find ways to connect students to school and provide them with a sense of belonging. This study adds to the small body of qualitative empirical research exploring the lived experiences of CTE concentrators from the perspective of the students themselves.

**Research Questions**

Central Research Question:

A. What are the lived experiences of Career Technical Education (CTE) concentrators?
Sub-research questions:

1. How are students placed into CTE? What intrinsic and external factors influence students to become CTE concentrators?

The first sub-research question allowed the researcher to explore what influences students to remain in their CTE-POS. Furthermore, it informed the research in understanding how students arrived in their CTE-POS and what influencing factors were involved in the student’s decision to enroll in CTE.

2. How do CTE concentrators perceive their academic and social experiences in high school?

Sub-research question two allowed the researcher to explore the lived experiences both academically and socially for CTE concentrators selected in the study. This question was critical to understanding how CTE concentrators, many of whom were designated as special needs, minority, or LI, perceived their high school experience both academically and socially. This question allowed the researcher to understand more about how CTE concentrators connect to school culture.

3. In what ways does involvement in CTE shape future education and career aspirations?

Sub-research question three elicited important information regarding the CTE concentrator’s future plans and whether or not their commitment to their CTE-POS has influenced their education and career aspirations.

These questions were explored through one-on-one interviews with CTE concentrators followed by classroom observations. The questions posed in the study were designed to inform the research by offering student perspectives on the impact, if
any, CTE has had on the academic success and school connectedness of CTE concentrators. Additionally, the research questions explored how CTE concentrators arrived in CTE and what motivated them to continue through the sequence of courses in their POS. Finally, the research questions provided an understanding of the influence that CTE has had on the future educational and career goals of CTE concentrators.

**Theoretical Framework**

Educational research that does not elicit or respond to students’ ideas violates students’ rights, and educational reform that does not include students in active roles reinforces the U.S. school as a locus of social control that keeps students captive either to dominant interests, notions, practices or to adults’ notions of how to empower students (Cook-Sather, 2006, p. 372).

**Student Voice.** The majority of research documented about CTE has been written without input from the students themselves. Students have long been seen as the empty vessels to fill with knowledge with little to no involvement in their own academic endeavors (Cook-Sather, 2002; Freire, 2000; Jagersma, 2010; Smyth, 2006). Providing students with a means to have their voices heard in order to communicate with decision makers and policymakers enables them to be “authors of their own understanding and assessors of their own learning” which creates an engaged student population (Cook-Sather, 2002, p. 5; Cook-Sather, 2006, p. 365; Goodman et al., 2011; Mitra, 2006; Smyth, 2006a; Smyth, 2006b).

For the purpose of this study, the definition of “student voice” provided by Cook-Sather (2006) as “the opportunity to speak one’s mind, be heard and counted by others, and, perhaps, to have an influence on outcomes” (p. 363) was utilized. Across the nation in many states, legislators continue to pass legislative actions positioned
around student rights and student advocacy although they continue to exclude student voices (Cook-Sather, 2006). Kozol (1991) posited that “the voices of children have been missing from the whole discussion of education and educational reform” (as cited in Cook-Sather, 2002, p. 5). Landmark legislative actions such as Brown vs. Board of Education of Topeka Kansas in 1954, the Elementary and Secondary Act of 1965, the Education for All Handicapped Children Act in 1975 and No Child Left Behind of 2002 all advocated for student rights without incorporating student voice (Cook-Sather, 2006).

Educational research has long been conducted “on not with” students (Cook-Sather, 2006 p. 376). Cruddas and Haddock (2005) noted that the current “dominant culture of school prevents practitioners from listening to students’ own creative ideas about how the system can change and meet their needs” (p. 326). The utilization of student voice in education is a culture shift from the current adult centered and disempowering system that provides students with very little input and ownership of their learning, lived experiences, and overall education (Cook-Sather, 2006). When student’s voices are heard and valued, they will become more engaged in the system and the process of their education (Ferguson, Hanreddy & Draxton, 2011).

This study listened to the voices of 13 students who were designated as CTE concentrators. The researcher informed the students prior to each individual interview of the importance of student voice and that this interview would allow the students’ to provide valuable input adding to a lack of current research about their experiences they have had in CTE.
**Self-Determination Theory.** Self-Determination Theory (SDT) refers to the intrinsic and external factors that influence the decision making of an individual person. This study is grounded in SDT and serves as a critical component to understanding the lived experiences of CTE concentrators. The majority of key studies that emerged from SDT research focused on intrinsic motivation. Intrinsic motivation refers to an individual embarking on an activity because it is interesting or self-fulfilling versus extrinsic motivation where an individual embarks on an activity for external goals and purposes (Reeve, Deci & Ryan, 2004; Ryan & Deci, 2000; Ryan & Deci 2006; Niemiec & Ryan, 2009). Ryan and Deci (2000) provide examples of intrinsic values such as community service, health, personal growth and affiliation versus extrinsic values such as fame, financial success, prizes, notoriety, and physical appearance.

There is little understanding as to why CTE students embark upon their CTE-POS. Furthermore, there is very little research demonstrating why CTE students continue in their CTE-POS and complete their POS as CTE concentrators. Are there intrinsic and external factors that motivate these students to persist in their POS? This study sought to answer these questions utilizing SDT as the foundation theoretical framework that is directly linked to the first sub research question:

1. How are students placed into CTE? What intrinsic and external factors influence students to become CTE concentrators?

Most contemporary theories assume that what motivates people to persist with and continue a specific behavior is the desire to accomplish previously set goals and outcomes. However, Deci and Ryan (2002) suggest that SDT utilizes a complex understanding of what motivates human beings with three basic psychological needs
that are instrumental to the positive well-being of people; (1) Competence. People need to gain mastery of tasks and learn different skills; (2) Connection or relatedness. People need to experience a sense of belonging and attachment to other people; (3) Autonomy. People need to feel in control of their own behavior and goals. When people accomplish these three basic psychological needs, they become self-determined and are able to intrinsically pursue the things that interest them.

SDT posits that the environment a particular person is immersed in does not control the ability of a person to become intrinsically motivated, but rather it is directly linked to the social contexts that affect peoples’ lived experiences which in turn, meets some, all, or no basic psychological needs (Niemic & Ryan, 2009). This concept is directly tied to research sub question number two:

2. How do CTE concentrators perceive their academic and social experiences in high school

The researcher wanted to find out if the perceived social experiences of CTE concentrators affected their motivation to continue in their CTE-POS. Additionally, the researcher wanted to better understand if external factors such as academic success, good grades, and academic accolades played a significant role in the motivation for students to complete their CTE-POS. Conversely, the researcher wanted to understand if CTE concentrators had other intrinsic motivations linked to social contexts that influenced the inclination for CTE concentrators to continue in their POS.

The third and final sub-research question pertained to the way in which involvement in CTE has shaped the future education and career aspirations of CTE concentrators. Niemic and Ryan (2009) suggested that if people have a set of
psychological needs met, they may remain active and motivated in order to sustain optimal development. This prominent SDT concept was investigated in the study with sub-research question number three:

3. In what ways does involvement in CTE shape future education and career aspirations?

Student involvement in CTE and an investigation into the lived experiences of CTE concentrators provided the researcher with a deeper understanding of the ability for CTE students to continue with their educational plans and career aspirations.

The study of motivational processes through the lens of SDT has received increased empirical attention in education and psychology (Deci & Ryan, 2000). The research questions explored in this study are grounded in SDT framework using student voice theory as the apparatus for informing the research. Understanding the motivating factors of CTE students who pursued and completed their CTE-POS from the perspective of the students themselves, provided a research understanding that has not been explored in other studies. In chapter two, the researcher will elaborate more on SDT and Student Voice Theory as the theoretical frameworks that underpin the findings of this important study.

**Methods**

In order to explore the research questions posed in the study, an appropriate inquiry approach is a qualitative narrative inquiry. Strauss and Corbin (1998) explained that “qualitative methods can be used to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional methods” (p. 11). Narrative inquiry is the process of
gathering information for research purposes in order to tell a story. Connelly and Clandinin (1990) noted that “humans are storytelling organisms who, individually and collectively, lead storied lives” (p. 2). Thus, the study of narrative is the study of the ways human beings experience the world.

Telling stories is a natural part of life that has been the primary form of communication and historical reporting for thousands of years. A narrative inquiry is appropriate when there are willing individuals who want to tell their stories along with a researcher who works closely with the individuals to accurately describe their story (Creswell, 2011). Narrative researchers utilize field notes, interviews, journals, letters, autobiographies, and orally told stories to accurately portray an individual’s story.

Creswell (2011) noted that there are seven major characteristics central to narrative research:

- Individual experiences,
- Chronology of the experiences,
- Collecting individual stories,
- Restorying,
- Coding for themes,
- Context or setting, and
- Collaborating with participants.

This particular study focused on the individual stories and experiences of CTE concentrators. These students were enrolled in, or had already completed, their second, third, and/or fourth year of CTE courses within one particular sequenced CTE- POS. Participants were interviewed individually and asked to tell their stories in a variety of
ways: by engaging in conversation, responding to questions from the researcher, and/or
telling stories triggered by semi-structured interview questions. There were a total of 13
participants interviewed in this narrative inquiry all of which were CTE concentrators
varying in gender, race, age and CTE-POS.

Significance of the Study

This narrative inquiry contributed to a lack of empirical qualitative research on
the lived experiences of CTE concentrators. As mentioned earlier, there is very little
qualitative research discussing the perceived impacts of CTE students who are fully-
vested in their CTE-POS. This investigation sought to inform educators and
educational leaders about CTE and the impacts, if any, on this particular population of
students. Furthermore, as the U.S. economy continues to struggle and school funding
remains on the forefront of local, state and national politics, this research is intended to
inform policymakers about whether CTE is deserving of continued funding and public
investment.

Schools who invest in sequenced CTE-POS find that multiple courses in a
sequenced POS are more expensive than offering a single CTE course. Analyzing the
perceptions and lived experiences of CTE concentrators allows educational leaders and
politicians to determine what type of investment is most valuable and cost effective.
Finally, the study was designed to inform decision makers if the new mission and
priorities of CTE has benefited students who are most committed to CTE of which, over
50% are designated as minority, students with special needs, or LI.

In what follows, the researcher reviews relevant literature in Chapter 2 that
includes exploring CTE through a historical perspective. By understanding where CTE
originated from, the legislative acts that shaped CTE, the impacts that CTE has on school reform efforts and the labor market, allows the researcher to provide context into the experiences students are having today. The researcher will also address the legislative acts that shaped CTE along with the conceptual framework that has molded CTE followed by the grounding theoretical framework of SDT.

In Chapter 3, the researcher explains the methodology used to elicit students’ voices about their experiences in modern day CTE-POS. This discussion delves into the theoretical framework of student voice and SDT along with the logistics of the study. The use of qualitative narrative inquiry will be explored along with the selected participants, site selection, the process used in data collection, data analysis, and research design. After a thorough analysis of all sources of data, the findings are outlined in Chapter 4 of the research study. Finally, Chapter 5 concludes with the implications of the findings and the significance of study with detail on how the research study may influence future research.

**Definition of Key Terms**

*Career Technical Education (CTE).* Perkins IV defines career and technical education as organized educational activities that offer a sequence of courses that provides individuals with the academic and technical knowledge and skills the individuals need to prepare for further education and for careers in current or emerging employment sectors. Career and technical education includes competency-based applied learning that contributes to student’s academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills (OVAE, 2013).
**Carl D. Perkins Act IV of 2006.** The Carl D. Perkins Vocational and Technical Education Act of 2006 (Perkins IV), which took effect in Program Year (PY) 2007 (beginning July 1, 2007), is the principal source of federal funding to states for the improvement of secondary and postsecondary career and technical education programs. Each year under Perkins IV, Congress has appropriated more than $1.1 billion dollars for grants to states, including the basic state grants (under Title I) and tech prep grants (under Title II) (OVAE, 2013).

**Comprehensive School Reform.** The CSR program was established as a demonstration program in 1998 and authorized as a full program in 2002 as part of the No Child Left Behind Act (NCLB). It is one approach to help low-performing K–12 public schools meet state performance standards. The CSR program emphasizes two major concepts. First, the approach mandates that school reform should be comprehensive in nature, strengthening all aspects of school operations——curriculum, instruction, professional development, parental involvement and school organization. Second, the CSR approach should involve the use of scientifically based research models——that is, models with evidence of effectiveness in multiple settings (Orland, Hoffman & Vaughn, 2010).

**Career Technical Education (CTE) Concentrator.** A secondary CTE concentrator is a student who has completed 50 percent of a planned program sequence (in hours or credits) in a state-recognized CTE sequence and is enrolled in the next course in that sequence, or has completed 50 percent of a single state-recognized multi-hour course and is enrolled in the second half of that course (California Department of Education, 2013).
Example: In a sequence comprised of two or three courses, only students enrolled in the last course would be counted as concentrators. In a four course sequence, students enrolled in the third and fourth courses would be counted as concentrators. All concentrators would also be counted as participants.

Minority. In a social science context, a culturally, ethnically, or racially distinct group that coexists with but is subordinate to a more dominant group (Sadie, 2010).

Narrative Inquiry (research design). Researchers describe the lives of individuals, collect and tell stories about people’s lives, and write narratives of individual experiences (Connelly & Clandinin, 1990).

Low Income (LI). For the purposes of this study and because the study will be conducted with students located in California, the term Low Income will follow the definition given by the California Department of Education (2014). According to the definition adopted by the State Board of Education (SBE), the ”Low Income” (LI) subgroup consists of students who meet either of two criteria:

1. Neither of the student’s parents has received a high school diploma
   OR
2. The student is eligible for the free or reduced-price lunch program

Programs of Study (POS) - Pathways. According to the Office of Vocational and Adult Education (OVAE), the term Programs of Study (POS), commonly referred to as Pathways, is a designed framework of sequenced courses that are (1) clearly defined and articulated across secondary and postsecondary levels; (2) utilize input from education, business, and community stakeholders to ensure program relevancy as well as the teaching of skills needed for further education and the workforce; (3) include opportunities for students to benefit from work-, project-, and problem-based learning
approaches that include explicit opportunities for students to obtain real-world work experiences through job shadowing, internships, school-based enterprises, and cooperative educational experiences (2013).

_Self Determination Theory (SDT). The study of the theory of human well-being and motivation through intrinsic and external factors and their influence of basic psychological needs (Deci & Ryan, 2000)._ 

_Special Needs._ The individual requirements (as for education) of a person with a disadvantaged background or a mental, emotional, or physical disability or a high risk of developing one (Merriam-Webster, 2014).

_Student Voice._ The opportunity to speak one’s mind, be heard and counted by others, and, perhaps, to have an influence on outcomes (Cook-Sather, 2006, p. 363).

_Vocational Education._ Organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree (NCES, 1990).
CHAPTER TWO: REVIEW OF LITERATURE

In order to fully understand Career Technical Education (CTE), we must be aware of its origin. The following literature review includes an overview of CTE followed by the history of vocational education that will provide the reader with an understanding of why CTE developed its new mission and priorities. In addition, information regarding major legislative movements such as the Carl D. Perkins Act and the Smith-Hughes Act that were instrumental to transforming vocational education into CTE will be included. This is followed by a closer look at the characteristics of CTE and the major themes encompassing the transition of vocational education to CTE. The role that CTE has had on Comprehensive School Reform (CSR) efforts and the economic returns of CTE will also be discussed. Student voice and Self Determination Theory (SDT) will be noted as the grounding theoretical framework that guides this study. Finally, this review will take a closer look at the conceptual frameworks that shape CTE, the social justice impacts of CTE and the leadership implications for educators and policy makers.

Introduction

Since its emergence in 2006, CTE has undergone a major restructuring by developing its strategic actions to incorporate academic rigors into a highly technical hands-on-learning curriculum (Lewis & Cheng, 2006). This shift in priority is governed through federal legislation noted in the Carl D. Perkins Vocational Education Act IV of 2006 (Threeton, 2006). The Act designates 16 broad industry sectors that serve as the overarching umbrella for most careers in the United States. Contemporary CTE programs utilize these 16 industry sectors to reflect the modern day workplace
with courses designed to provide students hands-on learning experiences within various sectors. This is accomplished by offering a sequenced set of CTE courses known as Programs of Study (POS), commonly referred to as Pathways (Sass, Bottoms, Pritz, Kelley, Foster, Hodes & Lewis, 2011). These POS are developed to provide students a real world and relevant curriculum while integrating rigorous academic content throughout.

There are four major characteristics of POS as defined in the latest Carl D. Perkins IV Act of 2006: (a) incorporation of secondary education and postsecondary elements; (b) includes coherent and rigorous content and technical competencies in a coordinated, non-duplicative progression of courses that align secondary education to adequately-prepared students to succeed in postsecondary education; (c) includes the opportunity for secondary students to participate in dual or concurrent enrollment programs or other methods to acquire postsecondary education credits; (d) leads to an industry-recognized credential or certificate at the postsecondary level or to an associate degree (Alfeld & Bhattacharya, 2012). This is a much different mission than the outdated vocational education model that historically focused on serving LI, non-college bound minority and special needs students who were deemed as not having the ability to attend postsecondary institutions (Stone & Aliaga, 2005).

Going back to the late 1990s, in a time when the U.S. economy experienced rapid growth due to advancements in technology and globalization, there were concerns about the quality of U.S. education, specifically vocational education (Brewer, 2004). These concerns included the lack of ability to provide youth the necessary skills to compete in an interconnected labor market. This resulted in numerous CSR initiatives
that called for increased academic requirements for students graduating high school along with a comprehensive redevelopment of an outdated vocational education curriculum. These reform efforts brought forward many concerns surrounding the effectiveness of vocational education to prepare all students for a dynamic labor market in a rising technologically advanced society. Educational leaders and policy makers knew that if vocational education was to remain intact within the educational system, it had to become more relevant and robust for students, schools, and employers.

Vocational education was originally designed to parallel the blue-collar labor market in order to produce trained workers to fill vacant jobs that were needed in the U.S. As the labor market changed in the mid-1990s and thousands of manufacturing jobs were sent overseas, the need for blue-collar workers decreased drastically. It was evident that these programs were continuing to prepare students for jobs that no longer existed. Because traditional vocational education was designed to train workers in one specific blue-collar career, it became more irrelevant in the educational landscape. At that time, educational leaders vehemently agreed that vocational education programs were not repositioning themselves to be relevant for the upsurge of highly-skilled, technical careers of the 21st century and subsequently, many of the programs shut their shop doors (Redman & Kotrlik, 2004). The demise of vocational education gave rise to CTE with a refreshed mission and purpose to offer all American students accordant industry-related programs that integrate academic rigor and current work-place curriculum.

Current day CTE programs are attempting to escape the stigma of traditional vocational education by creating a new era of vocationism that is more mainstreamed
and relevant for the 21st century student. Policymakers wanted a well thought out occupational skills program for all students that inspire innovation and the interest of the masses. Over a 10 year span from 2002 to 2012, CTE has seen an astounding 151% increase in student enrollment (Aliaga et al., 2012) with nearly 96% of all students nationwide taking at least one CTE course (Castellano, Sundell, Overman, & Aliaga, 2012; Hollenbeck, 2011; Hudson & Laird, 2009; Lavesque, Laird, Hensley, Choy, Cataldi, & Hudson, 2008). A significant number of these students (27%) have taken three or more CTE courses (CTE concentrators) during their high school experience (Aliaga et al., 2012).

Bishop and Mane (2004) estimated that secondary and post-secondary students spent more than 1.5 billion hours in a CTE course during the 2003-2004 school year. It is not by mistake that CTE has become increasingly popular for high school students. In a study on CTE called Pathways to Prosperity by the Harvard School of Education, Symonds, Schwartz and Ferguson (2011) discuss how CTE’s new model of curriculum delivery is attracting the interest of students due to its current and relevant nature. Its sequenced courses offer students a broader scope of industry exposure in contrast to the traditional vocational education model that isolated educational preparation to one particular career (Sass et al., 2011). The POS model has become an integral component of CTE as the labor market has shifted away from Agriculture and Home Economics to highly skilled manufacturing and technology-driven occupations (Aliaga et al., 2012).

As CTE becomes more mainstreamed and in-line with the academic culture of the U.S. educational system, one might ask how students who traditionally struggle in school are experiencing CTE. As mentioned earlier, 27% of all students nationwide are
taking three or more CTE courses (Aliaga, et al., 2012) and approximately 50% of these students are designated as either minority, LI, or are students with special needs (Gray, 2004). As CTE moves into the next phase of implementation with the eventual revision of the Perkins Act IV, gaps in the existing research should be addressed. These gaps include questions such as; 1) is CTE working for all students? 2) Is CTE working for students who traditionally struggle in school? 3) Are students connecting to school and achieving academically because of the new model of CTE? This study explores these gaps by utilizing a unique population of CTE students who are fully-vested in their CTE-POS and are designated as CTE concentrators.

The struggle to connect LI, minority, and students with special needs to school has been an ongoing effort for educators and policymakers alike. Adding to the breadth of this endeavor are several recent reports written about large populations of high school students who are simply not interested in the “college for all” era. Students across the nation are increasingly becoming more disengaged and bored with the irrelevant curriculum within their high school (Symonds et al., 2011). This epidemic of boredom has increased the dropout rate and decreased the scholastic engagement of students making high school completion an arduous task that many students are simply not interested in obtaining (Aliaga et al., 2012).

How does the newly emerged structure of CTE fit into this silent epidemic? How do students perceive their experience in CTE as it is compared to their non-CTE experience? Are LI, minority, and special needs CTE concentrators on track to graduate? Could CTE be the answer for our country’s most vulnerable student
populations? This study sought to answer these challenging questions and will contribute to the lacking body of empirical research surrounding CTE concentrators.

**Vocational Education**

Understanding the purpose and mission of vocational education provides context to the evolution of Career Technical Education and the shift in priorities and the mission of CTE. In the early 1900s, educational philosophy was classical in nature meaning that only white male upper-class citizens were allowed to participate in a system designed to educate a select prestigious population (Threeton, 2006). Education during this era was an institution that prepared approximately ten percent of the American population for college while the remaining 90% had three ways to prepare for work: (1) apprenticeship, (2) mother-daughter or father-son relationships and the age-old passing down of information, or (3) those who simply picked up a skill or trade through self-learning (Wonacott, 2003). This type of education system was sufficiently producing enough qualified workers throughout the Industrial Revolution from 1750 to 1850.

In the early 20th century as the development of factories and the assembly line labor practice emerged, the country became more mechanically advanced and the need for technically skilled workers grew. Subsequently, vocational education emerged in 1910 as a way to train students to fill job vacancies in a growing technical society (Stipanovic, Lewis & Stringfield, 2012).

Educational leaders in vocational education included John Dewey, a renowned educational philosopher, and Johann Pestalozzi, the founding father of the “learn by doing” educational concept. Both philosophers would play a large role in influencing policy makers to pass federal legislation needed to create and protect vocational
education (Orozco, 2010). In 1916, Dewey believed that the standard liberal education system (commonly referred to as traditional academic education), could not be had without vocational education and vocational education could not be had without liberal education (Hyland, 2011). This was a profound idea linking vocational education to academic studies, which were once perceived by society as a second-class training model for low-skilled laborers.

According to Beyer (2010) Pestalozzi was passionate about educating the whole child with a foundation of learning through work. Pestalozzi believed that students should learn how to work in school, not only for their own personal development but for the country’s economic growth. Both Dewey and Pestalozzi played key roles in swaying public opinion regarding vocational education along with influencing policy makers to ensure that legislative actions were geared toward protecting vocational education initiatives throughout history.

Federal support for vocational education began in 1917 with the passing of the Smith-Hughes Act. Democratic lawmakers from Georgia, Senator Hoke Smith, and Representative Dudley Mays Hughes, created this historic bill that identified vocational education, particularly agricultural education, as a separate federal program worthy of its own federal funding source and curriculum (Hayward & Benson, 1993). The act provided states with separate vocational boards to expand vocational programs, create separate teacher preparation programs, segregate the curriculum from the traditional classic curriculum, and distinguish individual funding from the general educational pot (Orozco, 2010). This act was critical in the history of vocational education because it
gave the field an identity with perceived value that occupational-preparedness was an important educational concept.

After the passage of the Smith-Hughes Act of 1917, vocational education went through a series of additional legislative bills that fine-tuned the purpose of the model solidifying its place in American education. It was not until 1945, during World War II, that vocational education made a drastic shift toward an occupational program that focused on training students how to manufacture war-time weapons and materials (Martinez, 2007). Education was simply not a priority during this era because of the country’s attention on military efforts.

The 1960s civil rights movement re-sparked a focus on education and vocational education became somewhat relevant again for politicians. This era brought a newfound passion for social justice and equity that spurred the passage of the Vocational Education Act of 1963 (Stipanovic, Lewis & Stringfield, 2012). The act urged vocational programs to provide entry-level job training for disabled and displaced war veterans, citizens with disabilities, students with physical and mental disabilities and a growing population of LI students (Vocational Education Act, 1963). Because of the language in the VEA of 1963 and the social justice implications of that time, it set a historic precedence for serving primarily disadvantaged students who were oftentimes minority, LI, and students with disabilities. The shift in focus on equity and occupational skill-based training set the stage for the Carl D. Perkins Acts and the eventual transition of vocational education to CTE.

**Carl D. Perkins Legislative Acts**
Carl D. Perkins legislation has been, and still is, the guiding manual for vocational education and now CTE since the first Act in 1984. It is the only document that provides CTE leaders with detail on what characteristics CTE should embody and how CTE should be implemented and executed within schools (Manley, 2011). Since 1984, there have been four reauthorizations of Perkins legislation with the final act being the Carl D. Perkins IV act of 2006. As American education and the labor market change, Carl D. Perkins legislative acts attempt to keep pace by reauthorizing the mission and purpose of CTE about every five to six years (Stipanovic, Lewis & Stringfield, 2012).

Carl D. Perkins was a member of the U.S. House of Representatives in Kentucky’s 7th district from 1949-1984 (Perkins, 1985). Carl C. Perkins described his father, Carl D. Perkins, as a visionary leader who founded programs such as Head Start and the Economic Opportunity Act of 1964. Upon his death in 1984, the U.S. Congress passed a legislative bill honoring his life’s work in the area of vocational education with a federal bill called the Carl D. Perkins Act of 1984. The act provided vocational education the necessary funding to begin transforming itself into a highly technical training ground for K-16 students with a focus on integrating academics into a technical curriculum (Anderson, 2008). It had two main goals: (1) improve vocational programs and training opportunities for students, (2) increase services and improve access to vocational education for students with special needs.

As education changed throughout the late 1980s and into the early 1990s, federal Perkins legislation was reauthorized to include the importance of academics being integrated into vocational education curriculum. The Carl D. Perkins Vocational
and Applied Technology Act of 1990 (also known as Perkins II), was the first time in the history of vocational education that required the integration of academic content into vocational programs. While the act seemed innovative and contemporary at the time, it only defined integrated curriculum as a set of sequenced courses that provided students with academic and vocational competencies (Castellano, Stone, Stringfield, Farley-Ripple, Overman, & Hussain, 2007). This left many vocational leaders confused regarding the implementation of “sequenced” courses.

The Perkins Act II had four major priorities listed in the language of the bill: (1) development of Tech Prep Programs which coordinate courses in the last two years of high school with a two-year community college associate degree, (2) integration of vocational and academic curricula, (3) promotion of work-related experience and, (4) accountability as a required element of funding (Castellano, Stringfield, & Stone, 2003). Subsequently, several initiatives were launched from 1990 to 2006 such as Tech Prep, High Schools that Work (HSTW), Career Academies and Career Pathways in an attempt to prepare our students for the 21st century workplace (Lewis & Cheng, 2006).

**Tech Prep.** Tech Prep was designed as an option to increase postsecondary transition, articulate programs and courses to postsecondary institutions, and prepare 11th and 12th grade students for a certificate or an associate’s degree (Miller & Gray, 2002). It was originally introduced in Perkins II of 1990 and III of 1998 and still remains in the Perkins IV reauthorization of 2006. Tech Prep is virtually identical to a Program of Study (POS), a POS is a sequenced set of courses in a particular industry sector that gets increasingly technical as the student moves through the two to four year
sequence) with the major initiative on articulation of secondary and postsecondary institutions (Lewis, Kosine & Overman, 2008).

Tech Prep was intended to ease the disconnected process of transitioning into college that most high school students and families struggle with in the U.S. There are standards and exams that students must master in order to graduate high school but those requirements are much different than the entrance requirements of postsecondary institutions. The intention of Tech Prep was to bridge postsecondary transition with students remaining in their POS after high school and end earning an associate’s degree or industry related certificate in their chosen industry sector (Castallano et al., 2007).

Research conducted about the effectiveness of Tech Prep has been overwhelmingly disappointing. Stone and Aliaga (2003) conducted a longitudinal study analyzing high school students’ GPA data from 1997 to 1999 and found no significant relationship between Tech Prep participation and GPA. Miller and Gray (2002) conducted a study of Tech Prep students in 1997 and found that nearly 70% of all Tech Prep participants did not finish the Tech Prep program. Additionally, it was found that only 8% of high school students actually participated in the Tech Prep program in 1998 with very few students taking advantage of the articulation agreements with postsecondary institutions (Castellano et al., 2007). However, Lewis, Kosine and Overman (2008) found that the average student participating in Tech Prep programs came from significantly lower socioeconomic backgrounds with parents who had lower educational levels. Therefore, one could argue that Tech Prep had served more disadvantaged students who were not college-bound from the beginning. Overall, it
became evident to policymakers and educational leaders that Tech Prep did not yield the results initially expected and the pursuit of CTE reform efforts continued.

**Career Academies.** Career Academies have been in existence since the 1970s, but it wasn’t until the late 1980s that they shifted into a high school reorganization model (Castallano et al., 2007). They have become increasingly popular in the U.S., as there are currently thousands of Career Academies with many schools creating the model on their own, without state and federal financial support. The design of a Career Academies program is a school within a school with an occupational focus. The curriculum of a Career Academy is thematic, revolving around a cluster of careers in a related discipline such as banking, or Aerospace (Lewis & Cheng, 2006). Stern, Raby and Dayton (2010) describe a Career Academy as having three major criteria: (1) a small learning community, comprising a group of students within the larger high school who take classes together for at least two years, taught by a team of teachers from different disciplines; (2) a college preparatory curriculum with a career theme, enabling students to see relationships among academic subjects and their application to be a broad field of work; (3) partnerships with employers, the community, and local colleges, bringing resources from outside the high school to improve student motivation and achievement.

There is overwhelming empirical evidence that shows Career Academies have been successful in achieving their goals. Stern, Dayton, Paik, Weisenberg and Evans (1998) found that academy students overall performed significantly better than comparison groups in attendance, credits earned, average grades, and the likelihood of staying in school. In addition, academy students earned more course credits than
comparison groups and three-year dropout rates in a 1985 cohort academy group were at 7.3% as compared to 14.6% in the comparison group (Reller, 1985).

Career Academies appear to be a valuable approach to making education relevant for students however, it has been found to be extremely time consuming, expensive, and difficult to implement (Finlayson, 2009). Additionally, leaders who attempted this model found it even more difficult to find teachers in traditional academic subjects who were experienced and knowledgeable enough to teach within the thematic occupational focused curricular design. Finally, many of these data may be skewed as academy students usually apply for entry into the academy and have intrinsic and extrinsic motivating factors to attend the academies.

**High Schools That Work (HSTW).** High Schools That Work (HSTW) was an initiative that begun by the Southern Regional Education Board in 1987 (Orozco, 2010). The major priority of HSTW was to integrate technology, Science, English and Math into vocational courses of study (Lewis, Kosine & Overman, 2008). It was established as a supplemental set of key practices and principles that high schools could adopt to incorporate into the culture of their school. The main concept was to increase expectations, raise the levels of complex problem solving and increase academic rigor while students were enrolled in a CTE-POS. The HSTW program called for common teacher planning, collaboration on curriculum integration and required all high school seniors to complete a vocational or technical concentration (Castellano et al., 2007).

Research conducted on HSTW’s showed favorable results in terms of increased attendance, greater academic achievement, increased graduation rates, retention and postsecondary attendance (Castellan et al., 2007). These results are explained by the
Southern Regional Education Board as being the product of “achieving high academic standards using a curriculum that stresses the application of knowledge and skills of higher academic achievement and developing assessment strategies in which students demonstrate their knowledge and skills” (Finlayson, 2009 p. 11). This reform strategy is still in existence today in many southern states and is implemented more frequently as a local initiative.

**Career Pathways.** Career Pathways was an initiative born out through the Perkins Act III. The College and Career Transitions Initiative (CCTI) in 2002 collaborated with the Office of Vocational and Adult Education (OVAE) to establish the Career Pathways initiative (Castellano et al., 2007). The initiative was intended to provide a rigorous, coherent Programs of Study (POS) that includes high-level academics in addition to technology applications and work-based learning. Lewis, Kosine and Overman (2008) describe a Career Pathway as:

A career pathway is a coherent, articulated sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate’s degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond. A Career Pathway is developed, implemented, and maintained in partnership among secondary and postsecondary education, business, and employers. Career Pathways are available to all students, including adult learners, and are designed to lead toward rewarding careers (Lewis, Kosine & Overman, 2007 p. 12).

This definition was slightly different from Tech Prep as it included “all high school students” versus the 11th and 12th grade students that the Tech Prep targeted.

The Career Pathways initiative paved the way for the POS model that is defined in the Perkins Act IV of 2006. Policymakers determined that the Career Pathway model was the least restrictive vocational initiative for students and posed the best possible
means of integrating academics in a vocational context (Stone & Aliaga, 2003). Policymakers responsible for the Perkins Act IV determined that the definition of a Career Pathway would and could be interchanged synonymously with Programs of Study.

**Perkins Act IV of 2006 and CTE.** The Carl D. Perkins Act IV of 2006 provided additional provisions that Perkins II and III did not. Specifically, Perkins IV had three main priorities: (1) vocational education would no longer be used as a term for hands-on learning and instead, the official title of all vocational education programs would be changed to Career Technical Education; (2) continue to fund “tech prep” programs separately from other federal funding streams, and ;(3) maintain funding at acceptable levels (Withington, Hammond, Mobely, Stipanovic, Stringfield, & Drew, 2012). Additional measures were written into the bill to hold Local Education Agencies (LEAs) accountable by providing highly technical career training courses with a noticeable integration of academic rigor that includes CTE standards-based curriculum and post-secondary transition curriculum for CTE students (Threeton, 2006; Stipanovic, Lewis, & Stringfield, 2012).

The bill established language regarding a CTE-POS and provided a definition of a POS as a sequenced set of courses that culminate with postsecondary transition. Alas, the reauthorization of Perkins IV paved the way for CTE to evolve from the outdated traditions of vocational education that were filled with outdated traditions of isolation, simplicity and irrelevancy.

From the Smith-Hughes Act of 1917 to the Vocational Education Act of 1963 through the various Carl D. Perkins Acts ending with the fourth reauthorization of
Perkins in 2006, vocational education has transformed alongside an evolving industry and a changing inter-connected global society. Support for quality CTE programs has increased and POS’ are being established in secondary schools throughout the nation. However, CTE has a long road ahead filled with challenges in a competing academic stronghold that encourages and supports the concept that a degree from a four-year university is the only path to successful attainment of the American Dream (Symonds et al., 2011).

**CTE Conceptual Framework**

In the last section, the research outlined the emergence of CTE and the history of vocational education. The following section describes the concept of CTE and the framework that guides the essence of CTE. The conceptual frameworks that ground CTE are Pragmatism, Reconstructivism, and Essentialism. These three conceptual frameworks are best visualized as each occupying a side of a triangle with all three concepts making up the overarching philosophy of CTE (Wonacott, 2003).
The three frameworks reflect contemporary thinking about CTE and the proactive stance to constantly adapt and evolve the program. It recognizes the struggle that CTE has had with self-definition and identifying where it fits with traditional academics.

**Pragmatism.** Miller (1996) described pragmatism as the predominant conceptual framework of CTE. The pragmatic believes that individual growth is characterized by an emphasis on problem-solving and higher-order thinking with learning being constructed from prior knowledge. “Pragmatic education seeks to prepare students to solve problems caused by change in a logical and rational manner through open-mindedness to alternative solutions and a willingness to experiment”
Pragmatists contend that most philosophical topics such as the nature of knowledge, language, concepts, meaning, belief, and science, are all best viewed in terms of their practical uses and successes rather than in terms of representative accuracy (Wonacott, 2003).

Pragmatism when viewed through a CTE lens, is constructed as the overarching purpose of CTE which is to produce knowledgeable citizens who are vocationally adaptable and self-sufficient, able to participate in a demographic society, and view learning and reacting to change as a lifelong process (Wonacott, 2003). The pragmatic embraces change and accepts that change is necessary in order to learn (Miller & Gregson, 1999). Pragmatic education seeks to solve problems in a hands-on context while embracing alternative solutions with a willingness to experiment with various problems using multiple approaches. This conceptual framework may be why CTE is becoming more popular and mainstreamed in American education (Symonds et al., 2011). It represents the foundations of CTE and is representative in the evolving mission and priorities established by policymakers. These pragmatic values are built into the CTE model and when studied through this lens, pragmatism represents the core conceptual framework of CTE.

Reconstructivism. The reconstructivist is proactive about change. The goal of reconstructivism is to realize the purpose of CTE as a way to create democratic learning organizations in the workplace rather than continue to support traditional workplace practices (Castellano, Stringfield & Stone, 2003). Rojewski (2002) explains that “the reconstructionist is explicit in that one of the purposes of vocational education should be to transform places of work into more democratic learning organizations rather than
perpetuating existing workplace practices” (p. 19). This framework emerged from the pragmatic framework and is considered a more current and contemporary approach to CTE.

Reconstructivism emphasizes the role of CTE as a way to contribute solutions to problems in the workplace such as discrimination in hiring, poor working conditions, and the glass ceiling for women and minority groups experiencing a lack of job advancement (Miller & Gregson, 1999). Emerging from pragmatism, reconstructivism focuses on social justice issues in the workplace and the ways in which CTE might correct these injustices. This theory conceptualizes an innovative way of thinking in CTE and perpetuates change from the traditional way of doing things in workforce education.

**Essentialism.** Essentialism is constructed by combining the idealism and realism of CTE. Essentialism is characterized by an emphasis on basic academics (the 3 Rs), respect for the existing power structure, and a nurturing of middle class values (Miller, 1996).

The essentialists perspective includes:

The notion that ideas, concepts, and theory should hold a more dominant place than preparing for a life role as a worker and producer; learning theory reflecting a behavioristic approach and memorization over building on the individual’s personal experiences; and a subject matter emphasis on the so-called basic skills and preparation for college as compared with any significant attempt to extend the range of options to be more inclusive of the needs and ultimate goals for all students (Wonacott, 2003 p. 12).

Rojewski (2002) contends that essentialism is a key conceptual framework that supports traditional CTE practices in preparing students for the workforce but it also embraces
academic integration with a focus on postsecondary transition to higher education. Studying CTE through an essentialist lens is most closely tied to the newly developed mission and priorities of CTE and represents the idealism and realism of CTE.

For decades, American education has toiled with two primary schools of thought due to federal legislation making vocational education and classical academic education exclusive of one another (Beyer, 2010). Vocational education has struggled with self-definition of what it truly is and how to best educate its students. There have been many questions raised about the purpose of vocational education. Is it to prepare individuals to be workers and producers or to train particular populations for specific careers, or to protect the middle class way of life? How does it fit in with classical academic education? Miller and Gregson (1999) posited that public education in the U.S. has been influenced by blending these two primary schools of thought and that conceptually, it is ideal, but in reality does not blend these two schools perfectly.

High quality CTE programs embody essentialism and attempt to integrate academics into the structure of the CTE curriculum. The idea that CTE is only one component of a comprehensive plan to educate the whole person is significant to understand as CTE attempts to emerge as a viable educational approach. Finally, the theory surrounding essentialism instructs us to understand that CTE is not an isolated solution and that in order to prepare students for college and career there should be a well-balanced educational approach that includes work-based learning embedded in academic rigor that builds upon individual experience.

The three conceptual frameworks outline the essence of CTE and the philosophical constructs that have been developed over the course of many decades.
spurred by legislative initiatives. As CTE evolves over time, its leaders seek to embrace problem solving in a hands-on fashion while incorporating rigorous academic study. It should open the possibility for students to understand the internal workings involved in becoming lifelong learners and productive workers by balancing career skills and intellectual prowess together.

**The Economic Returns on CTE and the Labor Market**

An important aspect of CTE is the connection to global industry and career readiness. The mission and priorities of CTE include student’s learning about various careers in the industry sector they have chosen along with skills, credentials, or certificates required to become employed. Students also learn about the viability of employment in a career that coincides with their POS and postsecondary training options available. Much of the current research surrounding CTE and the labor market posit that CTE-POS plays a role in decreasing the dropout rate of high school students across the U.S. In an extensive national study that analyzed the return on investment of CTE, Kotamraju & Mettlin (2012) estimated that earning a high school diploma adds $10,000 of additional income, per year, to an average person’s lifetime (up to age 65). Using these statistics, the U.S. would save nearly $168 billion by reducing the high school dropout rate to zero for all 18-65 year olds.

When similar research studies are targeted toward minority students, the results become even more astounding. Latinos continue to be a large part of the social and economic success of the U.S. Nearly one million students every year do not graduate from high school with one in every three Latino students failing to complete their high school diploma (U.S. Department of Education, 2012). These dropouts have a negative
effect on the financial stability of the U.S. and make it difficult for the U.S. to compete in a global labor market.

In order to be competitive in the labor market, CTE-POS might play a larger role than ever before. According to Maldonado & Farmer (2006) “the largest and fastest growing ranks of technical workers are not college-trained professionals; they are blue collar technicians educated at the pre-baccalaureate postsecondary level, in high school vocational education programs, or in formal training programs in the workplace” (p. 3). The Center on Education and the Workforce at Georgetown University estimate that there will be 47 million job openings in the U.S. over a ten year period ending in 2018 (Symonds et al., 2011). Only 36 percent of these jobs will be filled by those who only hold a high school diploma. The remaining 64 percent will require some form of postsecondary education - but some “form of postsecondary education” does not imply a four-year university degree. In fact, more than 14 million available jobs will be filled by those with an associate degree or an occupational certificate. These occupations include electricians, construction managers, police officers, dental hygienists, or other “middle skilled” occupations.

The Bureau of Labor Statistics determined that nearly 75% of the jobs that will open up in the next few years will not require a bachelor’s degree but will require some form of additional postsecondary training (2012). In an analysis of the workforce involvement of Latinos in the U.S., researchers found that the nation would benefit at a ratio of 4:1 in dollars spent if Latino students graduated from a postsecondary school (Maldonado & Farmer, 2006). This means that for every dollar the U.S. invests in Latino postsecondary graduation, there is a four dollar return due to higher taxes,
contributions to social security, and disposable income. Seeing that many of these students struggle to complete secondary education, it is hard to determine the best approach in bridging this widening gap.

What do these statistics mean for CTE-POS, the success of the U.S. economy, and the labor market? In a Michigan study, researchers explored the return on investment for secondary CTE students in the first 2.5 years after graduating high school. The study determined that students completing a POS earned an additional $2,654 per year and had a lifetime (age 65) income increase of 9.29 percent (Hollenbeck, 2011). Earlier studies on CTE concentrators showed that-technical industry sectors earn 9.5 percent more annually than their non-CTE counterparts (Meer, 2007).

Bishop and Mane (2004) found that graduates who took four advanced non-computer CTE courses, two fewer academic courses and one fewer personal interest course, spent more time in employment after high school and were 10 percent more likely to have a better paying and stable job. According to the study, these students earned $1,138 more (21 percent) in 1993 and $1,993 more (7.5 percent) in 2000 than non-CTE concentrators. Overall, it appears that CTE-POS is beneficial for students in their pursuit of employment in the labor market. The research demonstrates that high school CTE-POS increases wage-earning potential and postsecondary transition success that results in positive impacts for the return on investment for the U.S. economy.

**Modern Day Career Technical Education Programs of Study**

A Career Technical Education Pathway is a coherent, articulated sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate’s degree, and/or an industry-
recognized certificate or licensure, and/or a baccalaureate degree and beyond. A Career Pathway is developed, implemented, and maintained in partnership among secondary and postsecondary education, business, and employers. Career Pathways are available to all students, including adult learners, and are designed to lead to rewarding careers (Lewis et al., 2008, p. 12).

Current day CTE-POS fall within 16 national categories called Industry Sectors or Career Clusters. These industry sectors were designed to reflect the major industries within the United States that employ U.S. citizens and yield the majority of the careers available across the country (Stone, Alfeld, & Pearson, 2008). Embedded within Perkins IV of 2006 are the 16 Career Clusters described as being the prominent career opportunities currently available within the U.S..

Table 2.1:  
16 National Career Clusters

<table>
<thead>
<tr>
<th>Career Cluster</th>
<th>Description</th>
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<tbody>
<tr>
<td>Agriculture, Food and Natural Resources</td>
<td>Production, processing, marketing, distribution, financing, and development of agriculture commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</td>
</tr>
<tr>
<td>Architecture and Construction</td>
<td>Designing, planning, managing, building and maintaining the built environment.</td>
</tr>
<tr>
<td>Arts, A/V Technology and Communications</td>
<td>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</td>
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</table>
Table 2.1: 16 National Career Clusters

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>Business, Management and Administrations</td>
<td>Planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.</td>
</tr>
<tr>
<td>Education and Training</td>
<td>Planning, managing and providing education and training services, and related learning support services</td>
</tr>
<tr>
<td>Finance</td>
<td>Planning services for financial and investment planning, banking, insurance, and business financial management.</td>
</tr>
<tr>
<td>Government and Public Administration</td>
<td>Planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.</td>
</tr>
<tr>
<td>Health Science</td>
<td>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</td>
</tr>
<tr>
<td>Hospitality and Tourism</td>
<td>The management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.</td>
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<tbody>
<tr>
<td>Human Services</td>
<td>Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Building linkages in IT occupations for entry level, technical and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.</td>
</tr>
<tr>
<td>Law, Public Safety, Corrections and Security</td>
<td>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</td>
</tr>
<tr>
<td>Marketing, Sales and Service</td>
<td>Planning, managing, and performing marketing activities to reach organizational objectives.</td>
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In any given industry sector, a school may offer a POS of sequenced courses starting with an entry-level course that exposes the student to a particular industry. This is followed by a second-year course that is progressively more advanced with an option of a third-year course; usually described as the “capstone” course that completes the POS (Withington et al., 2012). For example, in the Arts, Audio and Visual Technology and Communications industry sector, a sequenced POS may be: (first-year) TV Film and Digital Media 1: (second-year) TV Film and Digital Media 2: (third-year/capstone – industry connected) TV and Video Broadcasting. The sequence of courses becomes increasingly more technical ending the POS with an industry-connected course in which students may receive relevant career preparation and internship opportunities.

Because of its thorough design and relevant curricular delivery approach, POS has become increasingly popular within the U.S.. According to Alfeld & Bhattacharya
there are currently more than 40 states in the U.S. implementing the POS model as their primary delivery of CTE curricula. The driving force behind POS is the attraction of improving student achievement, which is the foundation of CSR efforts nationwide. Improving academic achievement has been the impetus of CSR efforts and the primary goal of educational leaders over the past two decades (Castellano et al., 2007). It is virtually impossible to discuss CTE without taking a closer look at its impacts on CSR efforts of the 21st century.

**Career Technical Education and Comprehensive School Reform**

One of the most foundational obligations of our society is to educate all youth to ensure that students leave our compulsory K-12 educational system with the skills needed to prosper and succeed in a rapidly evolving technological society (Symonds et al., 2011). Educational leaders and policy makers are constantly looking for ways to improve the success of U.S. schools. The number of students dropping out and the lack of student engagement has contributed to the growing number of students leaving high school without basic literacy and numeracy skills meanwhile, many talented and gifted CTE students learning valuable industry skills are overlooked and devalued in our current educational system (Gentry, Hu, Peters & Rizza, 2008).

The prevalent questions being asked by CTE educational leaders and policy makers are: (1) Do POS improve student achievement? (2) Do POS decrease secondary dropout rates for students? (3) What extent does participation in POS lead to improved student academic and technical outcomes? (4) How do students’ lived experiences in their POS differ from their traditional high school experiences? In order to understand
the impacts on CTE-POS and continue to invest funding and effort on this movement, these questions should be addressed.

The National Research Center for Career and Technical Education (NRCCTE) found that after analyzing over 2 million national transcripts in 2010, students who took three or more courses in CTE were four times more likely to take an advanced Mathematics course and nearly two times more likely to take an advanced Science course (Aliaga et al., 2012). Staklis & Klein (2010) conducted a statewide analysis of CTE students in Pennsylvania and determined that students who had taken and passed an advanced Math and Science course were more likely to enter a postsecondary institution by a factor of 3.83 than students who did not. The study added to the existing literature that the completion of advanced Math and Science courses continue to be amongst the strongest predictor of postsecondary entrance and completion. These results infer that students who are vested in CTE-POS are more likely to enroll in advanced Math and Science courses which results in increased student achievement and postsecondary success.

Much of the available research on CTE indicates that CTE may have a positive effect on reducing the high school dropout rate. This is interpreted as improving student academic achievement along with the rate of postsecondary transition. In a four-year longitudinal study of two school districts offering CTE-POS, leading CTE researchers (Castellano et.al, 2012) wanted to determine if POS was helping to improve student achievement for 9th and 10th graders. They found that in both districts, there was very little significant difference in the state achievement exam scores in Math, Reading, and Science of the students participating in POS versus those not participating.
However, the study uncovered that 10th graders in a POS had a significantly higher incidence of being on track to graduate. The study defined “not on track” as when a 9th or 10th grade student failed two or more courses throughout their respective school year. At the end of 9th grade, 92.9 percent (n = 1,907) of POS students were on track to graduate compared to 91.7 percent (n = 509) of non-POS participants (Castelleno et al., 2012). More importantly, it was found that in the same cohort of students at the end of their 10th grade year, 70.6 percent (n = 1,827) of POS students were on track to graduate compared to 64.2 percent (n = 500) of non-POS students.

Whether or not students stay on track to graduate has been shown to be a strong indicator of increased student engagement resulting in positive student achievement (Symonds et.al, 2011). This particular study contributes to the theory that CTE-POS may be a positive factor in decreasing the dropout rate, engaging students, and providing a relevant curriculum that students enjoy participating in.

As described in Chapter 1, CTE has historically targeted LI, minority and students with special needs who contribute to the largest population of students who dropout from high school (Aliaga et al., 2012). Correcting the staggering dropout rate in secondary education has been at the forefront of CTE - CSR efforts. It is estimated that the average dropout contributes to a $300,000 lifetime-drain on our society as compared to the typical high school graduate (Symonds et al., 2011). Given that we know these staggering statistics, there still remains minimal understanding about the lived experiences of CTE students and the relationship of the impact of CTE based on the student’s level of participation in a POS (Bragg & Rudd, 2007).
In a qualitative study based out of San Francisco on minority student perceptions regarding their CTE–POS experience, many students agreed that multiple CTE course options and various POS kept students engaged, prevented their desire to dropout, and shaped their career interests throughout high school (Ryken, 2006). In a post-graduate follow up survey given to high school students once enrolled in three different high schools and participating in a CTE-POS, 74 percent of students agreed that their POS was of most interest to them throughout their high school experience and 65 percent agreed that their POS was related to their career goals while 42 percent stated that their POS made them more interested in coming to school (Alfeld & Bhattacharya, 2012).

When discussing CTE-CSR efforts, a look at student perceptions regarding their lived experiences in their POS compared to their traditional high school experience can provide valuable insight. In the limited qualitative research studies available, students seem to appreciate the relevant nature of POS and the perceptions of students about their POS experiences are generally positive. In a qualitative study of over 800 CTE students, emerging themes began to appear such as: (1) students enjoyed the autonomy of their POS and the ability to choose and determine the order of courses, (2) effective and caring teachers with industry experience sought out student strengths and showed a personal interest in students, (3) other students with similar interests demonstrated mature and committed behavior showing a true interest in their courses of study, and (4) learning relevant content in an interactive and applied setting that provided a hands on context was extremely beneficial (Gentry, Peters, & Mann, 2007).

Ryken (2006) found that 286 students responded in a qualitative study of a model CTE program with comments such as:
The POS gives you both curriculum and work experience. It is harder to understand material by just reading because when you are able to read the material with hands-on experience you grasp it. In my POS, everything was like second nature. (p. 67)

Students are important actors in CTE-POS and while there is some qualitative research mentioned in this review surrounding CTE and minority students, there is very little empirical research regarding the impacts of CTE on CTE concentrators. Using student voice to determine perceived impacts, if any, on CTE concentrators will add valuable insight for educational leaders and policymakers.

**Challenges of CTE – POS**

As with many CSR efforts throughout history, there are challenges with the implementation and execution of the program that may affect longevity and effectiveness of the effort. The set of governing guidelines that outline successful characteristics of a CTE-POS is the Carl D. Perkins Act IV. Because of the many federal restrictions in place to qualify for Perkins Act funding, many school districts do not comply with the standards outlined in Perkins resulting in individual schools implementing low-quality CTE programs (Castellano et al., 2003). This is partly because Perkins funding only constitutes approximately 5 percent of a school district’s budget restricted to CTE programs resulting in many school district’s passing on the funding in order to bypass stringent high-quality CTE regulations (Lewis et al., 2008). This has created inconsistency in CTE-POS offered throughout U.S. schools.

When examining CTE as a whole, there are pockets of quality programs that are immersing students in POS and are effectively preparing students for a world of work and postsecondary transition (Symonds et al., 2011). Unfortunately, these programs are
not found in all schools and in fact, schools with higher populations of LI, minority and students with special needs have less quality CTE-POS (Alfeld & Battacharya, 2012). Many schools have replaced their CTE programs with remedial courses in order to improve Reading and Math scores. This limits the experiences for students and further disengages these subgroups of students in their respective schools (Lewis & Cheng, 2006).

Furthermore, there is a lack of a national accountability system for CTE-POS. This inhibits the ability to provide data on the impact of CTE and student achievement (Kotamraju & Mettille, 2012). This lack of accountability system causes inconsistencies on the quality of CTE programs which tends to spur negative perceptions and stereotypes. Aliaga (et al., 2012) found that when CTE implementations are not carefully constructed, principal perception becomes more negative and the academic/vocational divide increases. This means that students begin to identify with one track or another which is found to be limiting on student achievement and self-efficacy (Castellano et al., 2003). If a POS is not valued due to poor implementation and execution, many principals will not support the commitment to host a CTE-POS on their site nor dedicate funding for such programs.

Another challenge that CTE has grown accustomed to throughout history is racial barriers such as stereotypes and cultural stigmas placed upon CTE. For many years, CTE has been demeaned and disparaged especially amongst the nation’s academic elites (Symonds et al., 2011). This may be due to the lack of empirical evidence about the impacts on student achievement and the stereotypical perception that CTE is the dumping ground for LI, minority and students with special needs who have
traditionally been considered non-college-bound (Castellano et al., 2003). A national longitudinal study suggested that these stereotypes may still exist and it reports that students in the lowest two Socio-Economic Status (SES) quartiles took the most CTE courses (Aliaga et al., 2012). Specifically, 48.91 percent of students in the lowest quartile and 50.34 percent in the second-lowest quartile took three or more CTE courses. This is compared to the 36.8 percent of students in the highest SES quartile taking none or only one CTE course.

Additionally, this stigma is further revealed in a longitudinal study of eight high schools on the South Carolina Personal Pathways to Success Initiative. Staff members at three of the high schools being studied believed that the negative stigma of CTE was declining while two high schools felt that there was a clear negative connotation entrenched in the beliefs of teachers (Withington et al., 2012). In fact, it was found that students themselves were less likely to take CTE courses in two of the high schools because there was less-weighted academic value assigned to CTE courses that could jeopardize students from earning scholarships and acceptance into four-year universities.

These stereotypes and stigmas can seriously affect the quality and participation of CTE-POS in high schools across the nation. Many researchers, such as Lewis and Cheng (2006) have discussed this stigma surrounding CTE course taking as a matter of de-facto tracking. Throughout their studies they have found that many LI, minority and students with special needs take CTE courses because they are deemed “socially safer” than higher-status courses that would isolate them demographically. This only adds to the stigma of CTE and displays a much larger problem with the educational system.
These subgroups of students are at a disadvantage from the onset of course-taking decisions due to the perceptions of educators and policy makers. These students are products of exclusion from higher-level academic-track courses because of the perceptions that teachers have regarding students being “better served” in more rigorous settings (Withington et al., 2012). Conversely, these instances occur when teachers have the perceptions that certain students would be “better served” in the “vocational” track. It is because of these false perceptions that de-facto tracking still exists in many of our nation’s high schools today.

These stereotypes and stigmas on CTE have been researched and the theoretical concept of self-fulfilling prophecy has emerged. Merton (1948) indicated that where a false premise is advanced, actions can be taken in its service that can lead to its realization (Lewis & Cheng, 2006). Theoretically, students who enroll in CTE courses that have been historically deemed less rigorous, have lower expectations, and are targeted for the non-college bound student, would realize this perception and the perception would be actualized. Using this framework, students would become disinterested in college, perform at lower rates and take on the “second-class” citizen image of traditional vocational education stereotypes.

Perceptions of CTE programs by teachers and administrators directly affect student’s attitudes and career aspirations and may encourage lower expectations and diminished goals (Finlayson, 2009). As CTE continues to be a program intended to bridge the achievement gap by offering students increased pathways to success by integrating career readiness and academic rigor, the stereotypes and stigmas of CTE must be transformed if it is to be considered a viable CSR reform effort. It will take
additional research and studies along with partnerships with academic educators, postsecondary educators, counselors, educational leaders, policymakers, the public and more importantly, the students themselves to reverse the perceptions of CTE from its historical stigmas and stereotypes of the past.

This research study has intended to use student voice theory and Self-Determination Theory (SDT) to explore these stereotypes and to better understand the impacts of CTE on CTE concentrators. By recognizing why students enroll in CTE courses and the intrinsic and external factors involved in CTE students’ course taking decisions will help inform educational leaders and policymakers about the impacts, if any, of CTE. Furthermore, students are important actors who should be questioned about their experiences in CTE and if they feel CTE has had any social and academic impacts to their high school career.

**Theoretical Framework**

Differently positioned people making different arguments, like those premised on multiculturalism, feminism, and constructivism, have core commitments in common – to listening and responding to a diverse set of perspectives and not just tolerating or tokenizing them but always destabilizing the center; to acknowledging that what you don’t know is much bigger than what you know; to the notion that the project of school is an ongoing negotiation rather than transmission; to the idea that education is a process based on rights and relationship; to the most basic premise that education is about change (Cook-Sather, 2006, p. 28).

**Student Voice**

In education, there is an innate disconnect in what we do and what we know between the espoused goal of educating students in 21st century schools (Cook-Sather, 2006). We know that in order for students to be engaged and take ownership of their
education, they must be partners in educational practice, research and pedagogy, although in most schools, educational leaders create the rules, guidelines, practices, standards, curriculum and school design with little to no student input. Many schools continually struggle with efforts to improve school climate and increase student achievement but few have decided to go directly to the students for input and advice (Mitra, 2003). In most traditional schools, “there are no spaces, physical or metaphorical, where staff and students meet one another as equals, as genuine partners in the shared undertaking of making meaning of their work together” (Fielding, 2004a, p. 309).

The concept of student voice is not new to education. In the sixties and seventies, student voice initiatives spiked across the country in an era of increased social justice and human rights advocacy (Mitra, 2003). Following the mid-seventies, the concept of student voice and student centered decision making vanished to the current exclusionary model of decision-making we see today. Furthermore, the scope educational decision-making has shifted over the last three decades from the local level to the federal level. Educational reform acts such as No Child Left behind in 2002 and Race to the Top in 2011, continue to be passed by federal legislators with little to no student input (Cook-Sather, 2006). Kozol (1991) states that “the voices of children have been missing from the whole discussion of education and educational reform” (p. 5).

In order for students to be engaged and feel valued, there must be a two-way communication of educators and students to dialogue change that affects both parties.
Robinson and Taylor (2007) argue that there are four core values surrounding student voice that need consideration:

- The concept of communication as dialogue,
- The requirement for participation and democratic inclusivity,
- The recognition that power relations are unequal and problematic, and
- The possibility for change and transformation.

Students and teachers who dialogue together and feel they are part of the decision making process while refraining from power relations of positionality have greater results. Just as important, is the mindset of believing that change is possible and that transformation is in the hands of both teachers and students. Current research shows that students “improve academically when teachers construct their classrooms in ways that value student voice – especially when students are given the power to work with their teachers to improve curriculum and instruction (Oldfather, 1995, p.653).

Increasing student voice in schools has shown to increase student engagement, build positive school culture and create a strong sense of student ownership of their school (Mitra, 2007).

Leading student voice theory researcher Fielding (2001) argued that there are four major components to student voice that are centered around speaking. He posits that in order to encourage student voice in schools and to ensure there is a sense of common understanding and longevity that these four constructs need to be taken into consideration:

- *Who* is allowed to speak?
- To *whom* are they allowed to speak?
• What are they allowed to speak about?

• What language is encouraged / allowed?

Successful schools that engage students and actively seek student input allow all students to speak in order to decrease bias that hinders validity. Corbett & Wilson (1995) noted that encouraging students to provide input and utilizing student voice as a catalyst for educational change allows policy makers the ability to transform current educational practices with students and not for students. Students should be allowed to speak to any and all educators as an acting partner in the decision making process (Fielding, 2001). Mitra & Gross (2009) argued that students have a unique perspective that adults cannot replicate. This includes broaching topics that adults are reluctant to discuss such as systemic inequities and power relationship balances.

Mitra (2007) suggests that there are three types of student voice illustrated in the pyramid below. The pyramid suggests that the most common and basic type of student voice is at the bottom of the pyramid while more engaging and complex student voice types are positioned at the top.
The pyramid illustrates that student voice starts with simply being heard. Oldfather (1995) suggested that “learning from student voices requires major shifts on the part of the teachers, students, and researchers in relationships and in ways of thinking and feeling about the issues of knowledge, language, power, and self” (p. 87). Students who feel heard and valued have increased levels of engagement, less dissent for the educational process and take ownership of their learning (Cook-Sather, 2006).

The second level of the pyramid, collaborating with adults, proposes a higher level of student participation. It suggests that students create partnerships with adults and collaborate in ways such as collecting data on school problems and implementing solutions (Mitra & Gross, 2009). It is at this level that the majority of current U.S. research is conducted with significant results claiming improvements to curriculum, assessment development, and student achievement (Fielding, 2001).
The final level of the pyramid describes how students are partnering with teachers to take on leadership roles that inspire them to be radical agents of change (Mitra & Gross, 2009). This level of student voice prepares students to participate in a democratic society, have presence, power and agency with an “opportunity to speak one’s mind, be heard and counted by others, and, perhaps to have an influence on outcomes” (Cook-Sather, 2006, p. 5). In this capacity, students work with teachers to create positive change in school culture and curriculum without power relationships derailing the change process.

If students feel heard at any level whether it be in dissent or support, there is at minimum, some level of student engagement occurring (Cook-Sather, 2006). Psychological research has proven that if students feel heard and valued, there is an increased level of ownership and intrinsic motivation to participate (Mitra, 2003). This study utilized student voice theory as the focus of exploring student’s lived experiences in CTE. In the next section, the researcher will discuss Self-Determination Theory (SDT) in order to further explore what intrinsic and external factors affect student engagement and participation in CTE.

**Self Determination Theory**

Self Determination Theory (SDT) suggests that human beings are naturally curious who are motivated by intrinsic and extrinsic factors (Deci & Ryan, 2008). Additionally, SDT posits that the foundations of personal growth and well-being are surrounded by three basic psychological needs; autonomy, competence, and relatedness (Black & Deci, 2000; Niemec & Ryan, 2006; Ryan & Deci, 2000; Ryan, Huta & Deci,
2006). Each of the three basic psychological needs are center to intrinsic motivation which was the original focus of SDT from its development.

Intrinsic motivation refers to “behaviors done in the absence of external impetus that are inherently interesting and enjoyable” (Niemiec & Ryan, 2009, p. 134). Simply put, people naturally strive for goals and aspirations that they find interesting, internally satisfying, and enjoyable. Conversely, extrinsic motivational factors include attainments such as fame, wealth, and notoriety (Deci & Ryan, 2000a). Intrinsic aspirations surround those of personal growth, deep relationships, and community service that are autonomous (vs. controlled) and provide the individual with a greater sense of worth, purpose and happiness (Black & Deci, 2000). Numerous studies have been conducted inside and out of the educational context that demonstrate when individuals engage in activities that have interpersonal meaning and value, they tend to have increased dedication and commitment to the activity than if there were extrinsic motivating factors (Niemiec & Ryan, 2009; Ryan, Rigby & Przybylski, 2006). More recent literature surrounding SDT note that there are some extrinsic rewards that are actually masked as intrinsically motivating activities. Ryan, Huta and Deci (2006) suggest that a person might value an extrinsic goal such as wealth for intrinsic reasons. This behavior is defined as introjected regulation which means that individuals engage in certain extrinsic tasks or activities to fulfill intrinsic desires (Ryan et al., 2006). For example, a person might state that they want to accumulate wealth and when asked why several times, the person may respond “to support my family, to feel valued, and to be loved”. This may be the same for students in an educational context. When asked, why do you want to get an A on the test (extrinsic reward), the student may respond
“because I want to do well, I want to make my parents proud” or “I feel that there is value in what I am learning that I can use in my future” (Niemiec & Ryan, 2009).

Individuals may also find themselves engaging in a task or an activity to “avoid punishment or to obtain contingent rewards” (Ryan et al., 2006 p. 155). This type of behavior is noted as external regulation and is of the worst extrinsically motivating factors because once the reward or punishment has expired, the individual’s motivation usually diminishes rapidly (Niemiec & Ryan, 2009). Motivational factors of students who engage in school on a daily basis is hugely important for educators to understand. Teachers and administrators want to know what motivates students and how to keep students committed to an activity with continued interest and engagement.

**Autonomy (vs. Controlled).** Behaviors that are autonomous are “experienced as volitional, and are performed out of interest or personal importance” (Black & Deci, 2000, p. 741). Individuals who feel autonomous in their activity feel that what they are doing is an expression of the self and that there are values and initiative that are not felt when their autonomy is controlled (Ryan & Deci, 2000b). Autonomy, (as it relates to SDT) allows individuals to feel a sense of choice which creates an environment of creative learning, engagement and commitment (Ryan et al., 2006). When choice or behavior are controlled there is a sense of diminished freedom which results in diminished autonomy. When autonomy control occurs, the person losing control feels left out of the decision-making process thereby diminishing autonomy and motivation. This is an important concept as we look at SDT in an educational context specifically in the field of CTE.
**Competence.** Refers to “feeling effective in one’s ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities (Deci & Ryan, 2000). There are factors that involve competence building in SDT such as forming new skills and abilities that provide the individual with new challenges that intrinsically motivate a person due to a perceived competence of the newly learned skills (Ryan et al., 2006). Competence is not simply the feeling that an individual can learn a skill and challenge themselves but it is about the feeling of being competent that allows the individual to increase his or her self-esteem (Ryan & Deci, 2000).

**Relatedness.** Relatedness refers to individuals having a sense of belonging and connection with others and their community (Ryan & Deci, 2000). Furrer & Skinner (2003) state that relatedness is large component of student motivation and that the more students connect to a person, program, or school, the more motivated that student will be. Students who feel a sense of connection and relatedness usually identify more closely with the values of those they feel connected to and the environment they are experiencing (Niemiec & Ryan, 2009). Classrooms and schools are social environments and student relatedness has implications on children’s academics as well as social and behavioral adjustment (Bierman, 2004; Ladd, 1999; Hamre & Pianta, 2006).

**Social Justice Implications**

The “everyone goes to college” mantra forces many students into a pathway that tends to provide few relevant cultural connections (Martinez, 2007; Symonds et al., 2011). Students who lack proper English-speaking skills or have exhibited low Math
skills are placed into multiple remedial classes leaving the student with little to no autonomy of choice to take a course in CTE (Grubb, 2011). These students find little to no relatedness, personal interest, or cultural connection to the curriculum further increasing a feeling of disengagement (Reynolds, 2004). In addition, LI, minority, and students with special needs are oftentimes left with little to no support from school personnel whose primary focus is on the top college-bound students versus the non-four-year college-bound students in pursuit of community college, vocational college or career ambitions (Alfed & Bhattacharya, 2012).

Nearly 70 percent of high school graduates transition to postsecondary schools but only four in 10 Americans earn an associate degree or beyond (Symonds et al., 2011). This number is even more staggering for minority students, with only 30 percent of Blacks and 20 percent of Hispanics completing an associate degree or higher. The educational system is failing disadvantaged students at epidemic rates creating an increased occupational skills-gap in the U.S. Symonds (et al., 2011) called this fragile and struggling population the “Forgotten Half” and predicts that this population will have serious implications for the future of the U.S. The new mission and priorities of CTE aims to stabilize this skills-gap while finding ways to ensure that all students have access to high quality, relevant, and robust CTE-POS opportunities.

**Leadership Implications**

The Carl D. Perkins Act IV of 2006 is up for reauthorization creating an ideal time for policymakers and leaders to ramp up accountability measures for CTE-POS. As most states shift to national curriculum standards with the adoption of the Common Core State Standards (CCSS), CTE teachers will have increased expectations of
incorporating more rigorous academic content into their POS (Sass et al., 2011). This shift toward uniform national standards is aimed at providing a consistent delivery of academic currency. Leaders of CTE will need to provide opportunities for CTE teachers to be trained on the CTE-Model Curriculum Standards that are aligned to the Common Core State Standards (CCSS) as CTE continues to become more mainstreamed into the academic structures of secondary schools.

Funding for CTE programs tend to be the crux of a viable and current POS. Currently, Perkins accounts for $1.3 billion dollars nationally in CTE funding with guidelines established to ensure that quality CTE programs are correctly implemented within schools. These funds are critical to schools who seek to begin or improve their CTE opportunities for students. Educational leaders and policymakers will have opportunities to discuss, revamp, and improve the new mission and priorities of CTE when Perkins is reauthorized. As CTE goes through this reauthorization, studies on the experiences of CTE concentrators from the perspective of the students themselves may help inform policymakers prior to reauthorization.

**Conclusion**

Students sitting in a classroom for 7 hours learning highly theoretical concepts, literacy skills and numeracy skills is simply not enough to prepare our youth with the necessary occupational-skills of the 21st century (Symonds et al., 2011). It is no wonder that students fail and become disengaged with school at such early ages. Successful educational systems demonstrate that all students learn literacy and numeracy skills more quickly and deeply when they are applied to complex work-place problems (Bishop & Mane, 2004). This is the model that Dewey had envisioned by integrating
classical academic education and Vocational Education together (Stipanovic et al., 2012).

The immense changes in the U.S. over the last 30 years have shifted the way Americans view education (Castellano et al., 2003). Today, education and career development are closely intertwined. As the technological revolution continues to boom and the number of students leaving high school are entering the workforce. It is widely known that CTE-POS must become more robust in the educational mainstream if it is to meet its own mission and priorities. As the CCSS continues to be implemented into the majority of K-12 schools in the U.S., educators will be tasked with preparing students for “College and Career Readiness”. The result inspires a major shift in ideology that places increased responsibility on CTE teachers and leaders to achieve the “Career Readiness” component of CCSS.

In the 21st century, there is currently one predominant pathway to achieving the American Dream: through a four-year college degree (Symonds et al., 2011). Unfortunately, many students in the American system historically do not achieve that goal. Expanding pathways for all students to be prosperous in America is critical to the success of the U.S. economy. CTE seeks to provide additional pathways that allow multiple opportunities for successful attainment of the American Dream. In order to accomplish this, CTE-POS must be relevant, current, and highly-technical to meet the demands of a rapidly changing global labor market. There must be accountability measures in place along with established systems for postsecondary training if the U.S is to compete internationally (Bragg & Rudd, 2007). In order for this to occur, CTE can
no longer remain on the margins of secondary education and must be an integral part of the mainstream educational approach (Aliaga et al., 2012).
CHAPTER THREE: METHODOLOGY

In the first chapter of this proposal, the need for research on Career Technical Education (CTE) concentrators was determined to be critical for educational leaders and policymakers. The need to document the lived experiences of CTE concentrators from the student’s perspective and the lack of empirical research in this particular area was discussed. The underlying theoretical framework of student voice was introduced and Self-Determination Theory (SDT) was examined as the foundation of the study. The research questions posed in the study were reviewed along with the statement of the problem and the purpose of the study. Furthermore, it was noted that the field of CTE in general is heavily understudied and the lived experiences of CTE concentrators will make an important contribution to educational leaders and policymakers.

In the second chapter, the research illustrated that students traditionally served in vocational education were largely designated as Low Income (LI), minority, and special needs who were considered non-college bound with limited abilities. The tradition and history of vocational education was examined highlighting important legislative acts that funded and protected vocational education from its inception in 1917. The new mission and priorities of CTE along with what modern day CTE programs should look like and the conceptual framework of CTE programs was explored. Student voice theory and SDT were examined more thoroughly as the study’s guiding theoretical frameworks. The impact CTE has had on Comprehensive School Reform (CSR) efforts along with the labor market, social justice implications, and leadership implications were discussed. In Chapter 3, the research design methodology utilized in the study
will be examined including the sample, population, data collection strategies, methods used, data analysis, and limitations.

**Purpose of the Study and Research Questions**

The purpose of this study was to explore the lived experiences of CTE concentrators in order to determine the perceived academic and social impacts of CTE from the perspectives of the students themselves. With the implementation of the Common Core State Standards (CCSS) and California’s Local Control Accountability Plan (LCAP), education is experiencing its greatest overhaul in recent decades. These changes are creating significant discussions surrounding CTE on student academic achievement and are materializing as an important topic in the public high school arena (Kotamraju & Mettille, 2012). At this point, little research exists to determine if CTE concentrators feel that the CTE courses they are enrolled in benefitted them in anyway (Bragg & Rudd, 2007).

The research questions were explored through a narrative inquiry design that focused on the stories of CTE concentrators who have lived through two to four years of their chosen CTE-POS. The research questions that guided this study are as follows:

**Central Research Question:**

A. What are the lived experiences of Career Technical Education (CTE) concentrators?

**Sub-research questions:**

1. How are students placed into CTE? What intrinsic and external factors influence students to become CTE concentrators?
2. How do CTE concentrators perceive their academic and social experiences in high school?

3. In what ways does involvement in CTE shape future education and career aspirations?

The study utilized a semi-structured interview protocol to explore the research questions. A semi-structured interview protocol allows the researcher to develop questions ahead of time and follow a guide of questions during an interview but has the freedom to seek clarification and probe the participants in order to gain a deeper understanding of the question or topic being explored (Strauss & Corbin, 1998).

Dornyei (2010) stated that a semi-structured interview protocol is a compromise between a structured and an open interview. He noted that the semi-structured interview protocol is guided by a list of questions, but the manner and sequence of questions may be slightly changed or modified based on the participant’s responses in order to gain a deeper understanding of the phenomenon being studied.

Each participant was asked the same series of questions with the researcher seeking additional information or asking the participant to elaborate on their responses based on the participant’s answers. According to Bernard (1988), using a semi-structured interview protocol is best when the researcher will not get more than one chance to interview selected participants. By using a semi-structured interview protocol, the researcher in this study was able to explore the research questions in order to gain a deeper understanding of the lived experiences of CTE concentrators.
Questions were open-ended using exploratory verbs that were non-directional such as influence, impact, determine, cause, and relate (Creswell, 2007). Yin (1994) suggested that using open-ended interview questions allows the researcher to expand the depth of data gathering and increases the sources of information. Utilizing open-ended questions allows participants to use as many details they would like and provides an opportunity for selected students to answer from their own perspectives rather than be confined to questions that provide pre-designed, scaled answers (Bogdan & Biklen, 2007). All interview questions were created to focus around the research questions guiding the study to ensure the data gathered were useable and informative enough to accurately tell a story. The interview questions were designed to explore the experiences of CTE concentrators and provide students with the opportunity to tell their story from their perspective.

**Design of the Study**

A narrative inquiry was used for this study in order to capture the story of each individual participant. According to leading narrative inquiry researchers Clandinin and Connelly (2000), humans are storytelling organisms who live storied lives because of how they experience the world in their own eyes. These lived stories are essential for humans to make meaning of their lives, create meaning from their lived experiences, and provide insight to others about how they view the world (Clandinin, 2006). A narrative inquiry methodology was an appropriate design for this study in order to explore the lived experiences of CTE concentrators.

Narrative inquiry has become an increasingly popular form of qualitative research that has gained significant traction in the social sciences over the last 15 years.
(Xu & Connelly, 2010). Narrative inquiry shares many similar attributes with other qualitative methodologies specifically in the social context of ethnography and the storytelling properties of phenomenology (Connelly & Clandinin, 2006). It deeply explores the phenomena of human experience and allows the participants to describe how they perceive the world. Because individuals experience the world in many different ways, narrative inquiry is always changing and evolving along with people’s stories which are always in transition (Clandinin, Pushor, & Orr, 2007).

In educational settings, narrative inquiry has become increasingly popular. This is because school practitioners, for the most part, are not concerned with boundaries of any sort (Xu & Connelly, 2010). They are more concerned with their ongoing professional and public lives while trying to make the educational field better. Atkinson and Delamont (2006) cautioned that many educators choose narrative methodologies because of the familiarity of listening to and telling stories however, it is later found that narrative inquiry is increasingly difficult and complex. People tell stories, but narratives analyze stories making the researcher the person responsible for interpreting the stories in order to analyze the underlying meaning the storytellers may not be able to provide (Frank, 2000). Recent literature suggests that unbiased analysis of stories can be increasingly difficult for researchers who inadvertently include their own experiences and stories into the retelling phase of narrative analysis (Clandinin, 2006).

Creswell (2011) noted that narrative inquiry allows the enquirer to emphasize learning about the participants in a particular setting through stories provided by the individual. Additionally, he states that these stories are considered the data that is derived from interviews or informal conversations. The stories collected provide the
researcher the raw data that is used to retell the story based on elements such as the problem, characters, setting, actions and resolution (Ollerenshaw & Creswell, 2000). Furthermore, the researcher must be able to decipher two larger elements of a story: the “so what?” and the “who cares?” questions (Clandinin, Pushor, & Orr (2007).

Stories investigated through narrative inquiry are said to be the portal to experience meaning that every encountered experience is captured through the story (Xu & Connelly, 2010). It is understood that there are many nuances to narrative inquiry beyond simply collecting and analyzing individual stories. According to Creswell (2012), there are seven major characteristics central to narrative inquiry:

- Individual experiences,
- Chronology of the experiences,
- Collecting individual stories,
- Restorying,
- Coding for themes,
- Context or setting, and
- Collaborating with participants.

At the start of this study, the researcher conducted purposeful sampling to identify individuals whose individual experiences met the criteria for the study. The researcher then investigated the chronology of the experiences with and without the participants to gain a better understanding of the course taking patterns of CTE concentrators. Once the participants were selected, the researcher investigated each individual story through individual interviews utilizing a semi-structured interview protocol. Interviews were transcribed, and the raw data were collected. Member
checking was used to collaborate with participants in order to ensure that the raw data were correct. The data were then coded for emerging themes using In Vivo coding keeping in mind the context and setting of the CTE classroom. Each individual story was restored in Chapter 4 accompanied with the findings of the study followed by a discussion of implications in Chapter 5.

Sample and Population

The following section will provide context for the study and outline how and where the research study was conducted. In addition, site selection, participant selection, and the method employed for data collection will be discussed. Finally, the procedures for data collection and analysis are detailed.

Site Selection

A large traditional high school located in Southern California was selected for this dissertation study. In order to protect the confidentiality of the study participants and the selected school and school district, an alias has been assigned. In addition, the selected study participants have been given pseudonyms in place of their true names. The alias given to the selected high school will be Oak Grove High School and the school district will be ABC School District.

Oak Grove High School is located in the ABC School District whose boundaries serve a suburban population of approximately 97,000 residents. In addition to the suburban population, the district serves small portions of three other border cities. The ABC School District has 29 schools (3 traditional high schools, 15 elementary schools, 5 middle schools, 2 alternative schools, 2 schools for children with special needs, 1 K-8 school, and 1 home school). The district serves nearly 22,000 students in grades pre-
school thru twelfth grade. ABC School District also boasts four K-12 charter schools with an overall enrollment of 3,000 students and a very large adult school that serves nearly 15,000 community adult learners.

According to the ABC School District School Accountability Report Card (SARC), the enrollment demographics of ABC School District includes 58% free and/or reduced lunch, 24% English Language Learners (ELL), 10% homeless, 60% Hispanic, 28% white, 4% African American, and 8% other. Oak Grove High School has a student enrollment of approximately 2,525 students of which 65% are Hispanic, 24% white, 2.7% African American and 8.3% other. Furthermore, Oak Grove High School includes 14.7% English Language Learners, 9% homeless, 61% free and/or reduced lunch and 16% students with special needs. We can see that Oak Grove High School is closely representative of district demographics.

Oak Grove High School offers sequenced Programs of Study (POS) in CTE for students in grades nine through twelve in the industry sectors of Agriculture and Natural Resources, Arts Media and Entertainment, Engineering and Design, Finance and Business, Health Science and Medical Technology, Hospitality Tourism and Recreation, Information Technology, and Transportation (ABC Adult School principal, personal communication, November 13, 2013). Oak Grove High School is the oldest high school in ABC school district built in 1972 and is located near the center of the city. The school was originally built to house approximately 1800 students and began experiencing overcrowding issues in the early to mid-1980s.

The CTE programs in ABC school district are managed and funded by the ABC Adult/ROP School as part of ABC School District. ABC Adult/ROP School contracts
through their local County Office of Education (COE) to operate Regional Occupational Programs (ROP) in ABC School District. The ROP program funds nearly the entire menu of CTE courses in grades 9-12 offered in the district. For the purpose of this investigation, ROP and CTE are synonymous largely because ROP is simply the funding mechanism for CTE courses in ABC School District. ABC Adult/ROP School develops courses in partnership with their COE, submits courses to the ABC School District administration for approval and operates the courses in the district’s three traditional high schools. The CTE instructors are hired by ABC Adult/ROP School who conduct all verification of industry experience followed by the appropriate CTE credential necessary for instructors to teach CTE in the 15 CA industry sectors.

In the first semester of the 2013-14 school year, the number of students enrolled in CTE at Oak Grove High School was 1,292 (Table 3.1). Oak Grove High School was chosen as the study site because it had a significantly higher CTE enrollment rate than the other two traditional high schools in ABC School District. In addition, 91.28% of CTE concentrators at Oak Grove High School have met the Technical Skills Attainment measure by receiving a grade of “C” or better in their final CTE-POS course. CTE concentrators at Oak Grove High School have met the Secondary School Completion state requirement and the Student Graduation Rate at a success rate of 97.16%. Oak Grove administrators and staff frequently discuss the high quality CTE programs offered at Oak Grove and boast that over half of the student body consistently enrolls in CTE courses. Furthermore, Oak Grove High School has a rich school culture that values the vibrant CTE-POS’ offered throughout the school.
Table 3.1:
OAK GROVE HIGH SCHOOL
Career Technical Education Participation (School Year 2013-14)

<table>
<thead>
<tr>
<th>Measure</th>
<th>2013-14 Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pupils participating in CTE</td>
<td>1262</td>
</tr>
<tr>
<td>CTE Concentrators</td>
<td>442</td>
</tr>
<tr>
<td>Total School Enrollment</td>
<td>2525</td>
</tr>
</tbody>
</table>


2. (ABC Adult School Principal, personal communication, November 13, 2013)

Oak Grove High School was chosen because the researcher was the principal of ABC Adult/ROP School during the 2012-13 school year and the beginning of the 2013-14 school year. In addition, the researcher has worked as a teacher and Assistant Principal at Oak Grove High School in ABC School District for 10 years providing the researcher with a close familiarity of the culture, traditions, and practices of Oak Grove High School. Because the researcher had worked in ABC School District for nearly 12 years, he had a good working relationship with the site principal, the district superintendent of schools, and the school board.

**Participant Selection**

Students selected for this study were all in grade 12 with the majority of students being 18 years old or older. All selected students were CTE concentrators and had completed the final course in their two to four year CTE-POS. The definition of a CTE concentrator is as follows:

*Career Technical Education (CTE) Concentrator.* A secondary CTE concentrator is a student who has completed 50 percent of a planned program sequence (in hours or credits) in a state-recognized CTE sequence and is enrolled in the next course in that sequence, or has completed 50 percent of a single state-recognized multi-hour course and is enrolled in the second half of that course (California Department of Education, 2013).
The researcher used purposeful sampling to select student participants for the study. Purposeful sampling is used in qualitative research allowing the researcher to select individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon investigated in the study (Creswell, 2011). The decision about who or what will be sampled is an important aspect of the study. Marshall and Rossman (2010) state that sampling should be conceptualized using four aspects when determining the sample: events, settings, actors and artifacts. These aspects are described below in regards to site selection, the setting of the site, the actors involved and the artifacts that will be collected.

Prior to participant selection, the researcher sought approval to conduct the study from the ABC School District’s Superintendent of Schools. Once Superintendent approval was gained, the researcher submitted all of the necessary documents through the IRB approval process in order to conduct the study. The researcher then contacted the Oak Grove High School principal and requested access to confidential space to interview students and conduct the study.

At the study site, there is an employee responsible for school-wide data titled the Data Processing Coordinator (DPC). The DPC is the center of all data generated from the school’s Student Information System (SIS). These data includes enrollment information, demographics, student course taking patterns, grades, graduation status,
test scores, parent information, discipline, etc. The researcher collaborated closely with the DPC of Oak Grove High School in order to determine the students who met the criteria for the study. Using email, the researcher requested a list of 12th grade CTE concentrators who were preferably 18+ years old who were representative of the school’s ethnic and gender makeup. Furthermore, the researcher asked the DPC for the CTE-POS that the student was enrolled in, the final CTE-POS course the student was enrolled in, the CTE teacher, the student’s course schedule, and the student’s transcript displaying the student’s course-taking history.

After receiving a list of potential student participants from the Oak Grove High School DPC, the researcher randomly selected 20 potential CTE concentrators who met the study criteria. The initial 20 students were representative of the school’s demographics and were all 12th grade CTE concentrators. The researcher then contacted each student’s CTE teacher inquiring about the selected students. The researcher wanted the CTE teacher’s input regarding the suitability for each student’s ability to participate in the study.

Each CTE teacher responded with input that resulted in the elimination of four potential study participants. These four CTE students were eliminated due to language barriers and/or severe learning disabilities making communication with the selected students nearly impossible. Finally, the researcher also asked the CTE teacher to discuss the purpose of the study and to inquire from the selected participants if they would be willing to participate in the study.

Once 16 potential participants were identified, the researcher notified each student via a form letter describing the intent of the study and inviting them to
participate in the study (see appendix A). One week prior to conducting the study, the researcher met with each selected student to discuss the study and provide an opportunity for students to ask clarifying questions. Participants were also provided with consent forms to ensure permission was granted to participate (see appendix B).

Upon meeting with each of the 16 selected participants, two students decided against participating in the study for their own individual reasons, and one student was habitually absent during the data collection period. This resulted in a sample size of 13 total CTE concentrators. Of the 13 participants, seven were female and six were male. There were seven Hispanic participants (54%), three white participants (23%), two black or African American participants (15%) and one Filipino participant (8%). Four of the seven Hispanic participants were female with three being male. Two out of the three white participants were female with one being male. The two black or African American participants were male with the single Filipino participant being female. The demographics of the study closely represent the overall school demographics adding to the validity of the study.

Table 3.2: Participant Demographics by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Black or African American Participants</th>
<th>Filipino Participants</th>
<th>Hispanic Participants</th>
<th>White Participants</th>
<th>Total Minority Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Seven (54%) of the participants in the study were designated as LI while two (15%) of students selected in the study were designated as students with special needs along with three selected students (23%) being designated as English Language
Learners. These designations overlapped with some participants falling into one, two and sometimes all three categories of LI, minority and/or students with special needs. The result is that ten of the 13 selected participants, or 73% of CTE concentrators participating in the study were designated as LI, minority and/or students with special needs. Overall, the selected participants in the study closely represent the national statistics on CTE concentrators with the majority of the students being designated as either minority, LI and/or students with special needs. This is of great significance in regards the validity of the study’s findings.

<table>
<thead>
<tr>
<th>Ethnicty</th>
<th>Special Needs</th>
<th>Low Income (LI)</th>
<th>English Language Learners (ELLs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Data Collection**

Data were collected over a four-month period from March 2013 to June 2013. All data gathered and reported were collected with explicit permission from the participants and in full compliance with the Institutional Review Board (IRB) guidelines. All electronic files created from these data collection processes were transferred from a digital voice recorder to the researcher’s laptop computer. The laptop computer used in this study was password protected with anti-viral and security software. Once the recordings were transcribed and analyzed, the voice recordings were deleted from the researcher’s laptop computer.
All paper and electronic devices that stored information, such as USB storage devices, were locked in a fire-proof file cabinet located in a safe and secure place. Once the data were extracted and analyzed from these devices, the data were erased from the devices and all paper information was destroyed via a paper shredder. The following sections will discuss the qualitative data collection methods established for this study.

**Methods**

Creswell (2011) states that the collection of data may consist of multiple sources including documents, archival records, interviews, observations, and physical artifacts. The collection of data for this study lasted approximately 4 months. The researcher began by conducting observations of the CTE classroom. These observations allowed the researcher to better understand the culture of the CTE classroom, gain a larger perspective on how students function inside the CTE classroom, and provided the researcher with context surrounding the experiences of students as it relates to their CTE-POS. Conducting observations of the CTE environment provided important background knowledge into the lived experiences of CTE students and allowed the researcher to observe additional information that students may have otherwise not disclosed.

The study included an informal analysis of documents such as transcripts, progress reports, test scores, and extra-curricular participation. These documents allowed the researcher to gain a deeper understanding of the academic and social experiences of the selected students. Furthermore, they provided valuable information regarding the student’s chosen CTE-POS and the courses that each CTE concentrator had enrolled in. Following observations, the researcher utilized a semi-structured
The interview protocol to conduct individual interviews of each selected participant. The interview questions developed for this study were directly linked to the research questions provided above. A copy of the interview protocol is located in Appendix C.

**Interviews.** One-on-one interviews were conducted in the CTE classroom, teacher offices, and common areas such as conference rooms. Qualitative interviews are used to ask one or more interviewees open-ended questions and record their answers (Creswell, 2011). The study utilized a semi-structured interviewing technique to gather the necessary information that explored the central phenomenon. Semi-structured interviews are simply open-ended conversations where the interviewer has predetermined questions guiding the interview on topics that surround the research questions. Although the interview is structured by these questions, the interview protocol allows the conversation to vary and may change substantially from one participant to another (Kvale & Brinkman, 2009).

All interviews utilized predetermined questions and were conducted individually in person. All interviews were recorded on a digital voice recorder and saved on a password protected laptop. The results of the interviews were professionally transcribed and coded by the researcher using In Vivo coding. To ensure the transcription was accurate, the researcher read the transcripts while listening to the voice recordings in order to correct any errors that may have occurred during transcription. The interview protocol is located in Appendix C.

**Document Analysis.** Documents can help researchers in providing valuable information to understand central phenomenon in qualitative studies (Creswell, 2011). The researcher was provided with access to selected participant’s academic records and
other supporting documents that will be used to triangulate data from interviews. Documents useful for the study were academic transcripts, class schedules, and progress reports. These documents were collected and analyzed in order to better understand the course taking patterns of CTE concentrators and the academic history of each selected student. Additionally, these documents provided insight into the profiles of study participants. Once these data were analyzed, the documents were shredded and destroyed to ensure student privacy. A copy of the document analysis protocol is included in Appendix D.

**Data Analysis**

Field interviews and supporting documents were gathered and analyzed. Once the interview data were collected, it was submitted to a professional transcription service. The data were then coded for description and themes that were used in the research report. The intent of coding the data was to establish common themes, patterns, terms or ideas that form a deeper understanding of the central phenomenon and research questions being studied (Miles & Huberman, 1994). Creswell (2009) described the coding process much like a funnel that begins with many pages of text and segments that are eventually dissected down to 30 or 40 codes. It is then reduced again to 20 codes by eliminating redundancy and overlap ending with five to seven themes after a significant collapse of codes. As redundant codes were eliminated, larger themes began to emerge.

**In Vivo Coding**

In Vivo coding was used from the initial analysis to the final rounds in order to narrow emerging codes into five to seven larger themes. Creswell (2011) defined In
Vivo coding as “labels for categories (or themes) that are phrased in the exact words of participants rather than in the words of the researcher or in social science or educational terms” (p. 431). ATLAS ti, a qualitative statistics coding software program was used to analyze transcribed interviews in order to better understand the common themes emerging from the study.

The analysis of data was an ongoing process as the data were received. After a period of time, the data began to inform each other. Thorough analysis of the data ensures that the findings of the study are valid. Creswell (2011) stated that “validating qualitative data means that the researcher determines the accuracy or credibility of the findings through strategies such as member checking or triangulation” (p. 630). According to Creswell (2007), validity in qualitative studies is one of the most important aspects to consider in order to ensure the findings and interpretations are accurate. The researcher used data triangulation to ensure all information is corroborated from various participants and sources.

**Triangulation**

Because the researcher collected interview and document data, the process of triangulation was used to inform the research findings. This process ensured that the proposed study is accurate and trustworthy with established and credible results. Because data were collected from different places, at different times, from different people, using different sources, the use of triangulation can substantiate conclusions and interpretations of the various data collected (Carlson, 2010).

The purpose of triangulation is to ensure that every source of data that were collected is analyzed, cross-referenced, and applied to the findings of the study.
Triangulation ensures that potential conflict among these data sources are found and addressed to increase validity. In regards to triangulation, Creswell (2011) posits that “the inquirer examines each information source and finds evidence to support a theme” (p. 259).

**Member Checking**

The researcher conducted member checking of each transcribed interview in order to ensure accuracy and validity of the study. Member checking is basically what the term implies – an opportunity for members (participants) to check and approve aspects of the information and data they provide (Doyle, 2007). Participants are usually given the transcripts of the information they provide to check their responses to questions for authenticity. Creswell (2011) stressed that member checking should be done with “polished” (p. 191) interpreted pieces once themes and patterns have emerged from the participant’s contribution. Member checking ensures that the study is trustworthy, authentic, and valid, which are critical components to conducting qualitative studies.

Once the interview data were professionally transcribed, each participant was provided with a copy of the transcripts in order for members to check and verify their responses. Transcripts were emailed to each participant in the study and given a timeframe of two weeks to correspond back to the researcher with any changes, input, or corrections. Once each participant checked their transcribed interview, the researcher was able to move forward with coding each transcript for emerging themes.
Limitations

Generalizability

There is a tremendous need for research in the emerging field of CTE and the lived experiences of CTE concentrators. However, this study is limited in scope and context because of the small population of participants selected at one educational institution. As with most qualitative studies, it examined in detail-the lived experiences of only a few participants. Furthermore, the goal of this investigation was not to generalize the results to a large population but rather to understand the experiences of this particular group of CTE concentrators. This is a common characteristic of qualitative research methods. The findings of this study were unique to the students selected, the school they attended, and this particular investigation. The results of the study were intended to provide an in-depth description of the findings that can lead to new hypotheses, theory, and directions in programming (Creswell, 2007).

Malterud (2001) explained that “the findings from a qualitative study are not thought of as facts that are applicable to the population at large, but rather as descriptions, notions, or theories applicable within a specific setting” (p. 486). Although each participant’s story is unique to that particular student, there were commonalities reported across experiences of each selected participant. These commonalities helped to inform educators and educational leaders as to the experiences of CTE concentrators.

Positionality

The researcher’s positionality was also a limitation. The researcher was a former teacher and assistant principal at the selected study site and later became the
principal of all CTE programs in ABC School District. However, the researcher had left ABC School District six months prior to conducting the study to pursue another position outside of ABC School District. Because of the researcher’s past position, there could have been participants who were reluctant to share their stories. In addition, the researcher’s former position brings with it a wealth of experience and content knowledge that could have influenced information students provided during interviews. By employing strategies such as triangulation of data and member checking, the researcher attempted to mitigate this risk as much as possible.

In addition, because of the researcher’s former position as the principal of the programs being studied, there is the possibility that participants gave information that they felt the researcher wanted to hear. Scheurich (1994) remarks that one's position, one's class (which may or may not include changes over the course of a lifetime), one's race, one's gender, one's religion, and so-on, all of these interact and influence, limit and constrain production of knowledge. Throughout the data collection process, the researcher attempted to address these limitations by reflecting on the interviewees’ demeanor and the researchers’ approach. Furthermore, the researcher began each interview by asking participants to share their open and honest opinions regarding their experiences in their CTE – POS.

Due to the nature of the proposed study, data were collected during a short designated period of time. This is in contrast to the document analysis that allowed the researcher to view change over time in student achievement, GPA, student involvement, academic success, and course selection. Because the study was not longitudinal, this created a natural limitation that could not be prevented. These limitations inspired
future thinking and suggested areas of future research that will be discussed later in the proceeding chapters.

**Summary**

The purpose of this study was to explore the lived experiences of CTE concentrators in order to determine the perceived academic and social impacts of CTE from the perspectives of the students themselves. In order to accomplish this, a narrative inquiry into the lived experiences of CTE concentrators in one traditional high school was conducted. Validity of the study was ensured by employing triangulation and member checking following a four-month data collection period. Participants were carefully selected based on the research criteria described in this chapter. All data were protected and secured and the researcher strictly followed the guidelines set by the Institutional Review Board (IRB).

A semi-structured interview protocol was employed and participant interviews were professionally transcribed. In Vivo coding strategy was utilized with ATLAS ti statistical software in order to reduce redundant codes and themes. Creswell (2009) posits that research is a “process of steps used to collect and analyze information to increase our understanding of a topic or issue” (p. 3) and that it is a challenging and exciting personal journey. This study’s goal was to provide a deeper understanding and a thorough exploration of the lived experiences of CTE concentrators.
CHAPTER FOUR: FINDINGS

The purpose of this study was to explore the lived experiences of CTE concentrators in order to determine the perceived academic and social impacts of CTE from the perspectives of the students themselves. The goal of this qualitative narrative inquiry was to capture the lived experiences of CTE concentrators in order to understand the issues they face in school, what influences their decisions to continue in their CTE-POS, and how CTE has impacted their high school experience. The general problem as stated in Chapter 1 of the study is that very little research exists about CTE concentrators and their experiences within their POS. With the recent national CCSS movement, the topic of CTE has become increasingly important in determining if CTE is helping close the achievement gap by increasing student engagement for disadvantaged students and providing students with college and career aspirations and goals.

Thirteen high school CTE concentrators were selected for this study. As described in Chapter 3, purposeful sampling was used to ensure that participants closely represented the school’s demographics which mirror the national demographics of CTE concentrators. The study site chosen was a traditional high school located in the suburbs of southern California with a student enrollment of 2,525 students. Participants were interviewed individually using a semi-structured interview protocol.

Interviews began with a review of the study purpose and informed consent procedures with all participants thereby adhering to the defined parameters of the IRB process, purposeful sampling objectives, and data collection approaches outlined in Chapter 3. All selected participants at the start of the one-on-one interviews were
allowed to select pseudonyms (in order to protect anonymity), and were provided a copy of the interview protocol. Participants were asked to describe themselves, their educational experiences and their family life to provide the researcher with a glimpse into the personal lives of the participants. Throughout the data collection analysis process, the researcher followed the privacy and confidentiality procedures as introduced in Chapter 3.

Each participant was encouraged to tell their stories as they had authentically experienced it. Throughout the data collection process, the researcher utilized an interview protocol that included a series of 30 semi-structured interview questions (see appendix C). Interviews and observations were conducted over a four-month period of time. Once the data were collected, it was professionally transcribed. The researcher reviewed each transcript while simultaneously listening to the audio recorded interviews. Once the transcripts were reviewed, they were sent to each participant for member checking to ensure accurate transcription.

The data were analyzed using Atlas Ti qualitative statistical software. The data were coded using In Vivo coding. A first initial analysis of the data produced 672 sources of unrefined narrative. Codes were then constructed from the initial data mine. The initial round of coding produced 56 codes. Further analysis and coding reduced the findings down to nine major categories that represent the significant findings of the study. These nine categories were then organized into four major themes that represent the crux of the findings.

Chapter 4 is divided into two main sections. In section one, the researcher provides a brief narrative of questions and answers directly related to the central
research question and sub-research questions introduced in Chapter 1. The intent of the first section was to provide a profile of each participant in order to provide background and context for the reader. Each narrative was significantly reduced and condensed by removing non-essential comments and discussion that did not result in significant findings. Each participant’s story begins with a summary of the background information by first introducing each student with descriptive biographical information. In a narrative inquiry, this “context is necessary for making sense of any person, event, or thing” (Clandinin & Connelly, 2000, p. 32).

This is followed by abbreviated interview excerpts of each student’s stories in their own words to create context for understanding about how they made meaning of their experiences. Direct quotes from interviews and conversations are located within each story. At the end of each story, a reflection is provided summarizing the key findings in each participant’s individual narrative. The intent of this section was to provide a profile of each individual participant for greater understanding and knowledge.

The second section of Chapter 4 includes an analysis of the narratives that infuses participant responses connected to the categories and themes that emerged from the coding process. Each theme is introduced with a discussion about the findings and the corresponding categories under the umbrella of the emerging themes. Categories are then introduced with student interview data weaved throughout supporting the themes and categories discovered in the coding process. This analysis provides a deep understanding of each participant’s story utilizing a holistic approach. These data represent the major findings of the study and will connect each student’s story to the
themes and categories discovered. Chapter 4 concludes with a summary of the key findings leading to the areas of future research and leadership implications.

**Participant Narratives – Their Story**

**Amanda’s Story.** Amanda was an 18 year old Filipino female in the 12th grade who was a CTE concentrator in the Health Sciences and Medical Technology industry sector. Amanda was born in the Philippines and was adopted by her Aunt when she was nine years old. Amanda’s parents lived in the province of the Philippines and her father worked in the fields while her mother was an elementary school teacher. Amanda’s parents struggled financially and they wanted her to live in the U.S with her Aunt in order to take advantage of the U.S educational system. The family plan, according to Amanda, was to be adopted by her Aunt so that she could petition for her parents to come to the U.S when she turned 18.

Amanda transferred from another school outside of the district at the start of 11th grade because her Aunt relocated closer to her work. Amanda was designated as LI yet she excelled in school by successfully taking honors and AP courses. Amanda was a bilingual student speaking English and Tagalog (a Philippine dialogue). Amanda traveled to the Philippines to visit her parents every winter during the holidays. She usually stayed the duration of a month although since her enrollment in high school, she gave up her monthly visits because of her commitment to school. In order to maintain contact with her parents, she frequently used FaceTime, Facebook and other social media platforms to communicate. She wanted to be a registered nurse because of the poor medical system she experienced in the Philippines in addition to the many family members (including her Aunt) who were in the nursing occupation.
Amanda: Well, freshman year and sophomore year, I don’t know why but I just focused on Honors AP classes because all my friends were in that class. I thought about taking up easy classes and my friends were like, take Photo, it’s fun, I did, and then that’s where – it’s really actually fun, I liked it a lot. Then, I wanted to be a nurse, a registered nurse, and I talked to my counselor about it and they told me to take First Responder and Medical Assistant.

Researcher: Why didn’t you take Medical courses when you first transferred here?

Amanda: I didn’t know about it. I met with my counselor before I enrolled and I right on the spot picked my classes. Basically the focus was on my, what was it called, A through G requirements, so they really focused on my electives.

Researcher: How do you feel about your CTE teacher?

Amanda: She is like a mother to us because she takes care of us, definitely. Well, first of all, she is really, really understanding.

Researcher: Let’s go back to your 11th grade year, how do you feel about your photo teacher?

Amanda: He was really nice and really fun, he was more like a friend to me because when I go to class, I would say hi to him and we would have normal conversation and then I still see him around school campus and we say hi to each other, say how are you, how have you been? He would always tell me to come visit, go for extended time in his class.

Researcher: How do your CTE classes compare to your non-CTE classes?

Amanda: CTE classes is really fun for me, it’s kind of the electives I chose so I want to do good in them.

Reflections: Amanda’s story was quite different than other participants. Her home life situation was not only interesting but very influential in terms of her class choices and future career. Amanda discussed how her CTE-POS was fun and interesting. She mentioned that her parents were upset at her for not taking more AP
courses during her 11th and 12th grade year. Surprisingly, without her parents, Amanda did exceptionally well in school with and had an intrinsic desire to succeed. Her CTE courses seemed to provide an outlet for Amanda as she transitioned from another school during her 11th grade year without her biological parents supporting her.

Amanda had numerous family members who were nurses. This played an enormous role in her decision to become a registered nurse. She mentioned that at first she may have felt forced into the decision to become a nurse but once she began taking CTE courses she knew she wanted to continue her pursuit of this profession. Furthermore, Amanda’s Aunt owned a local nursing home that Amanda volunteered in. She discussed this experience as well as her desire to help people as she had witnessed nurses do in the Philippines.

Amanda didn’t start taking medical science courses until her 12th grade year when she enrolled in an entire pathway at once. She stated that she did not know the courses existed when she was in 11th grade. When she visited her counselor about her career interest the emphasis was placed on ensuring that Amanda met the CSU/UC A-G requirements versus the pursuit of her career goals. This unexpected finding was similar to several other CTE concentrators who had average to high GPAs and were not ELLs or students with special needs.

**Crystal’s Story.** Crystal was a white female in the 12th grade who was an 18 year old CTE concentrator. She lived at home with both parents and had a younger sister and brother. She was very active in school and described herself as someone who was outgoing who enjoyed extracurricular activities. Crystal played soccer early on in her high school career but underwent knee surgery and had to quit. Trying to find
something to connect with, she joined band and played the trombone. Her sophomore year she became a CTE student in the Hospitality and Tourism industry sector and eventually completed all of the courses in the Culinary Arts POS. She became a CTE concentrator in Hospitality and Tourism along with the Arts Media and Entertainment industry sector by completing all of the designated CTE courses in the TV Film and Digital Media POS.

Crystal wanted to go to college and earn a degree in business administration and then embark on a career in music management where she wanted to manage a band. She felt that her experience in culinary arts competitions as a manager and her experience in the TV Film POS would help her successfully manage a band.

Crystal: Because I have this class to grade as a TA, I got to come here. Cook maybe, learn about different kinds of foods and cuisines, things like that, that makes me want to come. I get to go do things and like hands-on things. That’s what makes me want to come to school.

I just, after last year, (describing Culinary Arts) just experiencing it because it kind of becomes this little family and its like because we cook everything then we all sit down and eat together and it’s so much fun. Like you get to just talk, share stories about if you cook this or that and it’s I don’t know it’s like its a little family. Learning something new each week because learning how to cook something in a different way that you didn’t keep cooking, it’s always fun in that.

Researcher: How did you arrive in your CTE-POS?

I think it really came down during to meeting to like finish my schedule and I wasn’t really completely shown what I wanted to do. And so I’m like, and my parents kind of told that I probably need to start things about what I wanted to do for like college and a career or something like okay, well I really like movies and videos and stuff so I’ll try the editing part of it. I didn’t choose it with a counselor. I chose it with my parents.

Researcher: What has kept you motivated in your CTE-POS?
Crystal: Knowing that I’m going to learn something. Knowing that each time I come into the classroom that I’m really learning something completely different that I can use for the rest of my life.

Researcher: Tell me a little bit about your CTE teacher? How do you feel about her or even other CTE teachers in the past that you’ve had?

I think she challenges us to really think about what we really want to do and really focus on the things we want to do. I think you’re getting a lot more like life skills and things you’re going to possibly use in your career. So I think you learn a lot more about, like I don’t know, like the real world. I think they have definitely made me a little better because I’m a little more focused.

I think students who don’t really have an idea of what they want to do in their career should take this class.

Reflections: From the beginning of the interview, Crystal noted how much she loved her school. She referred to her CTE teacher as her second mother and described the friendships she made in her CTE-POS as a “family”. She was heavily involved in band and CTE restaurant management competitions. She discusses her experiences in CTE with her parents quite frequently and was proud of the skills she had learned. Crystal did not seek a counselor when deciding on enrolling in a CTE course but instead, consulted her parents. When she was asked what motivated her to continue in her POS, her response was that she really enjoyed the class and she appreciated the “real-world” life skills she was learning.

When asked about the rigor of her CTE courses, Crystal stated that she felt they were easy. She also mentioned that she did not feel any of her courses over the last 4 years have been very rigorous (CTE or non-CTE). However, she did exclaim that she had learned various technical skills including working with computers, editing video and learning complex cooking strategies. Crystal felt that her experiences in CTE had
shaped her future career and her involvement in competing in CTE competitions had opened her eyes to her management potential. Even though Crystal did not want to pursue a career directly related to her CTE-POS, she felt that her experiences in CTE have been the catalyst to choosing and deciding her future.

**Eric’s Story.** Eric was a 17 year old black or African American 12th grade student. He was designated as a student with special needs due to a learning disability identified earlier on in his education. Eric was raised by a single mother and was an only child. Eric described himself as “pretty much, a basic kid” who was generally disengaged from school and had been on the fringe of not graduating high school. He struggled academically and was taking courses to make up credits in order to graduate high school on time. He was a four year Agricultural Sciences student who had taken every single course offered in the Agriculture POS.

Eric was an officer in the FFA (previously known as Future Farmers of America) and took pride in his association in the Agriculture program. He played the bass guitar after school in a band made up of his friends. He wasn’t involved in many school activities outside of maintaining his status as an Agriculture FFA Officer. By his own account, Eric simply wasn’t that interested in school and didn’t see the point of many of his classes. He wanted to become a paramedic after high school and enroll in Junior College to pursue this career. Eric wanted to pursue EMT courses and noted that he did not want to give up his studies in Ornamental Horticulture or Ceramics.

**Eric:** This class is very fun, we go outside and do – work with plants, build–rebuild fix whatever needs fixing, things like that. I like working with clay and I like being able to make something and have it come out really fantastic.
All my friends are in it (Agriculture) and it's a really cool. In a class like this where we go outside and plant, we can hang out and do our work.

Researcher: Why do you want to be an EMT?

Eric: It is something that really interests me, I really like, because I know I can probably never be a doctor, I can probably be close to that, maybe like a paramedic. I want to help people you know?

I have to see the point really. See if it actually – it's not whether I like what I am learning because I cannot like what I am learning if I don’t see the meaning and importance behind it.

I think it's real hands on experience, it really teaches you things that you need to know later on in life, like responsibility. One of the biggest things I’ve learned is leadership.

Researcher: Have you ever experienced positive reactions for being in CTE?

Eric: My mom loves that, because it's basically–it's literally shaped me shape my whole high school career and she loves it, I do – it's just taught me everything that I know today.

I have learned, like I said the things that it teaches you, it teaches leadership and responsibility and I feel like if I hadn’t taken ag I just be like one of those other kids who are just like, school is stupid. I probably would have ended up at (alternative school mentioned) or maybe even dropped out, I don’t know.

Reflections. Eric represented the stereotypical disengaged suburban student, raised by a single mother who worked long hours at the local DMV. In general, he found high school irrelevant and tried to avoid challenge and extra work at all cost.

When asked “when you wake up in the morning, what makes you think, I can’t wait to get to school”? His response was “I have never had that thought”. Despite his disengagement with school, Eric found a connection in his Agriculture POS and mentioned several times that he enjoyed the friendships he made and the experiences he had in the program. He felt that even though he didn’t do well throughout his high
school career, he would have done much worse had he not made the connections and had the experience he had in Agriculture.

Eric wanted to continue his education by transferring to a local community college and pursue courses to become an EMT. He discussed his desire to help others much like his love for caring for animals. He stated that he wanted to continue his passion for plants and ceramics because both programs had such a positive impact on his high school experience. Eric’s mother was happy that he had found something that connected him to school and she encouraged him because of his participation in Ag. Leadership skills, public speaking, working as a team, and responsibility are traits that Eric said he had learned from Ag even though he may not pursue this POS as a future career. Finally, it was apparent that Eric enjoyed the hands-on, relevant learning that Ag and Ceramics had provided him.

Elena’s Story. Elena was an 18 year old Hispanic female who was a reclassified English Language Learner (ELL) in the 12th grade. She migrated to the U.S in second grade from Mexico with her family. She was designated as LI and had taken English Language Development (ELD) courses in middle school that she believed helped her achieve mastery of the English Language. Elena was bilingual speaking both Spanish and English with the primary language of Spanish being spoken at home because her father did not speak English. Elena had a 19 and 12 year old sister who lived at home with both of her parents. Elena excelled in school and had a 3.6 cumulative Grade Point Average (GPA). She was a CTE concentrator in the Hospitality and Tourism Industry Sector concentrating in the POS in Culinary Arts. Elena wanted
to attend a community college following high school in order to become a Dental Assistant.

Elena: I look forward to like spending time with the people around me. Like here I’m like seeing different people, interacting with different people.

Culinary; I love cooking and I enjoy it. It makes me happy. I really like my teachers. I like them like they help me like a lot. She (CTE teacher) always helps me. She always like asks me how am I, how am I doing like she cares. She is just like really helpful. She wants me to like be prepared and be like a better, like better myself like later in the future.

Researcher: What has motivated you to continue in your CTE-POS?

Elena: It helps me maintain myself at like the same position and not get lazy and get bored from school and drop my grades down. It kind of keeps me balanced so it kind of keeps me like one of the team but it helps me enjoy.

Like for me it helped me like at home like I started cooking more and my parents saw it and they have enjoyed new foods that I made here and I actually like tried them and did them at home.

Researcher: Do you feel that this experience has impacted you in any way in terms of your future?

Elena: It kind of has because like at the beginning that was like oh, it seems interesting to be a chef like I was looking like forward but then like it’s not that like call me like not to study that career but like I saw the hard work and I saw that I didn’t have like the passion to actually like go for and study.

Like I told them like oh, it seems interesting. I like what I’m doing and they just like talk to me to see like what I was like getting into.

Reflections. Elena loved school and felt connected to school. She commented about how much she enjoyed her teachers before the researcher was able to question her about them. She appreciated the hands-on learning aspect of ceramics and culinary arts. Elena discussed her English class because of her connection with the teacher and
enjoyed her economics class because of the relevant nature of the curriculum. She discussed her joys and passions and what her interests were that engaged her. Taking culinary arts was more of a hobby for Elena and something she really enjoyed doing at home.

Elena mentioned that she enjoyed learning new things that were interesting and intriguing to her. She came to enroll in CTE because she refused to be in a Spanish class and noted that she had already spoke Spanish. She did not want to become a chef and learned early on that she was not willing to put in the hard work required to pursue the profession. Instead, she had chosen to pursue a completely different career as a Dental Assistant. She discovered that being a Dental Assistant would provide her with steady employment and a sense of intrinsic motivation of helping others. Her experiences in CTE may not have inspired a desire to pursue a career in her studied POS but instead, allowed her to understand what she didn’t want to pursue in the future.

**Austin’s story.** Austin was a white male 18 year old 12th grader. He came from a successful middle class family with both of his parents graduating from college. Austin wanted to attend college after high school and become a nutritionist. He was a CTE concentrator in Photography and TV Film Media and Design. Austin describes himself as an outgoing kid who loved to meet new people and was a hard worker. During the interview, Austin spoke very fast and loud and stated that his whole family speaks fast and loud. Austin had previously attended the most modern high school in ABC School District and was on an intra-district transfer since the beginning of his 11th grade year. He began taking CTE courses when he was in 9th grade and was a CTE concentrator in both Digital Photography and TV Film Media and Design. In the
middle of Austin’s TV Film POS in 11th grade, he decided to enroll in Automotive Technology because of a family influence. He reenrolled in TV Film Media and Design during his 12th grade year and finished as a concentrator.

Researcher: What do you enjoy most about your high school experience?

Austin: So far it's definitely the people, I have met a lot of people and I have learned how different each person is.

Every time when I wake up I am always excited to go to class. I started taking pictures the first time, I started editing and everybody told me my pictures were good, they were really good and I was pretty happy, I was like, maybe I could do this, maybe I could have a profession in the photography field.

Researcher: During your 11th grade year, you decided to stop in the middle of your TV Film POS and enroll in Automotive. What was your thinking behind that decision?

Austin: Yeah, I tried because my dad is a successful mechanic, he is really big into cars and stuff. It didn't really—it didn't sink into me as much as it sunk into him.

There are good ways to figure out if you really want to go into it because you learn what comes with working in that field like all the pictures, all the editing, all—from taking apart cars, from taking apart—from breaking down videos, putting videos together, you learn how grueling and long it takes to do that and if you are really interested in it, it's something good that you can go into.

Researcher: How has CTE prepared you for your future aspirations?

Austin: It has taught me a lot about patience, dedication and motivation because once you start something, you are either going to take the time to finish it or you realize and you can't do it.

Reflections: Austin’s story was quite interesting in regards to his transfer in the 11th grade and continuing his CTE experience once enrolled at Oak Grove High School. He began the interview without any prompting by commenting on his teachers and their
effectiveness. He began his CTE experience in Digital Photography and according to him, he was really enjoying it. He found success in Photography and decided to branch off into TV Film Media and Design. In between these experiences, he decided to enroll in Automotive Technology with hopes of following in his father’s footsteps. He found that Auto did not fit his interests and re-enrolled in Photography during his 12th grade year. Austin stated that during his final year in Photography, he began realizing that photo was something he didn’t want to do and began to focus solely on nutrition.

Throughout his enrollment in Photo, Austin found success that led him to continue in this POS. His edited pictures and the feedback he received were positive enough to inspire an intrinsic desire to continue in this field. Even though Austin decided that he did not want to pursue Photo in the future, he felt that his experience in his CTE classes prepared him for college and life by doing things right, working hard and meeting the challenges presented to him.

**Rebecca’s Story.** Rebecca was an 18 year old Hispanic female in the 12th grade who was designated as LI. She was a CTE concentrator in the Medical and Health Occupations field and had earned her certificate as a Certified Nurse’s Assistant (CNA). She lived at home with both parents and her 7 year old brother and 22 year old sister.

Rebecca had gotten into trouble during her 9th grade year and she had been expelled from school. She met the requirements of her expulsion and returned to her home high school to successfully complete her graduation requirements early. She stated that she only enrolled in CTE to pass the time until walking in graduation. Rebecca wanted to attend Community College and earn an associate’s degree in welding which had been her goal for quite some time. She felt that while she
progressed toward this goal, she could work as a CNA to pay for college. Rebecca
spent three weeks in a nursing home doing unpaid internship work as a requirement of
her CNA license.

Rebecca: I like the teachers because they actually listen and they
actually try to help you and you are not just a number to them. They are
smaller classes, so we can be closer to each other, we can talk to each
other more.

I enjoy trying to work toward achieving goals and I like accomplishing
things and seeing what comes after.

Researcher: As you have progressed in this POS, what has kept you
motivated to continue?

Rebecca: Being able to help people. I feel like I belong to something
here.

I used to think people with scrubs just like to trust completely. I wear
them they are pretty comfortable and very useful. When you wear it you
get a sense of identity with people in the healthcare team, and yeah, just
makes you feel you have saved someone’s life. Yeah, I like helping
people.

Researcher: How do you feel about your CTE teacher?

Rebecca: Yes, she is always telling us about the careers and where we
can go and looking up these colleges and see how much it costs and all
that. She exposes us to a lot of things.

The other classes I don’t feel like there is a purpose to it but here you are
working toward a goal, like an actual certification. Sometimes I am just
wondering what I am going to do with this information later on and here,
in CTE, I know what I am going to use it for.

I told my dad I want to do welding and he was like, Oh! that's a man’s
job, you can't do that, so now I am definitely going to do that.

Reflections: Rebecca was another CTE concentrator who wanted to help others.

She presented herself as a street smart and sassy student who experienced the ups and
downs of life and school. She enjoyed the challenges of her POS and couldn’t wait to
move on to community college and earn an associate’s degree in welding. She took joy in proving people wrong and doing things that people didn’t think she could ever accomplish. This was attributed to her volatile past and experiences in life.

Rebecca was a young woman of few words. Her answers were short, concise and to the point. She enjoyed her experience in CTE primarily because of her CTE teacher and the interactions she had resulting from it. Rebecca had a hard time understanding the purpose behind her non-CTE classes and enjoyed the hands-on nature of her CTE-POS. Her POS provided Rebecca with a sense of belonging and pride and she felt a connection with others especially when wearing her medical uniform (scrubs). Even though Rebecca wanted to pursue a career in welding the believed that becoming a nurse would help her obtain future goals.

**Katie’s Story.** Katie was a 17 year old female Hispanic 12th grader who was a CTE concentrator in both Digital Photography and Culinary Arts. Katie’s mother was born in Mexico and her father in Washington. She lived with her younger brother and sister and had moved around the western United States until settling in California during middle school. Katie wanted to go to Community College to become a dental hygienist following high school. Katie had a passion for photography and wanted to pursue it as a profession but at the time, it was her understanding that the work may be sporadic leading to an inconsistent means of living. She wanted a stable job while pursuing photography as a hobby or side job. According to Katie, her mother and others felt that she had a knack for taking photos. Katie boasted about her family being the strength of her extended family that was always there to support each other. Several
Aunts and Uncles had moved in and out of Katie’s home over the course of her life due to the stable relationship of both her mother and father.

Katie was attending another local high school at the beginning of her freshman year and ended up transferring to Oak Grove High School shortly after. She attempted to try out for soccer but ended up twisting an ovary causing the need for surgery. Because of that, she enrolled in band and CTE which resulted in the cultivation of new friends and connections to her school.

Kaite: I love it here. I would have to say the friends, pretty much, the people who I hang out with and it's just one big family.

Researcher: Tell me about your CTE teachers.

Katie: They both care a lot and they just have that vibe, that sense of like, I am here for you, let’s do this, and stay positive and if you need anything come to me, they have that mom sense. It's nice to know that they are there and they won't tell anybody anything, they seem really trustworthy.

I like to come for Photo because that's always fun and my friends too usually they are the ones that make the day more fun and light hearted. I have to say Photo, so if it's like a class.

I did it with my friends and we actually had a really fun time and we learned many things. My mom says I have an eye for pictures and stuff like that and so do my teachers, so I took it and it was actually a really fun experience.

For culinary, I thought that would be a fun experience. Like I said again, my friends were going to take it and I thought that would be fun to have a class with my friends.

Researcher: What has motivated you to continue in your POS?

Katie: I would have to say the challenges and the new things that I was going to learn and it started to get technical. This is actually what you do in the real world for these types of things because they are both jobs. You actually use these in the real world. I am definitely more prepared for a job and for real scenarios than I was before I took those classes.
Reflections: Katie immediately began talking about her friends and the impact her friends had on her high school experience. She described her CTE teacher as “a second mom” and felt a strong connection to her. Katie described her experiences in CTE as if it were a job. She discussed the real world implications of her CTE-POS and how her teachers challenged her.

Katie was a realist. She understood that culinary arts were more of a passion while Photo was more of a hobby/side job. She brilliantly described how she would connect the skills she had learned in her CTE-POS’ to her future career. For example, if she became a dental hygienist, she would use her skills in photography to take photos and post them throughout the office providing aesthetics and comfort to patients. Katie seemed to have clear career plans and her CTE experience shaped the way she viewed her future goals and aspirations.

Reagan’s Story. Reagan was a 17 year old senior who was a CTE concentrator in Agricultural Sciences. Reagan was a white female who described herself as a daddy’s girl. She came from a close knit family and was an elder twin by 8 minutes. Reagan lived at home with her twin sister, 19 year old brother and mother and father. Her mother was a teacher in ABC School District who began a large charity organization that had raised over $200,000 for disadvantaged youth. Reagan’s father was a battalion chief in the local fire department. Reagan was very proud of her community service lifestyle and repeatedly discussed helping others through her and her family’s work.

Reagan wanted to transfer from high school directly to a four year university. She was named the student of the year for the CTE department and overall recipient of
Student of the Year at Oak Grove HS. Throughout her experience in CTE, she had developed a passion for animals and wanted to pursue a career as a veterinarian.

Reagan: I love this school mostly because of Ms. [CTE teacher]. This is the one class that has really taught me how to go into the future, I mean I am probably not ever going to use y=mx+b in my life but I am definitely going to use the skills that I gained from agriculture and Ms. [CTE teacher] to continue what I want to do. She is like my second mom, so I have always been able to talk to her about anything.

Researcher: What has kept you motivated to continue in your CTE-POS?

Reagan: Definitely the fact that this experience has given me the most real life experience I could possibly get. Ms. [CTE teacher] has always kept us moving forward, for the future.

The teachers that I made connections with, they have become like a home away home. These teachers want you to succeed, not only now, but also in the future. She has provided us with real life experience and she has provided us with work ethic and that can help anyone, it’s not just specifically for agriculture we have learned how to be leaders and we have learned speaking skills, how to be a better person.

It's (CTE) has opened up every single door for me because it's real life and it gives you the opportunity to find out what you want to do in your future and what's it going to look like, you can't see that in math unless you want to be a math teacher-but I can't see that.

Reflections: Reagan was full of life and had a bright future ahead of her. She attributed many of her successes and accolades to her CTE experience and her CTE teachers. She described her Agriculture teacher as her second mom and her CTE program as a community and a home away from home. She was heavily involved in many activities and had an excellent high school experience because of CTE. Her future directly related to her CTE-POS and she planned on pursuing her goal of being a veterinarian.
Reagan discussed helping others as being a huge priority in her life. This passion for helping others carried over into her career goal of caring for animals. She enjoyed the hands-on, real life context of her CTE courses. Initially, Regan was dissuaded from taking her chosen CTE-POS by her school counselor. When she requested to enroll into Agriculture during her ninth grade year, her counselor mistakenly informed Reagan that the courses in the Agriculture POS would not meet the A-G college entrance eligibility requirements. Reagan later learned that she was advised incorrectly and insisted on enrolling in her POS during her tenth grade year. Her experiences in her POS influenced her future career and helped her become employed at a local restaurant after earning her food handler’s card.

**Jose’s Story.** Jose was a male Hispanic 12th grade CTE concentrator in Automotive Technology. Jose was an English Language Learner (ELL) and was designated as a LI student. He came to the U.S. when he was 9 years old and was 19 years old at the time of the interview. Jose lived at home with his parents, his two younger sisters and one older brother. When he came to the U.S., he spoke no English whatsoever which forced him to be held back one grade level. Subsequently, in Middle School, Jose struggled in school and according to him, made bad choices when he was in 8th and 9th grade. He attended a local charter school but he was asked to leave during his 9th grade year to attend Oak Grove High School.

Jose described himself as generally disinterested in school and stated that school just wasn’t his thing. He found a role model in middle school who helped him continue in school instead of dropping out which is what he initially wanted to do. Jose was taking courses to make up credits because he had failed classes throughout high school.
His academic goals were to transfer to community college following high school where he wanted to become a diesel mechanic or major in business management.

Jose: I couldn’t speak English, and I had teachers that didn’t speak Spanish which put me back one year. My mom didn’t speak English at all, so she couldn’t work any place.

I had a choice to come here. I got this opportunity I couldn’t get in other schools. All my friends changed from that school to this school, same reason because there was opportunity and one thing I saw was Auto shop.

My dad has a car and that keeps breaking down.

He (CTE teacher) tells me what the parts are, he shows and demonstrates it, instead of just sitting there. He actually want to teach and that’s what motivates you more.

Researcher: What do you think about your CTE teacher?

I don’t know I just like working in cars now and maybe in my future I might. I am a hands on person, so if there is too much reading, too much team work, I am not saying I don’t want to do the work, I am just saying, I can’t read those things.

Reflections: Auto shop became Jose’s saving grace. He was doing poorly at his last school and as he transitioned to Oak Grove High School, the one program that he identified with was Automotive Technology. Jose’s favorite aspect of school was the large events and assemblies. He enjoyed seeing and learning new things that were carefully orchestrated and produced much like live theater. Jose mentioned several times that his father’s car was a motivational factor for remaining in Auto shop. He wanted to help his family by learning how to repair cars.

Jose had many goals and desires for the future. He discussed joining the military, starting a family, going into business management, becoming an electrician, becoming an automotive technician, owning a restaurant and earning a vocational
certificate in Automotive. Jose wasn’t quite sure how he was going to accomplish all of his goals nor did he have much guidance on how to get there. He did mention that he enjoyed the hands-on aspect of his CTE courses and explained that he didn’t learn by just reading but more by doing.

**Tony’s Story.** Tony was a Black or African American 12th grade CTE concentrator in the Arts Media and Entertainment industry sector. Tony had completed all of the courses in the TV Film and Digital Media POS at Oak Grove HS. Tony was 18 years old and lived between his recently divorced mother’s and father’s house. He described himself as athletically inclined and had played on the high school basketball team and the track and field team during all four years of his high school career. Tony struggled to identify with what he wanted to do as a future career.

Tony seemed very confident as he participated in the study. He found a connection to high school through athletics. Tony wanted to pursue college after high school and study either Greek Mythology or Marine Biology. He wanted to learn new and interesting things and found the hard Sciences and abstract Mythical studies intriguing. Tony began his CTE-POS because he watched a lot of ESPN and initially thought that he wanted to become a sports broadcaster.

Tony: The educational system is not bad. The teachers are good. I definitely like learning new stuff.

Researcher: What inspired you to sign up or enroll in TV Film Digital Arts?

Tony: Because I have looked at it as a career just to be like a director or something like to get into like the movie seeing or just like recording for something you know. It was kind of like intriguing too. So like my mom is like she’s like oh, yeah you can be definitely be like a news reporter or something like that. Be like a spokesman for like ESPN.
Researcher: What types of students do you think should take CTE classes?

Tony: Kids are just trying to figure out what they want to do in life, and see like just to start off and see like if they could just spark a new passion or something you know.

The CTE classes are more like a life experience kind of thing and like to help you with a job or like a career. It’s like more like a real life kind of situation and stuff like that. My parents, they’re like yeah, you’re going your own path and you’re figuring out what you’re trying to do in your life. So that’s a good thing.

Reflections: Tony discussed a lot about what he enjoyed and what was intriguing for him. Initially, he thought he would enroll in the TV Film and Digital Media POS because it was something he wanted to do as a potential future career. His primary reason for continuing in the POS was because he had found the CTE classes interesting and fun. Tony really enjoyed learning new things and commented that he liked going to school to see his friends and to learn new content. Tony discussed not liking math but not because it was hard for him but instead, because he found the concepts boring.

Tony’s mother had a large influence on his decision to enroll in CTE. She encouraged him to become a TV broadcaster because Tony enjoyed watching ESPN and according to his mother, he had a good voice. Surprisingly, Tony did not mention speaking with a counselor about potential future careers and what courses would impact his goals and aspirations. Tony seemed confused about where he was going, how he was going to get there and what he was going to do once he got there. He had very little to say about his family and his teachers unlike many other study participants.
Aaron’s Story. A 18 year old Hispanic male in the 12th grade and was designated as LI. He described himself as a well-rounded student who liked to be involved and enjoyed being active. Aaron enjoyed helping others and valued his community service work with his church. He played the drums in a band after school and enjoyed playing basketball with his friends. He was a CTE concentrator in the Engineering and Design industry sector with his POS being in Architecture Design.

Aaron was a quiet and astute student who had an air of confidence about him. He lived with both parents and had two younger sisters and one younger brother. He wanted to transfer to community college after graduating from Oak Grove High School. He would like to continue studying architecture in college because of his experiences and family influences. Aaron’s father was a machinist and worked alongside engineers. Aaron’s uncle was an engineer and along with his father, had influenced him a great deal to become an architect.

Aaron: I just want to learn new things that would help me transfer after two years of general ed, that's what I am trying to do.

My CTE class, Architecture, it's like hands-on class, you don’t just sit and take notes, you do things, like, right now we are building a model of the school gym, so it's a pretty hands on and it's fun and interesting.

The teacher teaches new things on the programs and so we can incorporate them in our design to make it better, to give us a better chance of winning. She can help us and learn new things. She just shows us and lets us try it out and that’s how we learn, it's looking and trying-I learn better like visual learning, doing it.

Sometimes my CTE classes are pretty hard because we have to think about what we are going to do, so we have to go through like a design process kind of thing and that’s how the teacher makes it a little bit easier. It's more interesting, we do more things.
The CTE program is more hands on and you are more active, you are constantly walking around the room, you go out and sketch buildings and take dimensions, and in my other classes we just sit down and take notes, do work from the workbooks.

I didn't even know that these computer programs existed until I got into the Architecture and Engineering classes.

Researcher: How did you enroll in Architecture?

Aaron: Well, my uncle came to visit us and he is an engineer right now, so he gets to travel the world. He asked me what classes I was in and he suggested I should join the engineering program at school.

My dad likes that I am taking classes here because it's like, it opens up my future. He is like, Oh! you can do better than me, you should go to college and study more. Continue in Architecture.

Reflections: Aaron enjoyed the hands-on aspect of his architecture CTE-POS. He stated that his CTE classes allowed him to be more active. He was the first CTE concentrator who clearly articulated an academic connection with his CTE-POS. This was an interesting finding as it could be argued that the Architecture Design POS was the most academically rigorous POS among the other participant’s pathways. Aaron’s father and uncle were a big influence on his chosen career and enrollment in CTE. Aaron identified that he liked school and had always liked school because of his desire to learn new and interesting content.

Aaron’s passion for his CTE-POS led him to choose a second career option if Architecture did not pan out. He discussed the option of being a software developer because of the experience he had with the software he had used in his CTE-POS. Aaron was able to discuss the technical skills he had attained in his CTE-POS and was proud of the content he learned. During discussions with his parents and other family
members, Aaron stated that he frequently talked about his Architecture courses but not his regular courses because according to him, they are just not as interesting.

**Rudy’s Story.** Rudy was an 18 year old Hispanic male who was a CTE concentrator in the Automotive Technology POS. He was designated as a student with special needs, an ELL and a student who was LI. Rudy’s hands were cracked with nicked up knuckles and grease under his finger nails. He wore steel toed boots and oil stained Dickey work pants with a weathered tee shirt. He lived at home with his mother and father and two younger sisters. When Rudy was 12 he and his family moved to Sacramento to move in with relatives while his father received treatment for brain cancer.

Rudy wanted to become an Automotive Technician although he did not want to attend college to achieve his goal. He had a job working at a local off road auto repair and fabrication shop that he obtained through his CTE-POS. Rudy spoke in confusing sentences with arrogance about his gained technical knowledge learned through his CTE experience. He leaned back in his chair slightly sideways with his arm over the chair next to him and nonchalantly answered each question with many words.

Rudy: Well, this school, I really enjoyed it so far. The class that brought my attention was Autoshop and that's because I like doing it. What I like most about school…… I like math and auto shop and that's it.

I made a decision because when I was in middle school, I was doing not horrible but I was doing bad and I told my mom that once we got here that I was going to improve my grades and do good in school and I wasn’t going to get suspended anymore, I was going to be staying in school.

I like numbers and auto shop, it's like, sometimes, it's like building a puzzle because it all goes together.
Researcher: How did you start in auto shop?

Rudy: My English teacher told me there is an auto course and I told her that I was trying to get in freshman year but I couldn’t, they wouldn’t let me and I was telling her that and she was like, okay, we will get you in this year. I always say I want to work on diesel trucks, I work on those big Cat motors, big earth movers and all that, but to get there you need a lot of school which I am not that person that I need to school, I just need someone to teach me how to do because I am a hands on person and I made my mind that I am not going to be a person that’s working on something with my head and stuff like that I am going to be a person working with my hands.

Researcher: What has motivated you to continue in auto shop?

Rudy: I like helping people out. Yeah, having a heart for people. My auto shop teacher, he is a great teacher, he gets on you when he is supposed to. He has been trying to get me to go to college and stuff like that but I do want to go to college. I just feel college is not for me because they are going to want me to do book work and I am not the person that sits down and does book work, I am a person that you show, I learn it, the first time you show me, and I don’t ask any more.

Reflections: Rudy was a true auto shop student who enjoyed getting dirty, taking things apart and putting them together and learning in a hands-on context. Rudy enjoyed math because he felt it was like a puzzle that could be figured out step by step. He stated several times that he did not shy away from hard work and enjoyed the autonomy he had in his CTE-POS. He had obtained an internship from his hard work in CTE that resulted in paid employment.

Rudy wanted to continue learning about automotive technology after high school but did not want to go to school for it. He felt that he learned best by doing the job and obtaining on the job training. Surprisingly, Rudy wanted to enter into the automotive field to help people who didn’t have the means to pay for the repairs nor the
knowledge to do repairs on their own vehicles. He found that people were oftentimes taken for granted in the automotive industry he wanted to do something about it.

Tony’s CTE experience had a big influence on what he wanted to do in the future and played a large role in his interest and engagement in school.

Laura’s Story. Laura was a 17 year old 12th grade Hispanic Female. She was designated as LI and was a CTE concentrator in Culinary Arts. Laura was a first generation student with both of her parents coming from Mexico. Laura had transferred in and out of three different high schools due to her parent’s divorce. She eventually ended up living with her mother, her 21-year-old brother and 14-year-old sister. Laura had been taking Culinary Arts since her sophomore year and had taken every available course in the POS. She was hired by the local Chili’s because of her experience and the competitions she engaged in through her CTE-POS.

Laura had been accepted by a renowned culinary arts postsecondary school and had decided to move out of the area to pursue her dreams of being an executive chef. The culinary arts POS changed Laura’s life. She would be the first person in her family to attend college and according to Laura, this was because of her experience and the motivation her CTE teacher provided her. “I come to school, I get good grades but this class is so much fun and I love it so much, I could be in here all day”.

Laura: This school, I feel it's pretty good school, I think it just depends on what you get yourself into. What I enjoy most about school is definitely this class. It's just like, Oh! I am going to go cook, I am going to go learn something about food or something like that.

Chef (CTE teacher), being the good teacher that she is, she is always there, I could go to her for almost anything. She is somebody that first I would first go to because I just trust her so much, we kind of grew up together, so it's–we call this classroom like the culinary family. She is a
mom-like figure, in a way, I don't know, maybe I have been with her long time, I just grew with her.

I wasn't even going to take this class to begin with, I didn't really know about this class but I actually signed up to be in French for my elective and I ended up not really clicking with it, and then I was like, I remember my counselor mentioned something about culinary arts, I am going to check that out.

And my brother, when I was in freshman and sophomore year he would always be baking at home, and he is just like, ‘you should give that class a look. I didn't have that when I was in school’. I was like, yeah, you are right. Because my dad actually was the one that wanted me to take the language, and I wasn’t really into it and I was just like, eh! I just kind of did it because he said, and I listened to my brother’s advice and he was just like, you are the one taking the classes, not dad. So I was like, all right, so I took the class and then I ended up falling in love with it.

Definitely the instructor has motivated me, inspired me a lot to pursue my education and go on to culinary school because I actually did get accepted into culinary arts school.

I don't know the word to say, she (CTE teacher) is really inspiring me to go to on into culinary school. I mean I think if it wasn’t for her, I probably wouldn’t be going. She is that mom role.

My family knows, I am the first one that is actually going to college, so they are pretty happy, they are excited for me. If I wouldn't have taken this class I probably wouldn’t be where I am going.

Reflections: Laura absolutely loved her CTE-POS and her experience genuinely shaped not only her high school career but her future aspirations. She stated that she “grew up” with her CTE teacher and the bond of trust she had built felt good. Laura thrived in this environment and her CTE teacher worked with her to secure a paid position at a local restaurant chain along with entrance into a prominent Culinary Arts postsecondary school.
Simply put, she “fell in love” with her CTE-POS and after three years of dedication to her POS she paved her own way toward a potentially successful career and life. Despite these successes, Laura was facing a very difficult time with her parents who were in the process of divorce. This may explain her love and connection with her CTE teacher and POS. Culinary Arts was Laura’s way of connecting to school while her family life was falling apart. CTE provided Laura with a sense of belonging and a way to find her identity in a very troubling time in her life.

**Analysis of the Narratives**

Initial coding of participant narratives produced 672 sources of data which were narrowed down and condensed to 56 codes. From these 56 codes, nine categories began to emerge. After close analysis, the nine categories were organized into four major themes. Categories were organized under themes in order to holistically and accurately report out the findings of the study. The major themes of the study were:

1. External Factors that Drive Student Connections
2. Intrinsic Motivators
3. Curricular Relevancy
4. Self-Assessment

Each theme in the study is introduced followed by the categories that are associated with the major themes. Student narratives are used to support these emerging themes. Quotes, stories and excerpts from interview data will corroborate the themes and categories resulting from the analysis of the data. Student stories are infused throughout the analysis. For quick reference, a participant identification table has been included to provide context and easy reference while reading student stories.
Table 4.1: Participant Identification by Name

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Big Ideas

Each participant experienced positive connections to school and their CTE. For most, the positive experience they had in CTE shaped their academic and social experiences in school. There were many factors influencing each participants own positive experiences.

Participants connected with the curriculum, each other, and their teacher. They found purpose and value in their POS that provided a sense of balance and belongingness not found in their other high school experiences. Their CTE-POS shaped who they were and provided participants with a clear understanding of what they wanted to do in the future and how they were going to get there. Overall, there was overwhelming evidence that participants truly enjoyed their CTE-POS and these experiences influenced how they viewed their school and their high school career. Their POS inspired trust, autonomy, connection and purpose. The following sections will discuss each major theme uncovered with corresponding categories using student statements that support the positive influences students had.

External Factors that Drive Student Connections

External factors are influences that are not intrinsically driven. These factors influenced the study participants to either enroll in their CTE-POS or continue in their CTE-POS through concentrator status. These external influences resulted in students connecting to their POS, their school, the culture of the school, and other students. These drivers were very prevalent in many of the participant’s stories and are heavily threaded throughout their narratives.
These factors helped to partially answer the research question of how CTE concentrators first arrived in their CTE-POS and what had connected them to school and their POS. The external factors that drove student connections included the following supporting categories:

1. **Teacher Impacts**
2. **Interconnectedness of School, People and Curriculum**
3. **Friends and Family as influencers**

Students described these external factors as important components influencing their decisions, career aspirations, future goals, enrollment in their CTE-POS, and their motivation to continue in their POS.

**Teacher Impacts:** Most of the study participants commented on how wonderful their CTE teacher was and that the teacher was one of the main drivers in their decision to stay in their CTE-POS. They had formed strong bonds and relationships with their CTE teachers unlike their non-CTE teachers. Reagan stated “I think that Ms. [CTE teacher] has gone above and beyond what she needs to do in teaching us about where we want to be in life. I love this school mostly because of Ms. [CTE teacher]”. Laura noted that she viewed her CTE teacher as a second mother and someone whom she completely trusts.

I would say she is different because she is a mom-like figure, in a way, she is just, I don't know maybe I have been with her long time, I just grew with her and so it's easier, just to know you can trust somebody feels good.
When she has issues or problems at school, she would go to her CTE teacher before her peers: “She is somebody that first I would first go to because I just trust her so much, we kind of grew up together, so it's—we call this classroom like the culinary family.”

Amanda was another student who stated that her CTE teacher was a mother-like figure. “She is really nice and is very sweet and really caring, she is like a mother to us because she takes care of us, definitely”. Elena discussed how much her teacher cared about her. She stated:

I really like her. She’s really nice. She like I said, she always helps me. She always like asks me how am I, how am I doing like she cares. She is just like really helpful. She wants me to like be prepared and be like a better, like better myself like later in the future.

When asked what connected Elena to school, her response was “I don’t want to graduate and I really like my teachers. I like them like they help me like a lot of my classes when I don’t get something they’re always there for me.”

Katie felt that both of her CTE teachers were like her second mother as did several other CTE concentrators. She noted that:

They both care a lot and they just have that vibe, that sense of like, I am here for you, let’s do this, and stay positive and if you need anything come to me, they have that mom sense kind of. It's nice to know that they are there and they won't tell anybody anything, they seem really trustworthy.

Teacher impact was not only tied to connection to school but also to motivation to continue in a POS. When Laura was asked what motivated her to continue pursuing her CTE-POS, she discussed the impact her teacher had on her.

What has motivated me to continue is that I would probably say, definitely the instructor has motivated me, inspired me a lot to pursue my education and go on to culinary school because I actually did get
accepted into culinary arts school, so I am going to go do that but I would say definitely just being here, taking all that you can.

Jose, who was an LI and ELL student said this about his CTE teachers: “I am pretty confident with them, they teach me the right pathway of things, that’s what I am seeing here”. The only Architecture and Design CTE concentrator said that his teacher “tries to do her best sometimes because it's like mixed classes, she has to help out the students and she tries to make time for us, so she can help us and learn new things”.

Teachers impacted student connectedness to school and their CTE-POS. They played a role in the student’s motivation to continue in their POS. This is an external factor certainly contributed to the health and success of the student’s experiences. No participating students had anything negative to say about their CTE teacher and most found a bond of trust and respect that encouraged connection to school and their POS. The majority of female participants in the study viewed their CTE teacher as a mother figure who they felt they could go to with problems and concerns. These connections are crucial in ensuring that students are successful in the 21st century.

**Interconnectedness of People, School, and Curriculum.** Participants talked about their connection to their school, the CTE curriculum, and other people at the school. Much of their discussed connection was with their teachers and friends. All students interviewed had great experiences at school with none of them being disappointed or regretful of their experiences. Laura said this about her Culinary Arts POS:

I don’t know, I just clicked right here, because I think I realized the importance of some of the knowledge that we get would be from the books. I didn’t really mind that the kitchen wasn’t open but once it didn’t open up, it was just something so different, just so new, and I was
just like, Wow! This school has got something really nice, that was pretty cool.

She found connection with the curriculum that linked excitement and accord for her school.

Eric connected his experience in Agriculture to his friends and his school. He informed said that:

All my friends are in it (Agriculture) and it's really cool. In a class like this where we go outside and plant, we can hang out and do our work and when we are doing our work, we can talk, stuff like that, that’s one reason and I am a big plant nerd, and then so I like to work with plants, and soil and yeah.

Reagan noted that she actually built a community in her CTE-POS that connected her to her school.

Definitely ag and the community that I have built within it because we have a lot of really great leaders in agriculture, and it's really fun, especially our officer team to get together and all be leaders for each other and take charge of something that’s so big in agriculture even within our chapter trying to get more involved.

Reagan’s statement demonstrated her ability to connect the intra-curricular activities of her CTE-POS to people and her school. In addition, Reagan felt that her own leadership skills were responsible for building the community she enjoyed being a part of so much.

Jose struggled tremendously in middle school and as a 9th grader, he found a connection to Oak Grove High School that kept him off the streets, engaged in school and making positive choices. He chose to leave his charter school in 9th grade for CTE-POS. His CTE-POS brought him closer to his friends and had the same engaging impact on them as it did to him. He stated:
Actually it's really nice, I liked it, I got this opportunity I couldn’t get in other schools. All my friends changed from that school to this school, same reason because there was opportunity and one thing I saw was Auto shop.

Rudy, who was a student with special needs, ELL, and LI said it well: “What I like most about school…… I like math, I know that, and Auto shop and that's it”. Rudy found a great deal of success in his automotive CTE-POS. Rudy’s experience in Auto shop provided him a connection both academically and socially.

Amanda had a slightly different story. Her Photography CTE-POS brought her closer to what she felt interest in. Not only did she dive head first into what engaged her but she used her CTE experience to meet new friends who appreciated her talents. It was evidenced that Amanda connected to the curriculum and people in her CTE by her statement:

So all the pictures I took I bring to home and draw them like flowers and everything like that, yeah. I really liked it, it was just interesting for me, I didn't mind making friends which I did, so it was pretty fun.

Laura had a similar experience. She said “I just mainly hang out with people that I like in the culinary arts program, the culinary arts team, we all grew a strong bond”. Her CTE experience provided a strong connection to school and her CTE community through her experience.

**Friends and Family-Influencing Factors:** Several participants entered into their CTE-POS because of the influences of their friends and/or family. Many concentrators had family members in careers linked to their CTE-POS which influenced the students to enroll and maintain their motivation in their CTE-POS. Surprisingly, there was very little school counselor input on the influencing factors related to the
study participant’s decision to enroll and maintain their status in their CTE-POS. This was surprising because the new mission and priorities of CTE insist that early and sustained career counseling is integral to offering a high quality CTE program (Symonds et al., 2011). This finding will be discussed further in Chapter 5 in the implications section.

Aaron, who was a student enrolled in one of the most technical CTE-POS’ (Architectural Design) had his father and uncle influencing his decision to initially enroll and maintain enrollment in Architecture.

Well, my uncle came to visit us and he is an engineer right now, so he gets to travel the world. I think he is in Europe right now. Yeah. And he came and he asked me what classes I was in and he suggested I should join the engineering program at school. I had my CTE handbook and it came with the courses. He gets to work for different companies and designing things for them, they pay everything for him, his trips.

Aaron’s father worked as a machinist alongside the company engineers. He told Aaron that he wanted him to be an engineer and was proud of his dedication to architecture. “Yeah, he is like, Oh! you can do better than me, you should go to college and study more. Continue in Architecture”.

Amanda’s aunt and older sister were both nurses along with a few of her cousins. Her parents wanted her to become a nurse and initially, Amanda felt pressured to enroll in medical courses.

So it's like that and I don't know if – at the beginning if it was interest, it was my idea but probably because my parents are like, you should be a nurse. In the beginning I don't know if it was like I liked it or if it was forced upon me, my family are like, you should be a nurse, you should be just like your aunt, your older sister, but now I really want to be a nurse.
At the time of the interviews, Amanda was also working at her Aunt’s nursing home that was owned by her Aunt. Her decision to enroll in the Medical Sciences POS was largely in part because of her family’s influence.

Katie, a CTE concentrator in Photography and Culinary Arts stated that one of her major influences in taking culinary arts, beside the movie Ratatouille, were her friends. She struggled early on in 9th grade with making friends and tried to find a connection in sports and band. She eventually found her connection in her CTE-POS.

I can just do it in Culinary because that's a cooking class and I was like, that would be a fun experience and my friends were going to do it too, so I did it with my friends and we actually had a really fun time and we learned many things.

Austin who was one of the only students who didn’t fully engage in his CTE-POS chose to enroll in Auto shop in the middle of his Photography experience because of his father’s influence. He said this about his decision to enroll: “Yeah, I tried because my dad is a successful mechanic, he is really big into cars and stuff”.

Crystal decided to enroll in her CTE-POS because of her parents influence. They wanted her to begin to focus on something that she wanted to do as a career. I think it really came down during to meeting to like finish my schedule and I wasn’t really completely shown what I wanted to do. And so I’m like and my parents kind of told that I probably need to start things about what I wanted to do for like college and a career or something like okay, well I really like movies and videos and stuff so I’ll try the editing part of it.

Subsequently, she enrolled in TV Film and Digital Media to pursue her dream of managing a band and editing music and video. When Rudy decided to dedicate himself to auto shop, his influence came from his parents. This allowed him to pursue an internship in automotive technology and decide to commit to a career in automotive
technology. He said that one of his primary motivators in enrolling in auto was “my mom and dad tell me if I really want to do it, to go for it, they don't put me down”. He explained that his family had older vehicles and they constantly needed repair. He figured that by learning as much as he could in automotive repair, he could help his family tremendously.

Elena and a close friend were taking Spanish together and after a few days, they both decided that they wanted to do something different.

Well it was just like I don’t know where because my friend we were both in Spanish and we’re like - we already know Spanish, why are we here? Just like an easy class. So we decide to switch and we asked like the counselor what classes were available and he said you guys can take Culinary. And so we said yes.

Even though Elena decided to take Culinary Arts with a friend, she later stated that her parents were very proud of her taking culinary classes because they had frequently tried to teach her how to cook.

Laura had a slightly different story. Her influencing factor to enroll in her CTE-POS was her brother. She originally enrolled in French because her father wanted her to take a foreign language.

And my brother, when I was in freshman and sophomore year he would always be baking at home, cooking and I was just kind of into it because he would be cooking, not like cooking-cooking but like more baking and like pastries and he is just like, you should give that class a look. I didn't have that when I was in school, so it would be something that's interesting, and just, I was like, yeah, you are right. Because my dad actually was the one that wanted me to take the language, and I wasn’t really into it and I was just like, eh! And I just kind of did it because he said, and I listened to my brother’s advice and he was just like, you are the one taking the classes, not dad. So I was like, all right, so I took the class and then I ended up falling in love with it.
Laura was very passionate about culinary arts, so much that she was planning to attend a prominent culinary arts school several hundred miles away from her home. If Laura didn’t take the advice of her brother, she may have never had the experience she did.

**Intrinsic Motivators**

Intrinsic motivation refers to an individual embarking on an activity because it is interesting or self-fulfilling versus extrinsic motivation where an individual embarks on an activity for external goals and purposes (Reeve, Deci & Ryan, 2004; Ryan & Deci, 2000; Ryan & Deci 2006; Niemiec & Ryan, 2009). As outlined in earlier chapters, this study was grounded on Self-Determination Theory (SDT) that relies heavily on the concept of intrinsic motivation. Prior to this study there was very little understanding of what motivated CTE concentrators to enroll in their CTE-POS and maintain their motivation as they navigated through their chosen pathways of courses.

This study discovered that intrinsic motivation played a large role in the decision for students to continue in their CTE-POS. While external factors played a major role in the decision for students to initially enroll in their CTE-POS, it was discovered that an intrinsic drive kept students motivated to continue. The categories derived from interview data under the theme of Intrinsic Motivators were:

1. Student Choice
2. Personal Enjoyment – Engagement

Study participants were asked what motivated them to continue in their CTE-POS. The majority of students responded in variations of student choice and personal enjoyment – engagement. Simply put, the study participants had fun and enjoyed their
experience with several respondents saying that their CTE courses kept them grounded and balanced among their other strenuous academic courses.

**Student Choice.** Students seemed to enjoy the control they had in choosing to enroll and continue in their CTE-POS. Most participants were not told they had to take their CTE courses but in fact, they chose them for themselves. This is much different than their academic courses that were assigned to them. Furthermore, students found that once they were in their CTE course, there was autonomy in their learning. Because the study was conducted on CTE concentrators, most students had developed strong bonds of trust with their teachers who allowed a great deal of freedom and choice for study participants. In addition, several study participants chose to participate in CTE competitions within their POS that increased their intrinsic motivation to continue in their POS and played a role in their enjoyment and engagement in their POS.

Elena talked about her classes and how much she enjoyed them. “I love cooking. And I enjoy it. And it makes me happy to do things and I have learned like different types of food that I’ve never heard from before here. And dance, I love to dance. I enjoy it”. Jose described a 30 minute period in the school day where students were able to choose what classes they want to go to in order to get extra help, work with their teacher, make up work etc. Jose frequently chose to work with his auto shop teacher on projects and repairs.

I know my–sometimes during extended time, I will stay because a lot of kids after extended time they are leaving, they leave the work like nothing, so that gives me a chance to you know what? What's my time here, I can just in here and finish that work, so that's the one takes me, I want to actually do it and show what's the value.
Aaron said that his architecture class provided him with an opportunity to experiment on his own with the autonomy to make mistakes. “We don’t take a lot of notes in class. She just shows us and lets us try it out and that’s how we learn, it's looking and trying”. Jose’s story is slightly different whereas his choice to continue in auto shop had been influenced on what he wanted to do with his career.

Yeah, they know that I want to do it for my future and I told my dad before that yeah I want to do this auto shop and I am going to have a shop and I want to have my own things, tools, lifts, air compressors.

Jose wanted to control his own decisions and future career. This kept Jose enrolled in his CTE-POS.

Reagan described the moment she tried to enroll in agriculture. She was at an 8th grade orientation and she spotted the agriculture program amongst the other programs because there were animals on display.

Animals have always been my thing, so I walked over and I started talking to Ms. [CTE teacher], I got really excited about it and I was studying for classes and while we were sitting down in our computer lab the counselor told me that wasn’t a good option because it didn't count and so I was like, dang!

Reagan was told by the counselor that she could not choose her POS. It wasn’t until she found out through a friend that agriculture courses were approved by the UC system and did count toward her A-G eligibility that she insisted to be enrolled. Against her father’s advice, Reagan was adamant to enroll in Ag and found her guiding passion during her 10th grade year.

During Reagan’s 11th grade year, she decided on what she wanted to do as a career. She made the choice to continue in her CTE-POS and shift her area of interest.
When I decided I really want to become a vet and junior year I was in Natural Resources where I got to learn about soils and plants and I learned about the aspect of growing things and what's best for that, so that was another thing that I really enjoyed doing which is why I joined horticulture instead of vet sciences because I know I am getting a B in vet tech but I really wanted to learn how to cultivate the land and how to make things grow and work and get the hands on experience with it because I had gotten animal science now I wanted plant experience, so that's why I kept moving forward in the industry, I wanted to have real life experience that Ms. [CTE teacher] was offering.

It was clear that Amanda appreciated her CTE classes because she was able to choose them versus her regular classes that she was not able to choose. Amanda explained that it was her choice to enroll which played a role in her motivation to enter and continue her CTE-POS. Austin discussed how he chose his CTE-POS. “I was really into sports at that time, and I was starting to look at pictures and I was like, Oh! all these pictures are really good, I want to do that”. The ability for students to choose their POS created excitement and intrigue that lead to engagement and connection to the school, curriculum and people in the POS.

Katie, who was a CTE concentrator in both Culinary and Photography recounted how she chose her CTE-POS. There were external factors that influenced her decision along with intrinsic factors. Well, I actually wanted to take, I took Culinary my junior year because I really like the movie Ratatouille and I just thought that was so cool to be a chef and France and I just thought that would be the best and I was like, I can just do it in Culinary.
Eric had a desire to become a veterinarian. Because of this desire, he chose to enroll in his CTE-POS as a 9th grader and became connected both socially and emotionally. As a disengaged 12th grader, it was Eric’s intrinsic desire to become a veterinarian that influenced his choice.

I wanted to be a veterinarian. And so then I joined the agriculture because it had veterinarian classes. And yeah, that's what got me into agriculture, I ended up changing my mind but ended up loving agriculture. It was more of like a childhood fantasy, I want to be a veterinarian when I grew up.

Throughout most participants’ stories, the freedom to choose their POS provided students a feeling of commitment and intrigue. Students seemed to take more ownership of the courses they chose versus the courses assigned to them because of college entrance or graduation requirements. When students have the autonomy to choose their coursework there appears to be more buy in and determination to engage and continue in order to be successful.

**Personal Enjoyment – Engagement.** Students frequently commented about their personal likes and dislikes. They described why they chose to take the courses and their reasoning for maintaining their motivation in their CTE-POS. Some participants had background experiences in the subject and personally enjoyed the subject matter prior to engaging in it. This led to comments about being more engaged by the subject. This was discovered in both CTE and non-CTE classes.

Personal engagement and enjoyment were important intrinsic motivators. Laura noted about her culinary arts POS that “I really enjoyed it and I had fun. So that’s why I decided to take it this year”. Her story was very typical of most of the participating CTE concentrators. They had fun and enjoyed the earlier years in their POS which
motivated them to continue well into concentrator status. Eric talked about his Ceramic class – all of his other classes and then his Ag class. “I have Ceramics, I look forward to it, every other class, and then after that I have this class, and this class is very fun”.

Tony discussed how he enjoyed his CTE-POS. He noted that his enjoyment was more about how his role had changed in his POS from previous years.

I am enjoying it because we’re not focusing as much as the announcements as last year but now we’re starting to learn new stuff and plus I’m in a different position to our like I’m more into the computers. And so it’s definitely cool to learn stuff. I just like the class I guess.

Reagan said that “we have a lot of really great leaders in agriculture, and it’s really fun”. She went on to say that her CTE-POS “provides me with the balance of hardworking, dedication and also it kind of helps me balance out my school work and my time management”. These factors including her value of real-world experiences (which will be discussed later) were major contributors to Reagan connecting with her CTE-POS.

When describing her two CTE classes, Katie said that she simply just enjoys going. “I enjoy them, they are fun to go, I look forward to going to photo at the end of the day or going to culinary after my first period, so it's fun”. Rebecca had a slightly different take on the intrinsic factors that caused her to enjoy her CTE-POS so much. She stated “I enjoy trying to work toward achieving goals and I like accomplishing things and seeing what comes after and then being able to pick the next step”. Personal interest and enjoyment in a CTE-POS is an important understanding given the age of disengaged youth in schools.
Austin was the only CTE concentrator who became disinterested in his POS during his senior year. He reflected on his CTE experience after the fact: “Personally the CTE classes, when I first started taking them I used to be really into photography and when I took TV, Film, Media, I thought it was one of the coolest things, I had one of the best times”. Even though Austin was no longer interested in his POS, he noted how much he enjoyed them earlier in his high school experience.

Rudy found pleasure in the puzzle of his CTE-POS. “I don't know. I think it's just because I like numbers and auto shop it's like, sometimes it's like building a puzzle because it all goes together, knowing the way it goes back together, and it all comes together, knowing the way it comes apart”. Laura highlighted the personal enjoyment she felt in her CTE-POS which had obvious implications about her engagement in her POS, her connection to school, and her overall outlook. She said “I come to school, I get good grades but this class is so much fun and I love it so much, I could be in here all day”. It was almost as if Laura minimized her other classes in comparison to her CTE-POS.

Amanda discussed her personal enjoyment with her CTE-POS and reflected on her background experiences.

I always liked taking pictures, like surroundings and everything, and I used to paint and draw, so I was like, I might as we tall take a different route right there. So all the pictures I took I bring to home and draw them like flowers and everything like that, yeah. I really liked it, it was just interesting for me.

Overall, most participating students enjoyed their POS and the notion of “fun” surfaced throughout multiple narratives. Students commented on the balance that their CTE-
POS provided them and their enjoyment of their POS as something that kept them engaged and intrigued in school.

It is inherent in human nature to pursue and explore experiences that are found interesting, intriguing, and fun. The study participants had varying levels of intrinsic and external factors that influenced their decision to enroll in their CTE-POS although personal enjoyment which led to increased engagement was a key factor in why students maintained their motivation in their CTE-POS. Many of the participants stated that they had such a good time early on in their POS that they wanted to continue resulting in their CTE concentrator status.

**Curricular Relevancy**

Curricular relevancy was a theme that inspired students to come to school, engage in their studies and continue their motivation in their CTE-POS. The majority of students referred to learning new things they didn’t know beforehand as something that kept them engaged and connected to school. They reveled in what they had learned and were proud of the skills they had acquired.

Participants referred to the real-world context of their courses and the hands-on experiences they had. Many study participants commented on the differences of their non-CTE experiences compared to their CTE experiences and referred to how much they enjoyed the relevant curriculum and the practical life skills they had learned. The theme of Curricular Relevancy has two underlying categories that emerged from the narrative analysis. They are:

1. Relevant and Unfamiliar Learning
2. Technical Skills attainment through hands-on learning
Relevant and Unfamiliar Learning. One of the largest categories that emerged through analysis of data were that students loved learning new things that were different, unfamiliar, and exciting. It was one of the most prevalent reasons why students attended school and remained engaged. For many participants, learning something new was the only thing that inspired them to attend school every day. There was a sense of joy and excitement when participants spoke about new and unfamiliar learning. Throughout the data collection phase, many participants verbally listed the technical skills they had learned with pride and confidence.

In a time when many teachers, parents, and educators presume that students don’t care, don’t want to learn and dislike school, the complete opposite was present for the study participants. Crystal was a great example of a student who wanted to learn new and unfamiliar content. She said:

Because I have this class to grade as a TA, I got to come here. Cook maybe, learn about different kinds of foods and cuisines, things like that, that makes me want to come. Knowing that each time I come into the classroom that I’m really learning something completely different that I can use for the rest of my life. So knowing how to just like sauté onions or something like that. Something just completely normal knowing different kinds of professionals that I didn’t know existed something like that I really enjoy learning.

Crystal yearned to learn new and relevant information that she could use in her life. She enjoyed learning and exploring new things. Katie had a similar story but what made her story compelling was that she appreciated the challenges she faced when learning new and unfamiliar content.

I would have to say the challenges and the new things that I was going to learn and it started to get technical, okay, this is what it could actually—this is the type of scenario, this is actually what you do in the real world for these types of things because they are both jobs.
When asked what connected Crystal to school, she noted that it was being able to learn that motivated her.

Knowing that I’m going to learn something. Knowing that each time I come into the classroom that I’m really learning something completely different that I can use for the rest of my life. So knowing how to just like sauté onions or something like that. Something just completely normal knowing different kinds of professionals that I didn’t know existed something like that I really enjoy learning.

When Tony responded to the question of “what do you like most about school”, he discussed learning new things. He said “I Definitely like learning new stuff but I’m more into like science but I’m not taking science this year. But yeah, it’s definitely learning new stuff”. When citing his CTE experience more specifically, Tony liked learning the new and unfamiliar skills that he found useful in regard to his future.

I am enjoying it because we’re not focusing as much as the announcements as last year but now we’re starting to learn new stuff and plus I’m in a different position to our like I’m more into the computers. And so it’s definitely cool to learn stuff.

Rebecca had a lot to say about the relevant and unfamiliar learning she experienced in her CNA-POS. When she was asked to compare her CTE experience versus her non-CTE experience she stated:

The other classes-I don’t feel like there is a purpose to it but here you are working toward a goal, like an actual certification. Sometimes I am just wondering what I am going to do with this information later on and here, in CTE, I know what I am going to use it for.

Katie described her CTE experience as learning new and unfamiliar content that became increasingly more technical. “I would have to say the challenges and the new things that I was going to learn and it started to get technical”. Reagan, the Oak Grove High School Student of the Year had this to say about learning new and unfamiliar things.
This is the one class that has really taught me how to go into the future, I mean I am probably not ever going to use y=mx+b in my life but I am definitely going to use the skills that I gained from agriculture and Ms. [CTE teacher] to continue what I want to do.

Aaron’s story was very similar in terms of what he liked most about school. “I just want to learn new things that would help me transfer after two years of general ed, that's what I am trying to do”. When questioned about her experience in school, Amanda stated the words that most educators want to hear from all of their students. She said, “I love reading, learning, learning when I like the subject, yeah”. Amanda enjoyed learning especially when she liked the subject. Liking the subject is associated with the curriculum being relevant.

Laura was excited about what she had learned in her CTE-POS. She discussed what she was learning about in culinary arts with excitement and vigor. “This class I don’t mind it all, it's just like, Oh! I am going to go cook, I am going to go learn something about food or something like that”. Her desire to learn something new that was relevant surfaced during Laura’s interview and how her experience in culinary arts changed her life.

Participants seemed to enjoy new learning that was unfamiliar, fresh and relevant. This finding was not isolated to only CTE courses as several students discussed enjoying new and intriguing learning in both CTE and non-CTE environments. Educational leaders in the 21st century struggle with disengaged youth who are bored and disenfranchised in school making this finding profoundly interesting which disputes the notion that students don’t want to learn and that school is more
obligatory than inspiring, interesting and intriguing given the curriculum is relevant and engaging.

**Technical Skills Attainment through Hands-On-Learning:** Students appreciated the hands on learning aspect of their courses. Participants compared their CTE experiences with their non-CTE experiences and noted the differences in teaching, learning, and the hands-on experiences they had. Students were proud of the technical skills they had learned and were quick to point out any technical learning they had gained from their CTE experiences.

Eric discussed how much he appreciated the hands-on genre of his Agriculture POS. He said “I like being able to make something and have it come out really fantastic”. Aaron compared his CTE classes with his non-CTE classes. According to him, his architecture POS was different meaning that it was more hands-on, active and engaging.

Because it's like hands-on class, you don’t just sit and take notes, you do things like, right now we are building a model of the school gym, so it's a pretty hands-on and it's fun and interesting. Designing buildings like fork lines and modeling them in 3D on computer.

Aaron specifically pointed out the skills he was working on much like Rebecca did. When asked about her CTE experience compared to her non-CTE experience, she reverted to a discussion about her teacher and the skills they had learned.

She will stand behind us while we are doing skills, tell us the right way if we are doing wrong, so we know. There is lot of skills, like bed making, transferring, ambulating, which is putting a transfer and walking the patient, and like the hand-washing.
Jose had similar experiences that Rebecca did. He discussed how his CTE instructor made the content relevant and attainable through the hands-on nature of the course. He also stated that he was a hands-on student and that was how he learns best.

I see, I do it, I memorize and that's good, I work on it and he always tells me, he tells me what the parts are, he shows and demonstrates it, instead of just sitting there, he actually gets up and draws on the board and he tells us, this is this part of the car, this is the wheel, this is hood, and pretty much with that, we get an idea how we look in a car, you see the parts, and it's not for all because they are different, they are almost the same, they are different locations for the parts, and that's for me, that's, I don't know, it's because I am hands on student, that’s why.

Rudy, another Automotive Technology CTE concentrator, noted the technical skills he had learned. He was very proud of the skills gained and spoke about them in an arrogant fashion as if no one else knew what he knew.

There is a program that we have in class called ProDemand and you can type it in whatever car you are making, motor, whatever and if you don't know how to do something or just soundboard something or put it back together it tells you how to torque everything, how the torque pattern is, it tells you, if you don't know where the cooling sensor or the knock sensor is on the motor, you go to the Mitchell on Demand and type it in and then it tells you Oh! it's in the motor, the knock sensor, or Oh! it's on the side of the motor to do because I am a hands on person and I made my mind that I am not going to be a person that’s working on something with my head and stuff like that I am going to be a person working with my hands. Everything I do is going to be my hands, I am like, that's what I have been seeing, I do everything with my hands, that’s what I want to do.

Crystal was another student who enjoyed the hands-on aspect of her CTE-POS.

When she described her high school experience she commented about what she enjoyed most about school.

And then like on my other days I’ll have PE and classes like that where I get to go do things and like hands-on things something like that. That’s what makes me want to come to school. Like it’s kind of like I don’t know it is putting together something that the whole school is going to
see. So it’s like that satisfaction we see it the next day that everyone else is seeing it and like you put that together. So I was like yeah, I get to like edit something. And then I get to go cook something so I enjoyed.

Eric, who was one of the most disengaged participants, appreciated the hands-on aspect of his agriculture POS. He enjoyed the ability to be outdoors and work, fix things and engage in the relevant curriculum. He noted his two favorite aspects of school which was Ceramics and his Agriculture POS.

I have Ceramics, I look forward to it, every other class, and then after that I have this class, and this class is very fun, we go outside and do — work with plants, build—rebuild fix whatever needs fixing, things like that. In a class like this where we go outside and plant, we can hang out and do our work and when we are doing our work, we can talk, stuff like that, that’s one reason and I am a big plant nerd, and then so I like to work with plants, and soil and yeah.

In Eric’s response, he essentially dismissed all of his other classes and was only interested in the hands-on nature of his Ag and Ceramics courses.

When Reagan was asked about her experiences in CTE, she mentioned the hands-on learning she had experienced in both veterinarian sciences and plant science. She appreciated the real-life context of the learning and enjoyed the relevant curriculum.

I really wanted to learn how to cultivate the land and how to make things grow and work and get the hands on experience with it because I had gotten animal science now I wanted plant experience, so that’s why I kept moving forward in the industry, I wanted to have real life experience that Ms. [CTE teacher] was offering, so.

Many study participants engaged in the hands-on learning experience in their CTE-POS and their non-CTE experiences. For many participants, they learned better in a hands-on context and appreciated the relevant, real-world frame that their CTE-POS offered. Some participants commented on the differences of their CTE experience
versus their non-CTE experiences and they seemed more interested, intrigued and engaged in experiences they felt were real. When students were provided a relevant and engaging curriculum along with new and unfamiliar learning, students were engaged and thoroughly enjoyed their high school experiences.

**Self-Assessment**

Self-assessment refers to the way that individuals look at themselves in order to assess important factors that affect one’s identity and purpose (Kruger & Dunning, 1999). Self-assessment factors may include components of an individual’s life that provides a sense of belonging, well-being, positive self-image and purpose. Those who have an understanding of themselves and what influences their behavior along with the reasons they engage and identify with important factors surrounding their life have a clear picture of their self-assessment.

Many participants in the study seemed to have an understanding of what they wanted to do as a career and the impact their CTE-POS had on their future. Not only did students comment on their future goals but they also noted what has inspired them and connected them to pursue the goals they had established. They discussed their desire to help people which was oftentimes connected to their career objectives. Many participants had an excellent sense of self-assessment and commented on community service, their desire to help others and the way they would use their career aspirations to benefit mankind. The theme of Self-Assessment had two categories that emerged from the data:

1. Career Eagerness
2. Compassion – Sense of Service
**Career Aspiration.** Most students had a clear understanding of what they wanted to do in their future career. They easily discussed how their CTE-POS had impacted their career aspirations even when they were not interested in the topic of the POS. Approximately 50% of the study participants wanted to pursue a career in the same particular field they had dedicated themselves in their CTE-POS. These students were able to connect the skills and knowledge they had learned that would assist them in their future. Approximately 50% of the other students did not want to pursue a career directly related to their CTE-POS however, participants could easily connect the skills and experiences they had learned to their chosen future career outside of their POS.

Furthermore, students that did not want to pursue a career directly related to their POS had determined they didn’t want to pursue that career because of their experiences. For example, by engaging in a POS for two to four years, students learned enough about that particular industry that they chose to not pursue it as a potential career. In both cases, participants had an excellent sense of self-assessment. This was demonstrated using Reagan’s story. She noted the following impacts that CTE had on her future:

> It's opened up every single door for me because it's real life and it gives you the opportunity to find out what you want to do in your future and what's it going to look like, you can't see that in math unless you want to be a math teacher but I can't see that.

Reagan wanted to pursue a career in veterinarian sciences although she also wanted to cultivate the land and build upon what she had learned in her Agriculture POS.

> This experience has given me the most real life experience I could possibly get. Ms. [CTE teacher] has always kept us moving forward, for the future and every step I take in agriculture industry, I get to find things that I haven’t done before, my freshman year was Ag Bio and I
got to learn all the chemistry and animal sciences and that's when I decided I really want to become a vet and junior year I was in Natural Resources where I got to learn about soils and plants and I learned about the aspect of growing things and what's best for that, so that was another thing that I really enjoyed doing which is why I joined horticulture instead of vet sciences.

Because of Reagan’s POS, she was planning on pursuing college at a university well known for their agriculture program in order to work toward becoming a veterinarian.

Austin’s story was quite different. He decided that he did not want to pursue a career in his POS and found a passion in nutritional sciences. However, he learned a great deal from his experience in terms of where his future was headed and could articulate how his POS influenced his future decisions.

I feel it has, it has taught me a lot about patience, dedication and motivation because once you start something, you are either going to take the time to finish it or even if you get halfway through it and you realize and you can't do it, and you give up but if you get halfway through it, why give up, you already halfway done with it you can—the best thing to do is to keep moving forward at that point.

When Austin was asked who should take these CTE courses he stated that it should be for students who want to pursue their POS as a career. He noted:

People who want to go into that field and who are thinking about going into that field. Because there are good ways to figure out if you really want to go into it because you learn what comes with working in that field like all the pictures, all the editing, all—from taking apart cars, from taking apart—from breaking down videos, putting videos together, you learn how grueling and long it takes to do that and if you are really interested in it, it's something good that you can go into.

Rudy wanted to continue to expand his the knowledge gained in his automotive technology POS to eventually become a diesel mechanic

As a career actually I want to do, I always say I want to work on diesel trucks, I work on those big Cat motors, big earth movers and all that, but
to get there you need a lot of school which I am not that person that I need to school, I just need someone to teach me how.

Rudy knew what he wanted to do in his career and he was able to articulate how he was going to get there. Based on his experience, he realized that he was not a person who would continue in school to further his knowledge but instead, he would seek on-the-job training as his preferred method of building knowledge and skills. He was able to understand via self-assessment that college was not his forte and instead, hard work and experience would be the way he navigates his future.

Elena decided after three years in her Culinary Arts POS that she didn’t want to pursue that career. She realized that the hard work and grueling dedication it would take to become a chef was something she wasn’t willing to pursue. When she was asked how her CTE-POS had impacted her future she responded by saying:

It kind of has because like at the beginning that was like oh, it seems interesting to be a chef like I was looking like forward but then like it’s not that like call me like not to study that career but like I saw the hard work and I saw that I didn’t have like the passion to actually like go for and study.

Crystal wanted to become a band manager. She felt that going to college and earning a degree in business were the appropriate steps to take to accomplish her goals. The experiences she had in her CTE-POS’ allowed her to decipher what skills and knowledge she would use to achieve her future goals. When she was asked if her CTE-POS impacted her future she said:

I think so little just knowing what I’m going to have to do. Like for management like learning about management just even though it’s like restaurant business. Learning what that entails and everything I’m going to have to know what I have to do. TV and Film I’m not completely sure. Probably knowing just entertainment business and having to have connections and stuff. I think that has prepared me.
Eric discussed how he originally wanted to become a veterinarian which was the primary reason he joined agriculture. He changed his mind about what he wanted to do and had an interesting take on what he felt he was truly capable of. He decided he didn’t want to become a veterinarian but instead a paramedic. When asked why he wanted to be a paramedic he said, “that really interests me, I really like, because I know I can probably never be a doctor, I can probably be close to that, maybe like a paramedic”. Eric assessed his own abilities and determined that he was not able to meet the demands required to be a doctor. He did mention that even though he wanted to become a doctor, he still wanted to do something with plants because ultimately, he was a self-professed “plant nerd”.

Rebecca had her entire career and future planned. She stated that she wanted to go to a community college and earn a certificate in welding and while she attended school, she would work as a Certified Nurses Assistant (CNA) which was what she studied in her POS. She said that she would work as a hospice nurse until she earned her associates degree in welding where she would design metal art.

I feel like I am going to work at either in assisted living or convalescent home, I will do that and I am going to get my home health aide maybe in the same CTE program, so then I could be a hospice nurse.

Rebecca had her plans carefully constructed and even noted which community college she would attend in order to obtain her welding certificate.

Laura enrolled in culinary arts her sophomore year and it changed her life. She became immersed in her CTE-POS and fell in love with the art of cooking. She competed in many of the culinary arts competitions and earned several accolades
including entrance into a very prestigious culinary arts school. Laura said “I am going to culinary school and I mean my family knows. I am the first one that is actually going to college, so they are pretty happy, they are excited for me”. When Laura was asked if her POS had prepared her for her future she said:

Yeah, definitely like a lot, if I wouldn't have taken this class I probably wouldn’t be where I am going working and just being in this program what actually got me the job because I was able to transition from hosting to working in the back, so that definitely helped me out a lot and just interpersonal skills.

Laura was able to articulate where she was and where she was going. Her self-assessment of what she wanted to do and how she identified with culinary arts was very clear. She was excited about her future and reveled in the experience she had in her POS.

Amanda knew what she wanted to do after graduating high school and her POS was directly related to her future. Amanda was taking medical assistant and first responder courses and she stated “I really want to be a nurse”. When she was asked if her POS had impacted her future goals and aspirations she said:

Yeah, definitely, like what I learned from Medical Assistant and then First Responder, definitely but overall I think it's going to be the First Responder is like CPR, actually happens in real life, stuff like that, like paramedics, hospital.

Aaron was the only participant in an Architecture Design POS. He wanted enroll in college and continue his studies as an architect. He discussed how he was going to fill out the paperwork to ensure that he receives college credit for his work in his POS as his courses were articulated with the local community college. When he was asked about how his POS had impacted his future he said “I have to be responsible
and turn everything on time and it taught me the basics of Architecture, so when I go into college I don’t have to start from the first”. Aaron had a plan to continue in his POS in college and was very focused on being successful in achieving his goals.

Katie was a CTE concentrator in both photography and culinary arts. She realized from these experiences that she didn’t want to do either of those as a career.

I was thinking maybe doing photography as my job and stuff like that. I actually wanted to be a dental hygienist, so I was thinking of doing that and taking photography on the side. Photography is not leaving me at all, I am still going to continue with it whether it's a hobby or an actual job, but culinary, after I got a feel for it, it was my favorite but I still continue on with that, I feel like it can still prepare me for once again the real world but I think I am still going to pursue photography as either side or a job.

Katie said that she needed a more stable job and felt that photography wasn’t a permanent source of steady income. Becoming a dental hygienist was a career she chose to pursue and she identified a postsecondary dental school that she would attend after graduating high school.

I wasn’t sure really what I was going to do for my career for the longest time, I mean photo was an idea but it didn't seem like that would be enough because there are certain times I would get a gig and get paid a lot but then other times I think would be a dry spell for me, so I was thinking I had to have some kind of stable job to work.

Katie identified her future career because of her experience in her POS. She determined that continuing in her POS was not the direction she wanted to pursue but that the skills she had learned will be with her forever.

Most of the study participants had a clear understanding of where they were going in their future. Some participants decided to continue in their POS because of their experiences and some decided not to continue in their POS because of their
experiences. In either case, most of the participants had a plan of what they wanted to do in the future and how they were going to get there. This finding was critical for areas of future research in order to understand if non-CTE concentrators had the same self-assessments about their future and their planned career.

**Compassion - Sense of Service.** A topic that surfaced among many of the study participants was compassion and a sense of service. Many of the participating students noted that that they felt a need to be of service to others. They wanted to use what they had learned in their CTE-POS to help others. Many participants identified their desire to help others and felt that compassion was important to them. This type of self-assessment was an interesting finding because the topic was not incorporated into the original questions. Furthermore, several CTE concentrators discussed pursuing careers that were service oriented that help and assist others.

Reagan had one of the more compelling stories to tell about compassion. She had worked with her family over the past 4 years to raise over $200K in a community give effort that targeted underprivileged kids. She volunteered as a princess in the local hospitals through the Make a Wish Foundation in order lighten the days of sick children. She said “I am a princess for Make A Wish, so I go to hospitals, I go to wishes for kids with cancer, I have also raised over $200,000 heading campaigns for Make A Wish in my lifetime”. She was also in Best Buddies which was a school-wide campus program that partners regular education students with special education students. When interviewed, Reagan was in the middle of putting on a special prom for students who have light sensitive and hearing issues.
I am in Best Buddies and my sister and I actually, this is the second year we have done it but we actually put on a very special prom for the kids that are sound sensitive for the kids that are light sensitive, for kids that wouldn’t be able to go to prom.

Rebecca’s sense of service was tied directly to her POS. She wanted to work as a hospice nurse while pursuing a certificate in welding. She expressed her desire to help people with the skills she had gained through her POS. She stated, “yeah, it would be nice to take care of those who are dying and I am sure I can always find a job doing that. Yeah, I like helping people”. Eric’s compassion was much like Rebecca’s. He stated that “it is something that really interests me, I really like, because I know I can probably never be a doctor, I can probably be close to that, maybe like a paramedic. I want to help people you know?” Not only was Eric clear on how he wanted to help people but the self-assessment he had about his skills and talents surfaced in his discussion of not being a doctor. He was realistic with himself and was able to determine a career he could be successful in while meeting his desire to help others.

Katie wanted to become a dental hygienist, which was not related to her POS. However, she mentioned that she wanted to pursue this profession to help people. “I was like, teeth are actually kind of interesting, it will be cool to clean them and help people”. Amanda described her native country (the Philippines) and how the health industry struggled to adequately help people. She commented on the impact that nurses had and her admiration for those who help others.

Well, in the Philippines, health is really bad there, and you can basically, it's really hard to get medical attention there and I would always go to hospitals and be with my parents just to see around and I really liked how the nurses, how they do and how they help, and some even
volunteered in the province, so I really admired them and then in my family, there are nurses, like my older sister is a nurse, her husband is a nurse, my aunt is a nurse, my other aunt is an LPN. I want to be like that and help people.

Amanda connected to her POS through her desire to help others, her admiration for her family and her respect for the nursing industry.

Rudy described his sense of compassion and how he wanted to help others in his future career which was directly linked to his POS. He felt that there were automotive mechanics who take advantage of people by overcharging them. He wanted to be different.

I like helping people out. There are people out there in the world they are good people and they do nice things and stuff and they don’t always have the money to do things, there are people came in to auto shop and come in with a dealer, what you call, invoice and it's like $4000 for a oil pan because maybe it's leaking and that's not the way to do things to people, I have seen that so many times. Yeah, having a heart for people.

Rudy felt a sense of pride knowing that he could help others with his knowledge and skills. His self-assessment of being a good person who helps others emerged in the interview and inspired him to be a good mechanic for those who can’t afford overpriced repairs.

Laura discussed her experiences in volunteering to help her CTE-POS. She didn’t specifically note that she enjoyed helping others but she commented about helping her teacher and her school. “I usually volunteered for the events that they have”. She discussed volunteering and signing up for all of the culinary arts events that the school had to offer. She said “I think the last thing we did was make Ravioli and then she made some other dish but that was what we are doing for competition, so I was there to help. I have done the teacher luncheon, the teacher breakfast last year. I have
actually–I think I have done mostly everything that she usually has for us sign up”. Laura’s sense of service to her teacher and school was important to her and she identified with her feelings of compassion.

Many participants felt a sense of compassion and service to others. An important factor to consider regarding this finding was that the majority of the participants were designated as minority, LI, and/or students with special needs. While educators struggle with solutions for similar students to increase academic achievement and connect disadvantaged students to school, these study participants have found compassion and a sense of service as motivating factors that have shaped their experiences and influenced their future career and life pursuits.

**Additional Findings**

From the four themes and nine categories represented above, there were significant additional findings that surfaced and are worthy of noting. These additional findings are explicit or implied from the stories and experiences provided by study participants.

**Career and Academic Counseling.** An additional finding occurred when students were asked how they arrived in their CTE-POS. Very few students made any mention of a counselor assisting them in choosing their POS. Furthermore, not a single participant commented about receiving any sort of career guidance counseling. This finding is particularly interesting because it implies that the participants, most of whom are disadvantaged students, receive very little guidance about what their future career goals and aspirations may be and how to best to achieve those goals. This could be the result of Oak Grove HS having a student to counselor ratio of approximately 1:520
students. The American School Counselor Association recommends a ratio of no more than 1:300 (Campbell & Dahir, 1997) and the National Education Association recommends a ratio of no more than 1:250 (Hatch, 2014).

Early and sustained career guidance programs are critical in establishing effective CTE-POS (Symonds et al., 2011). Studies have been conducted throughout the U.S demonstrating a dire need for career counseling and the shortage of career guidance counselors. The impact of career guidance programs for high school students was conducted in a statewide Missouri study. Researchers found that when students had access to fully implemented career guidance, students performed better academically and perceived that their high school had prepared them for their future significantly more than their counterparts without career guidance programs (Lapan, Gysbers & Sun, 1997). Early and sustained career counseling is a critical component of an effective CTE-POS and is best demonstrated in the figure below.
Study participants relied more on their friends and family as a resource to enroll and continue in their CTE-POS rather than a school counselor. When counselors did meet with participants, the discussion that occurred consistently focused on the student’s ability to complete the A-G university eligibility requirements with little to no discussion about career planning.
College For All. Of the few study participants who met with their counselors, all noted that the priority of the discussion was on college entrance requirements versus understanding career ambitions. This entrenched flaw in our K-12 public education system is best demonstrated in the Harvard School of Education report on Pathways to Prosperity (Symonds et al., 2011). The report argues that there is more than one pathway to achieving prosperity in the U.S although our schools and our society have done very little to promote alternative pathways for students who do not fit the academic four year university mold. In fact, many agree that educators, politicians, and society as a whole has convinced the majority of our nation’s population in believing that obtaining a college degree is the only passage to successfully obtaining status in the middle class (Symonds et al., 2011).

Stigmas and Stereotypes. Another goal of this study was to explore possible stigmas and stereotypes that may exist from the participant’s lived experience. Participants were asked if they had experienced any negative comments, suggestions, stereotypes, or ridicule for being enrolled in CTE. Only one student mentioned that her friends had questioned her about her motivation to take CTE courses and whether the courses were fulfilling her A-G college entrance requirements. The remaining participants all stated that they had never experienced any negative feedback from being associated with CTE. This finding had significant value because it demonstrates that the historic stereotypes and stigmas placed on Vocational Education may be minimal in the new era of 21st century CTE. This may be attributed to the changes CTE has
undergone over the last few decades and the development of the new mission and priorities of CTE.

**High Quality CTE-POS.** An important component of the new mission and priorities of CTE is to ensure the integration of academically rigorous courses into each CTE-POS. The U.S Department of Education (2014) suggests that high quality CTE programs employ direct ties to rigorous academic instruction with technical skills built into relevant industry based curriculum. “A Career Technical Education Program of Study is a coherent, articulated sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate’s degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond (Lewis et al., 2008, p.12).”

In order to explore if academic rigor was present in the experiences of participants, the researcher asked questions surrounding academic rigor and challenge. Nearly all participants stated that they felt their CTE class was challenging but few participants discussed academic rigor being present in their CTE-POS. In fact, participants had little understanding of what academic rigor actually was. Additionally, most participants acknowledged that they had very little academic rigor in their non-CTE classes. Due to the limitations of this particular study, this finding would need to be further investigated in order to determine its validity.

Furthermore, the study discovered that there were very few academic connections from CTE to non-CTE classes. Participants overwhelmingly stated that the material they had learned in their academic courses did not apply to their CTE courses and vice-versa. This finding was concerning given that the goals and priorities of CTE
are to provide a continuous curriculum that links skills and learning into both the academic and CTE environments.

After an analysis of students in different POS, it was clear that the more technical the POS the higher level academic courses students took. For example, participants who were concentrators in less technical POS tended to struggle, were credit deficient, and generally took lower level courses that were not as academically challenging as those in more technical POS’. Additionally, the more complex and rigorous the POS, the more focused the students were regarding their future. These students were specific about careers they wanted to pursue and had a clear picture of how to get there. Finally, students who engaged in more technical POS participated in CTE competitions at higher levels which led to experiential learning and leadership activities that connected students to school and their POS.

**Social and Academic Perceptions.** All 13 participants had a positive experience in their CTE-POS and were socially successful in school. They connected with their school, their CTE instructor, and the friends they had established in their CTE-POS. Nearly all participants were engaged in school with much of the engagement stemming from their experience in CTE-POS. Engagement creates motivation which is a critical component to remaining in school, learning new information, persisting through challenges, and building self-esteem (Skinner & Belmont, 1993). Engaged and motivated students are easy to identify although they are hard to find in 21st century schools. This finding supported the existing literature reviewed in Chapter 2 regarding CTE improving student engagement thereby increasing retention leading to higher graduation rates and postsecondary enrollment.
Of the 13 participants, 100% were on track to graduate high school during the time of the interview. This finding was particularly interesting keeping in mind the demographics of the study with 73% of participants being designated as LI, minority, or students with special needs. Nearly all participants enjoyed coming to school and were focused on graduating high school. Their participation in CTE played a significant role in the student’s drive to come to school. Cyrstal said it best when she was asked what motivates her to continue in school and her POS: “knowing that each time I come into the classroom that I’m really learning something completely different that I can use for the rest of my life”. Participants engaged in new experiences, ideas, concepts, and thoughts.
Study participants had many external factors that influenced their decisions to enroll and continue through their POS to become CTE concentrators. Participants noted that their CTE teachers had a profound impact on their decisions to continue in their POS. Several CTE concentrators had established trusting relationships with their instructors making their decisions to progress through their POS heavily connected to
how they felt about their teacher. Students felt comfortable and safe with their CTE teachers and some referred to them as their second mother.

Additional external factors influencing students’ CTE experiences were their family and friends. Many students entered into their CTE-POS because of the friendships they had formed and the encouragement by friends to participate in their POS. Furthermore, CTE concentrators oftentimes remained in their POS because of the relationships they had built while enrolled in their POS. Family members were also influencing factors as many students enrolled in their POS because it was closely related to a family member’s profession. Participants had Uncles, Aunts, cousins and parents who encouraged them to enroll and continue in their POS because of the experiences they had in their own professions. Surprisingly, the majority of the participants had very little counselor direction in terms of course selection and career guidance.

Students remained in their CTE-POS because of their connection to their school, curriculum, and people. They enjoyed the content of their CTE classes and because of their experiences with others, they felt connected to their school. Each of these factors were interconnected making the lived experiences of each CTE concentrator a positive one. Participants commented about the course content, their love for their teacher and friendships they had developed in their POS and how these experiences ultimately connected them to school.

Participants had intrinsic motivating factors that had implications on their lived experiences. These intrinsic factors influenced how students navigated through high school and played a major role on their commitment to their POS. One of the major
themes that emerged out of intrinsic motivating factors was student choice. Students committed to their POS because it was their choice to enroll. They enjoyed having the ability to decide which courses they wanted to participate in and because it was something they wanted to do, they were more engaged, invested, and successful. Furthermore, many CTE concentrators felt a sense of autonomy in their POS because of the years they had spent building trusting relationships with their CTE teachers.

Student enjoyment surfaced throughout the study. Students wanted to do what they enjoyed rather than what was mandated. When they were enjoying themselves, they became more engaged in the content and more connected to school. Participants compared their CTE experiences with their non-CTE experiences and several noted that the classes they did not enjoy taking they ultimately found boring and without purpose. They were disconnected with these classes and had no interest, other than passing, to learn the content. Students continued in their CTE-POS because they enjoyed it and found pleasure in their experiences.

Participants were inspired by the relevant curriculum provided in their CTE-POS. Several students commented on the real world context of their POS and the hands-on nature of their courses as being extremely important for engagement. They noted that learning new and unfamiliar information was integral in their motivation for coming to school and continuing through their POS. This was true for both the non-CTE environment and the CTE environment. The majority of participants stated that they wake up and go to school because of the excitement they had about learning something new.
Students loved the hands-on nature of the relevant curriculum provided in CTE. They connected with the curriculum and appreciated the learn-by-doing structure of their POS. Participants stated that their CTE classes were more engaging and active versus sitting down and taking notes. They enjoyed getting out of the classroom and working outdoors on projects and hands-on assignments. Several participants commented about their POS being relevant to what they wanted to pursue in their future career. CTE concentrators noted that they felt there was purpose in their CTE-POS which seemed to be lacking in their other classes.

Many participants were proud of the technical skills they had learned through the hands-on curriculum of their CTE-POS. They were able to articulate and provided evidence of technical skills attained such as giving animals injections, repairing the suspension on an off road racing vehicle, designing buildings using complex software, checking blood pressure and performing CPR, adjusting lighting and shutter speed, and creating a complex salad dressing using multiple ingredients. It was clear that participants had learned valuable technical skills that provided a sense of confidence, self-esteem and accomplishment.

Most participants had a clear understanding of who they were, what they identified with, and where they were going. This was noted as having a focused Self-Assessment meaning that CTE concentrators were able to articulate their plan for their future and what they felt was important to them. Participants understood their strengths and weaknesses and used their own assessment of these characteristics to decide on their future career, what they identified with, and what their future goals would be.
Participants discussed in detail what they were going to do in their future careers. Most students had a plan and were able to outline systematically how they were going to achieve their goals after graduating high school. Concentrators were able to articulate the skills they had learned and how those skills affected their career decisions. Of the study sample, approximately 50% of participants were going to continue in their studied POS in order to pursue what they had learned as a potential career while the other 50% were not. Surprisingly though, the students who determined they did not want to pursue a career related to their POS came to that conclusion because of their CTE experience. They realized that their POS wasn’t for them and their passions lied in other areas. In either case, students had an excellent sense of self-assessment that can be attributed to their experiences in CTE.

Participants discussed their community service actions that were important to who they were and what they identified with. They had an internal desire to give back and help others. The majority of participants had a plan to engage in a career that was service oriented. They commented about their desire to help others and provide services to those who were in need. This was surprising as the majority of students were designated as either LI, minority, or students with special needs and while most educators would agree that these students need the most help, the students themselves wanted to be the person who does the helping.

In Chapter 5, the significance of these findings will be discussed in detail. Furthermore, areas for future research will be introduced along with the leadership implications that arose from the findings. A discussion will occur surrounding the
local, state, and federal implications with a larger understanding of what these findings may mean for CTE.
CHAPTER FIVE: DISCUSSION OF THE FINDINGS

The narratives in Chapter 4 explored the individual life stories of 13 CTE concentrators at one traditional high school located in Southern California. Chapter 5 presents a summary of the previous four chapters with a close look at the key findings and their implications. The summary will begin with an overview of the problem, the theoretical framework grounding the study, research methodology, key findings, and additional findings. Limitations of the study will be presented including generalizability and positionality. This is followed by an examination of the implications of the study including leadership implications and research implications. These discussions will take place with support from the existing literature weaved throughout. The study will conclude with a dialogue on how the findings and implications address the research questions providing educators and policymakers with a better understanding of the lived experiences of CTE concentrators.

Summary

Overview of the Problem

The purpose of this study was to explore the lived experiences of CTE concentrators in order to determine the perceived academic and social impacts of CTE from the perspectives of the students themselves. With the growing number of disengaged high school students attending our nation’s public schools, educational leaders, teachers, and politicians struggle to find ways to increase retention, interest, and engagement. Factors that motivate children to learn are a constant source of educational research. Motivated students are easy to identify: they are motivated, curious, involved, engaged, and have the ability to persist through academic challenges.
Engaged students can be scarce in 21st century high schools.

Disengaged youth account for elevated dropout rates, decreased graduation rates, and increased numbers of students uninterested in the stagnant academic curriculum found across our nation’s schools (Symonds et al., 2011). Educators and policymakers struggle to bridge the engagement gap and reverse the trends of disengagement. Reform initiatives such as CTE, have been designed to connect students to school and increase engagement through high interest technical learning that is relevant and purposeful. Currently, there is very little empirical research that proves or disproves if CTE has an impact on the academic and social engagement of students.

In general, there is very little research on CTE (Alfed & Bhattacharya, 2012; Bragg & Rudd, 2007; Gray, 2004; Castelleno, Stringfield & Stone, 2003; Lewis, Kosine & Overman, 2008; Rykan, 2006; Stipanovic, Lewis & Stringfield, 2012). Most of the existing empirical research is limited to the mechanics of CTE such as the course-taking patterns of CTE students, labor market trends, comparisons of CTE vs. non-CTE student test scores etc. Additionally, there is virtually no research exploring the lived experiences of CTE concentrators who have maneuvered through their CTE-POS over the last two to four years of their high school career. This study’s purpose was to explore this understudied and important group of CTE students to fill an existing gap in the literature.

In addition to better understanding the stories of CTE concentrators, this study sought to determine if stereotypes and stigmas exist within the context of CTE. CTE has long been associated with stereotypes and stigmas derived from the traditions of
vocational education. These stereotypes suggest that CTE is a program for LI, minority, and students with special needs. Throughout history, underrepresented and disadvantaged students have been targeted to enroll in CTE because of the presumption that disadvantaged and underrepresented students were not capable of attending college and pursuing white collar careers (Aliaga et al., 2012).

This assumption has created years of institutional discrimination including disproportionate numbers of minority, LI, and students with special needs being enrolled and tracked into the traditionally low-skilled vocational education programs. It is thought that these perceptions have created historic precedence in schools creating a stigma that college bound students do not-and should not-enroll and pursue a CTE-POS. Instead, all coursework for these students are said to include higher-level academic courses including Advanced Placement (AP) and International Baccalaureate (IB) to ensure acceptance into top universities. This study set out to determine if these stereotypes and stigmas still exist today by eliciting the stories of some CTE concentrators themselves.

Throughout the history of educational research, students have traditionally been the subjects of research versus being active participants in research. There has been very little CTE research utilizing student voice to better understand the lived experiences of students in CTE. Furthermore, there are no known studies that utilize student voice to determine the lived experiences of CTE concentrators who have successfully maneuvered through their CTE-POS. There are very few known qualitative studies surrounding CTE although those that have been conducted are
primarily anecdotal in nature. There is a large gap in empirical research utilizing student voice to explore the lived experiences of CTE concentrators.

**Theoretical Framework**

Self-Determination Theory (SDT) provided the foundation for this study and the framework for answering the three sub-research questions:

1. How are students placed into CTE? What intrinsic and external factors influence students to become CTE concentrators?
2. How do CTE concentrators perceive their academic and social experiences in high school?
3. In what ways does involvement in CTE shape future education and career aspirations?

SDT explores the intrinsic and external factors that influence the decision making of people. Leading researchers Deci and Ryan (2002) suggested that SDT utilizes a complex understanding of what motivates human beings with three basic psychological needs that are instrumental to the positive well-being of people; (1) Competence. People need to gain mastery of tasks and learn different skills; (2) Connection or relatedness. People need to experience a sense of belonging and attachment to other people; (3) Autonomy. People need to feel in control of their own behavior and goals.

All three sub research questions were closely related to the competence, connection or relatedness, and autonomy of the research participants. Participants were asked several questions surrounding the external and intrinsic factors that initially inspired them to enroll in CTE. Furthermore, participants were asked what has
motivated them to continue through their POS and commit to two to four years of one POS. These questions were vital in understanding the lived experiences of CTE concentrators.

Participants reflected on their experiences and what influencing factors shaped the way they perceived their academic and social understandings. This information was important to gather as it was necessary to understand if the experiences students had in their CTE-POS impacted student connection to school culture thereby increasing academic success and creating a sense of belonging. Current educational research has focused on connection and belongingness as a key component of social-emotional-learning that increases student engagement. Engaged students lead to increased retention, graduation rates, and academic success.

Numerous educational reports have noted that nearly 40 to 60 percent of high school students are consistently unengaged, chronically inattentive, and bored (Johnson, 2009). While most of these studies researched the social contexts and motivational factors impacting student success, many researchers have called for more descriptive studies that focus on the psychological measures that impact student belongingness. Leading SDT researchers Niemic and Ryan (2009) suggested that if students have a set of psychological needs met, they may remain active and motivated in order to sustain optimal development.

This concept implies that a sense of belonging creates increased student motivation impacting student achievement. Baumeister and Leary (1995) suggested that the need to belong is a “pervasive drive to form and maintain at least a minimum quantity of lasting positive, and significant interpersonal relationships” (p. 497). This
notion implies that relatedness and belonging are basic psychological needs. When these needs are met, students exhibit higher levels of intrinsic motivation allowing them to be successful in school (Deci, Vallerland, Pelletier & Ryan, 1991).

Finally, Student Voice Theory (SVT) provided the second theoretical framework utilized in the study. The researcher explored the lived experiences of CTE concentrators through the perspectives of the students themselves. Most educational research has long been conducted “on not with” students leaving out the input of students themselves (Cook-Sather, 2006 p. 376). This study sought out the individual stories of students who had committed to their CTE-POS. SVT posits that students are important actors, and their stories should be accounted for when determining understanding of a given educational context. This study utilized SVT to explore this very important and understudied subgroup of CTE students.

Review of the Findings

This research study set out to understand the lived experiences of CTE concentrators. After analyzing hundreds of minutes of interview data and exploring the stories of 13 CTE concentrators, the study certainly accomplished what it set out to do. Among the significant findings, it was determined that participating CTE concentrators had many external factors that facilitated their connectedness to both the academic and social aspects of school. These factors included a strong relationship to their CTE teacher, interconnectedness to people, school, and curriculum, and the role their family and friends played in influencing their decisions.

The majority of study participants immediately began discussing their CTE teacher as a primary reason they first enrolled and then maintained their enrollment in
CTE. Several students commented on how they viewed their CTE teacher as their second mother. Over the years of taking CTE they had developed close relationships with their CTE teachers that inspired a sense of belonging and connection to school and the program. Their CTE teacher influenced them to do well, pursue a career in their POS, and work toward their larger goals. Additionally, students established interconnectedness to people, school, and the curriculum. They built relationships in their CTE-POS and found other students with similar interests and future aspirations. Participants connected with the curriculum and each other, which seemingly spilled over into a connection with their school.

Participants discussed their family and friends as being influencing factors driving many of their decisions throughout their CTE experience. Most CTE concentrators entered their CTE-POS because of friends or family who encouraged them to do so. In the instance of friends as influencers, CTE concentrators simply heard about their CTE-POS through school friends who had experienced a POS. In some cases, family members influenced participants to enroll and maintain enrollment in CTE because their own careers were closely related to the participant’s POS. These family members included brothers, uncles, mothers, and fathers.

Participants had many intrinsic motivators that inspired them to continue through their CTE-POS. These intrinsic motivators included the ability for students to choose their CTE-POS and select their own courses. This gave students ownership of their CTE-POS and provided students with a sense of autonomy. Additionally, because students chose their POS, they enjoyed their experiences more than courses that were assigned to them. This sense of personal enjoyment motivated participants to continue
in their POS and had significant impacts on each participant’s opinion of their school, their connection to school, and future aspirations.

Participants thoroughly enjoyed the relevant curriculum. Nearly all participants commented on how much they enjoyed learning new and unfamiliar material. Learning new information inspired participants to wake up in the morning and come to school. Many educators mistakenly assume that students who are disengaged in school simply don’t want to learn, but this study determined that this is not the case. Students are naturally curious and when provided with new, relevant, and interesting curriculum they seemed to thrive with an eagerness to learn.

Furthermore, students appreciated the technical skills they had learned through CTE’s inherent hands-on approach. Participants commented on their real life experiences and found value and purpose in the technical skills they had learned. They were proud of the skills they had learned and boasted about these skills throughout the interview process.

High schools across the U.S hope to inspire students to become one-step closer to identifying what they may want to do in their future and how they are going to get there. The majority of participants in the study had an excellent sense of what they wanted to do, where they wanted to go, and how they were going to get there. They were able to self-assess their learning, determine what they enjoyed and disliked about their POS, and ultimately decipher what they may want to do in the future.

The majority of participants had a sense of service and empathy for others. Ten out of 13 participants stated that they wanted to help others, and they had planned on using the skills they had learned in their CTE-POS to pursue a career that was service
oriented. This finding was particularly interesting because the majority of students selected for the study represented students who educators believe need the most help and support themselves. This assumption is derived because of their designation as either minority, LI, or students with special needs. Surprisingly, these participants who have been deemed our most needy, disadvantaged, and underrepresented students overwhelmingly wanted to be of help and service to others.

To summarize the findings deduced from the interview data, a table comprised of the four themes and nine sub-categories is listed below. This table also provides a description for each category in order to further detail a deeper understanding as it relates to the themes and categories born out of the study.

Table 5.1: FINDINGS
Themes and categories

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Factors that Drive Student Connections</td>
<td>Teacher Impacts.</td>
<td>Many participants commented on their experience as being a positive experience because of their CTE teacher. Participants referred to their CTE teacher as their second mother and continued in their POS because of the impact their teacher had made on them.</td>
</tr>
<tr>
<td>Interconnectedness of School, People, Curriculum –</td>
<td>Participants connected with their school, the people in their CTE-POS and the curriculum provided in CTE. For many, their CTE-POS provided them a sense of belonging and connection.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 5.1: FINDINGS

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends and Family as Influencers</td>
<td></td>
<td>Students were influenced by their family and friends to enroll in CTE courses, and continue throughout their CTE-POS. Family members had careers directly related to participant’s POS and encouraged participants to enroll and continue their studies in their POS.</td>
</tr>
<tr>
<td>Intrinsic Motivators</td>
<td>Student Choice</td>
<td>Participants thrived in their CTE classes that they chose. They took more ownership of their CTE courses because they had the autonomy to choose the courses that interested them.</td>
</tr>
<tr>
<td></td>
<td>Personal Enjoyment – Engagement</td>
<td>Participants truly enjoyed their experience. Their enjoyment started early on in their POS and once they found this joy, they wanted to continue through the POS.</td>
</tr>
<tr>
<td>Curricular Relevancy</td>
<td>Relevant and Unfamiliar Learning</td>
<td>Nearly all participants thoroughly enjoyed learning new and relevant material. When asked what made them want to get up and go to school, most students commented about learning new material.</td>
</tr>
<tr>
<td></td>
<td>Technical Skills Attainment through Hands-on Learning</td>
<td>Participants loved the hands-on aspect of their CTE-POS. They found value and purpose in the curriculum and noted that their non-CTE experience was less concrete and more abstract.</td>
</tr>
</tbody>
</table>
Table 5.1: FINDINGS
Themes and categories

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Assessment</td>
<td>Career Aspirations</td>
<td>Participants had a clear understanding of what they wanted to do in their future career. Participants noted that their CTE experiences influenced them to commit to a career in their POS or choose to pursue a career in a completely different field because of their experience in their POS. In either scenario, the majority of students had a clear idea of what they wanted to do and how they were going to get there.</td>
</tr>
<tr>
<td>Sense of Service</td>
<td></td>
<td>Participants had a desire to help others and be of service to other people. The careers they had chosen were primarily service-oriented careers and many discussed their decisions to pursue these careers because it provided an opportunity to help others.</td>
</tr>
</tbody>
</table>

Review of Additional Findings

There were several significant additional findings that are worthy of reviewing. These findings were either discussed by the study participants or implied. A summary of the additional findings found in the study are located below:
Table 5.2: Additional Findings

<table>
<thead>
<tr>
<th>Additional Finding</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career and Academic</td>
<td>Very few students made mention of an academic counselor helping them and guiding them. Furthermore, not a single student in the study was provided with career guidance counseling. The literature demonstrates that in order for CTE to be effective, there must be early and sustained career counseling.</td>
</tr>
<tr>
<td>Counseling</td>
<td></td>
</tr>
<tr>
<td>College For All</td>
<td>Of the few study participants who did meet with their counselor, the conversation was overwhelmingly centered around A-G college entrance eligibility criteria. This was true even for participants who were not “college bound”.</td>
</tr>
<tr>
<td>Stigmas and Stereotypes</td>
<td>Not a single participant claimed that they had been stereotyped or stigmatized due to their participation in CTE. This was an important finding because it may imply that the stigmas and stereotypes of vocational education may no longer exist.</td>
</tr>
<tr>
<td>Academic Integration</td>
<td>There was no evidence of academic integration in any of the participant’s CTE-POS. High quality CTE-POS demands that CTE courses have rigorous academic integration in order to connect students with purposeful and relevant learning that is cross-curricular in nature.</td>
</tr>
<tr>
<td>Social and Academic</td>
<td>All 13 participants had a positive experience in their CTE-POS. They were connected to school both socially and academically. 100% of the study participants were on-track to graduate high school. Given the demographics of the study participants, this finding demonstrates how CTE-POS can successfully connect students to school.</td>
</tr>
<tr>
<td>Perceptions</td>
<td></td>
</tr>
</tbody>
</table>

Limitations

If all high school students could experience a designed curriculum such as CTE to either convince or dissuade them from honing in on a career, enabling them to make a decision about what they potentially may want to do in the future, is a win for all educators. Participants in both cases all had a strong sense of what they wanted to do
and how they were going to get there. While this is an important finding, it is also a limitation. Because the study was a narrative inquiry, there was no control group to compare this finding too. Do non-CTE students of similar backgrounds, ages, and designations have the same clarity regarding their future career? Is it possible that there is no difference in career aspirations of CTE concentrators versus non-CTE? Do CTE participants who have taken 1 to 2 un-sequenced CTE courses have the same level of career aspirations as CTE concentrators? These questions pose limitations and areas for future research simultaneously.

**Generalizability**

There is a tremendous need for research in the emerging field of CTE and the lived experiences of CTE concentrators. However, this study is limited in scope and context because of the small population of participants selected at one educational institution. This research studied one traditional high school located in Southern California. The sample size consisted of 13 CTE concentrators who had taken 2-4 years of CTE in one POS categorizing them as a CTE concentrator. The scope and size of the study is limited to the research site and to the few individual stories reported in the study. Each story is uniquely told by each participant in their own voice. These stories allow educators, politicians, and leaders to better understand the lived experiences of this understudied group of students. Each interview provided a small window of information to view the stories and experiences presented by each participant. The goal of this study, as with most qualitative research studies, was not to generalize but instead, to uncover the stories and report the lived experiences using the most accurate details possible.
**Positionality**

The researcher was a former assistant principal at the study site and former principal of CTE for the ABC school district. These positions brought a wealth of experience and knowledge of the school, the school’s culture, the school’s teachers, and the administration. This familiarity may have had the potential to influence the information students provided in their interviews. To minimize this limitation, each participant was informed that all interview data would be kept confidential and there would be no penalties for sharing or not sharing pertinent information. Additionally, procedures were established to minimize positionality such member checking and triangulation of the data.

**Implications for Educational Leaders**

Understanding the lived experiences of CTE concentrators was the goal of this study. The findings represent how each concentrator experienced their CTE-POS and the impacts that CTE had on their school experience. Based on the findings, it is clear that CTE had a profound positive impact on the academic and social success of all participants in the study. CTE inspired students to remain engaged in school and provided balance for many students. Participants enjoyed their CTE experience and for most students, CTE kept them engaged in school, on track to graduate, and connected to the school culture. There are very few high school programs that can boast these same results. This finding supports the current literature demonstrating that CTE has had a positive impact on student engagement, increased graduation rates, and decreased dropout rates (Castellano et al., 2007).
Participants were heavily connected to their CTE teachers. Their CTE teachers had a profound impact on student enrollment in CTE-POS. Students were inspired by their teachers and many participants began talking about their CTE teachers almost immediately without prompting. Several participants referred to their CTE teacher as their second mother who they trusted with their personal problems and social issues. Students oftentimes feel that the most important quality a teacher can possess is to be caring and willing to help students with their work and personal problems (Corbett & Wilson, 1995).

Recent studies conducted on student and teacher relationships show overwhelming evidence that students who connect with their teacher feel safer, are more competent, and make significantly better gains (Hamre, Pianta, Bear & Minke, 2006). Several participants were inspired by their CTE teacher to pursue a career in the field of their POS resulting in acceptance into college, vocational schools, and/or apprenticeships. The CTE teacher played a significant role in the lived experience for CTE concentrators. Schools offering CTE need to ensure that their teachers are establishing these same connections with students because it was the single most significant predictor influencing student success.

Students enjoyed the autonomy and choice inspired by selecting their own CTE courses. This was a different process than the courses automatically assigned to them based on grade level and graduation requirements. When students chose their courses, they chose to be successful in them. Schools should enlist the participation of students when selecting courses. Students need to have more say in the courses they are taking in order to provide a sense of buy in and ownership. Students are able to choose their
own paths in postsecondary schools although in high schools, students are generally
told what courses they must take. This results in a lack of student choice and
involvement in the educational process.

Participants connected with the relevant curriculum and many explained that
they felt a sense of purpose in their CTE-POS. The opposite was true when participants
discussed their non-CTE experience. Many participants could not see the relevance of
their non-CTE courses and most commented that they did not understand why they had
to take them. This is troubling from an academic perspective because it demonstrates
that students do not feel their non-CTE experiences were valuable and applicable. This
may result in boredom, disengagement from curriculum, and a disconnect from school
culture. The literature suggests that disengagement and boredom is occurring in our
nation’s high schools at staggering levels (Symonds et al., 2011; Johnson, 2009). High
schools need to find strategies to curb disengagement by integrating purpose, relevance,
and applicability into academic curriculum. The results of this study demonstrate that
CTE is an excellent avenue for this integration.

Participants had very little career guidance from school counselors and found
themselves enrolling in their CTE-POS due to the influences from families and friends.
There is a critical need for improved career guidance for high school students.
Research has demonstrated that counselors have unmanageable caseloads of students
resulting in unequal access to quality career guidance. Furthermore, counselors are not
trained or are underexposed to careers and programs available to students therefore
counselors usually resort to what they know which is college entrance requirements
(Maduakolam, 2000). In order to compete in the highly skilled labor market of the 21st
century, high school students require early and sustained career counseling and programs.

Family and friends were noted as having significant influence on course taking decisions of students. Because of this influence, it is vital to educate these groups about the various programs and opportunities available for students. If parents had a clear understanding of the career oriented programs available at their children’s school, more students may experience courses such as CTE resulting in similar outcomes as the concentrators identified in this study. Local schools should develop programs that integrate parents and the community in order to better inform these influencers about the options available to all students. This should be done in the earlier grades allowing students more time to engage in a program such as CTE.

Research Implications

Career Technical Education is a field that is significantly understudied (Alfed & Bhattacharya, 2012; Bragg & Rudd, 2007; Gray, 2004; Castelleno, Stringfield & Stone, 2003; Lewis, Kosine & Overman, 2008; Rykan, 2006; Stipanovic, Lewis & Stringfield, 2012). Because CTE is an emerging topic, there are many areas that that should be further investigated. Castellano (et al., 2003) state that there is very little research on CTE reform efforts and the value that CTE has had on student success. There is also very little research on the academic achievement of CTE-POS concentrators as compared to non-CTE students (Castellano et al., 2012; Lewis et al., 2008; Morgan et al., 2012). The lack of these types of comparative analyses makes it difficult to fully understand if CTE is working for students.
Alfeld and Battacharya (2012) cited the lack of empirical research in CTE-POS as a limiting factor when educational leaders and policy makers are attempting to convey the importance of CTE. Most leadership outcomes made for CTE are usually anecdotal or are based on past experiences with little data supporting decisions. Furthermore, there are few research studies on the effectiveness of CTE transition programs and the success rate of CTE concentrators completing an associate degree or higher (Lewis, Kosine, & Overman, 2008). For example, utilizing a longitudinal methodology to track the participants in this study who chose to pursue their CTE-POS in the field they studied would be hugely beneficial to track job success, salary, additional training, student debt etc.

The lived experiences of CTE students and their perspectives on the effectiveness of their POS are in dire need of additional research. Research on CTE concentrators who leave high school and enroll in CTE through community college or vocational school and complete their POS with a two year degree or industry certificate are largely understudied. Additionally, there is very little qualitative research on CTE-POS and the perceptions of teachers, principals and counselors. Studying these educational leaders is critical to fully understanding CTE and the benefits CTE may have on educational reform efforts.

**Social Justice Implications**

The need for educationally equitable learning experiences for all students is at the forefront of most educator and policymaker agendas. This study took a closer look at the social justice concerns surrounding CTE concentrators. Social justice issues have been threaded throughout the study that included discussions about the “college for all”
mantra, stereotypes and stigmas, and the population traditionally served in CTE. Additionally, the study illustrated the lack of career counseling for disadvantaged students who have maneuvered through their CTE-POS throughout their high school careers.

The findings demonstrated that the academic counseling students did receive were limited to UC/CSU A-G college entrance requirements versus other opportunities at two-year community colleges, vocational schools, and additional career awareness. Participants weren’t encouraged to pursue any other pathway other than a four year university. While some participants were headed down this pathway, the majority were not. With 76% of study participants being minority, special needs, or ELL, educators are missing critical opportunities to guide disadvantaged students.

This study supports the literature demonstrating that the focus in our nation’s high schools remain on those students who are college bound, meanwhile students who may not be on track to enter into a four year university are left to sort out their own futures. In a time when only 30 percent of Blacks and 20 percent of Hispanics complete an associate degree or higher, it is clear the educational system is not preparing our disadvantaged youth who do not fall into the elite group of students bound for a four-year university (Alfed & Bhattacharya, 2012). This has and will, continue to contribute to an increase in the equity gap that exists in our schools.

Recommendations

Policy Recommendations

With the establishment of the Local Control Funding Formula (LCFF) recently implemented in California, there is great need to ensure that CTE programs are
sufficiently funded. As school districts develop their Local Control Accountability Plan (LCAP), they must ensure that CTE programs are written into their plan as a program that connects students to school both academically and socially. Furthermore, as school districts design their local priorities and goals, there needs to be a focus on promoting students to become CTE concentrators. As observed in this research study, students who maneuver through a POS are very likely to be on track to graduate from high school, connect socially to their school, teacher, and each other.

**High Quality CTE-POS.** In order for students to experience the same positive social and academic outcomes as the participants in the study, schools and school districts must offer high quality CTE programs. In order to ensure this, there must be accountability measures put in place that monitor the implementation and development of high quality CTE programs. Currently, the only guidelines outlining what high quality means for CTE programs are found in the Perkins Act IV of 2006 which has been overdue for reauthorization since 2011 (Stipanovic, Lewis, & Stringfield, 2012). As demonstrated in the study, high quality CTE-POS offer technical courses that are tied to local industry sector needs, integrate academic and technical skills, incorporate work based learning skills, promote parent and community engagement, grow industry partnerships, and promote leadership skills (Lewis et al., 2008). These accountability measures should be written into each school district’s LCAP as the guiding principles to high quality CTE. These components are best illustrated in the diagram below.
Figure 5.2. High Quality CTE Programs of Study. This figure illustrates the components necessary for a high quality CTE program. Each component in the circle supports the overall outcome of high school students being college and career ready. Each component intersects and has influence on what is required to support a quality experience for students.

The four major components surrounding College and Career Readiness are critical for high quality CTE programs. The outer components are essential in ensuring the inner components are implemented well and operate effectively. A key outer component necessary in making high quality CTE programs effective for students is having highly qualified CTE teachers. Highly qualified CTE teachers consists of
possessing adequate industry experience, having a deep understanding of pedagogical methodologies, are student centered, and have the ability to establish local business partnerships. As demonstrated in the study, the importance of having highly qualified teachers who care about students and are passionate about their industry sector is critical to successful CTE programs. Educational leaders must ensure that CTE teachers embody the characteristics outlined above in order to provide CTE students the same sense of belonging and connection to their school, curriculum, and POS.

**Educational Leadership Recommendations**

**Supporting CTE Teachers in Meaningful and Abiding Ways.** The findings of the study demonstrated that CTE teachers had a tremendous impact on student connection, student success, and student persistence. Due to these findings, it is essential for principals to ensure they are supporting their CTE teachers in meaningful and abiding ways. This is done by ensuring CTE teachers are placed on the same hiring contracts and salary schedules as their non-CTE peers and that they are included into the school’s culture and school-wide professional development. Furthermore, school principals need to ensure that CTE teachers have adequate access and resources to ensure the impact they may potentially have on students.

Too often, CTE teachers are on the periphery of the school climate due to the focus on core academic teacher performance (Gray, 2004). Because students are only tested in core academic areas and the public’s way to assess school success is through results of high stakes, state mandated testing, there tends to be a focus on these teachers versus CTE teachers. This focus discounts school culture, relationships, and student connections that come from CTE experiences. This neglect may cause CTE teachers to
feel devalued and less important causing CTE teachers to leave the teaching field and return to their industry jobs or seek districts that do value CTE teachers. The value of CTE teachers and the impact they have on student connections and school culture should be harnessed and celebrated.

**Counseling/Career Guidance.** In the Harvard School of Education report Pathways to Prosperity, the authors argued that there must be more than one pathway for U.S students to gain access into the middle class (Symonds et al., 2011). They noted that the college for all mantra that exists in our nation’s high schools is unrealistic and serves a small portion of the population. In this study, participants who sought school counselor advice noted that counselors focused solely on participant’s completing the college A-G entrance requirements with very little career guidance. Not a single school counselor mentioned or assisted study participants in discussing future career interests or possible vocational and/or community college postsecondary options.

It is evident that counselors may need additional training about each CTE-POS offered and the courses that qualify for college entrance. Additionally, programs should be established to help guide high school students early on in identifying what they may or may not want to do as a future career. In a longitudinal study conducted with high school seniors in Michigan, Lee and Eckstrom (1987) noted that career guidance counseling in U.S schools is unequally unavailable to high school students. Furthermore, they found that students who were designated as LI, minority, or students with special needs received disproportionate amounts of vital career counseling from their respective schools. This particular study was conducted in 1987 and it appears from the results of this study today, very little has changed.
If U.S high schools are to compete in the highly technical job markets of the 21st century, educational leaders must ensure that there is adequate numbers of counselors available and that counselors are providing accurate and consistent career and college guidance. Furthermore, educational leaders and policymakers must inspire an understanding that college is not the only pathway to prosperity. Technical training, industry certificate programs, vocational schools, and two-year degrees can lead to high wage careers for many students.

Superintendents and principals need to ensure that students are receiving sufficient levels of counseling support including career guidance. Furthermore, counselors need to have manageable caseloads of 1:150 to 250 students in order to spend time working with students early on about career goals. Counselors need to have time throughout the school year to train in occupationally related fields, work with local businesses regarding the labor market need, familiarize themselves with the CTE industry sectors and pathways offered at their school, and communicate postsecondary options to students and families.

**Academic Integration.** Most study participants noted that there was very little challenging and rigorous academic curriculum connected to their CTE-POS. This finding poses a critical concern as the new mission and priorities of CTE is to integrate academically rigorous curriculum into each CTE-POS. With the development and implementation of the CCSS, it is vital for CTE and CCSS to integrate core academic skills and technical skills together. In order to ensure that students are able to achieve the four C’s of the Common Core (Communication, Collaboration, Creativity, and Critical Thinking Skills), students need an integrated curriculum designed by core
academic teachers and CTE teachers. This critical need for CTE and the CCSS to align and work together is illustrated in figure 5.3 below.

Figure 5.3: Career Technical Education (CTE) and the Common Core State Standards (CCSS). This figure illustrates the integration of CCSS and CTE. The figures show how the new CTE model curriculum standards and the CCSS standards intersect when academic rigor is integrated into CTE curriculum.

In too many schools across the U.S, CTE program teachers and academic program teachers operate in silos with little cross-curricular planning and collaboration. School principals and superintendents must eliminate these practices and foster creative learning spaces that encourage and demand collaboration between academic and CTE
teachers. CTE curriculum should be linked to academic curriculum so that students may see the relevant nature of learning. Unfortunately, many students in the study agreed that they did not find purpose in their non-CTE courses. This concerning finding is supported by much of the current literature discussing the increased disengagement of students in American schools. Students should experience a connection from one course to another and find purposeful and meaningful learning in all classes.

**Student Choice.** Autonomy proved to be a viable reason why students in this study wanted to perform well. Because students had chosen their CTE-POS they had more ownership and buy in regarding their education. In most public high schools throughout the nation, students are told what classes they must take in order to meet high school graduation requirements and/or college entrance requirements. This does not allow students to have a say in what courses they are taking. This limits student choice and affects ownership of courses which impacts student achievement.

If school leaders, including principals and counselors, were to ensure that students have more choice and control over the courses they need and want, students may feel a greater sense of autonomy in their required and elective courses. Educational leaders should provide opportunities for students to engage in choosing their courses, pathways and interests. When students are active participants in their education the results may be similar to what was found in this study: increased student autonomy resulting in greater academic success, connection to school, people and curriculum.

**Conclusion**
This study began with one central research question: What are the lived experiences of Career Technical Education (CTE) concentrators? This research study answered a question not posed in any other known research study of its kind. The study explored how CTE concentrators arrived in their CTE-POS and what kept them motivated as they navigated through their CTE-POS. Additionally, the study provided the ability to better understand what the perceived academic and social experiences of CTE concentrators were. Finally, the study demonstrated how involvement in CTE shaped concentrators’ future educational and career aspirations. What made the study unique was the use of student voice to answer these questions providing empirical research on how CTE concentrators perceived their experiences. The study accomplished what it set out to do.

Throughout extensive narrative inquiry and analysis, this study utilized 13 participants to answer the central research question uncovering the lived experiences of CTE concentrators. Students provided insights into their lives, their academic and social experiences in school, and what inspired them to be CTE concentrators.

Answering the central research question added to the lack of empirical research about CTE concentrators and CTE in general. The study inspired several implications for both educational leaders and future research. As the landscape of public education continues to evolve and change with the implementation of CCSS, it is vital for educators to develop high quality CTE programs that integrate technical and academic course work to inspire positive connections and a sense of belonging for all students.
Appendix A: Invitation to Participate in Qualitative Study

Dear Oak Grove High School Student,

I am a student in the Joint Doctoral Program in Educational Leadership at California State University San Marcos (CSUSM) and University of California, San Diego (UCSD). I am conducting a research study that seeks to explore the lived experiences of students enrolled in Career Technical Education (CTE). You are being contacted because you were identified by a staff member within your school as a student who meets the eligibility criteria for this study.

Through this research, I am hoping to explore any impacts, including both social and academic, that CTE may have on students who are fully vested in their CTE Program of Study (concentrators). I believe this study has the potential to inform educators about student outcomes in CTE.

If you choose to participate in this voluntary study, you will be interviewed individually. The initial interview will take approximately 20 minutes. The second interview will have a conversational style and will last approximately one hour. The interviews will be conducted at your school in conference rooms, classrooms and other common areas. During the interview you will be asked to describe your experiences in school, specifically in your CTE class/classes. These experiences may include schoolwork, school/after-school activities, relationships with educators and relationships with other students. With your permission, the interview will be audio taped and transcribed. Following the interviews, you will be shadowed for approximately two to four hours as you navigate your regular school day. The purpose of this “shadowing” is to gain a better understanding of your experiences as a CTE student.

Your confidentiality will be respected throughout this process. Pseudonyms (fake names) for your name, your school, school district, and educators will be used to minimize the risk of identification. You will be given the opportunity to review the transcribed interview and to eliminate any comments or references you feel may be identifiable or have negative connotations. Your responses will not be linked to your name or address.

I hope you will agree to participate in this research project. You will receive a $5 gift card as an incentive for your time! If you would like to participate, please respond to me by April 14, 2014. Please let me know if you have any questions or concerns.
Respectfully,
Ebon Brown
Doctoral Student
UC, San Diego and CSU, San Marcos
951-816-0789
Ebonbrown57@gmail.com
Appendix B: Consent Form to Participate in Research

Consent to Participate in Research

Invitation to Participate
Ebon Brown, under the supervision of Dr. Erika Daniels, Professor CSUSM Education Studies, with approval of Vista Unified School District, is conducting a research study to find out about the lived experiences of Career Technical Education (CTE) concentrators. As a parent of a student enrolled in CTE, your permission is requested for your child to participate in this study. There will be approximately 6 students participating in individual interviews as part of this study.

Purpose
The purpose of this study is to explore the lived experiences of CTE concentrators from the perspectives of the students themselves.

Description of Procedures
Students will participate in two interviews and a shadowing activity about their lived experiences in CTE at their school. The interviews and shadowing will be conducted sometime between April 1, 2014 and June 6, 2014. The initial interview administration time is approximately 20 minutes with a follow up interview time of approximately 45 minutes to an hour. Interviews will be conducted in English and will be audio-recorded and professionally transcribed for accuracy. Audio recordings will be destroyed once transcripts are obtained. The researcher, who is also a credentialed teacher and school administrator, will ask the questions. The interviews will be held in a school administration office, teacher’s offices, and conference rooms with the permission of school administration. Following the interviews, the researcher will shadow the student for approximately two to four hours as the student tends to his/her normal school day activities. Students will be provided with a copy of the interview transcript to review for accuracy.

Risks and Inconveniences
There are minimal risks to participating in this study. These include:
1. A potential for the loss of confidentiality.
2. Although the interview is brief, there is a possibility students may become bored or fatigued.
3. During the course of the interviews, students may become emotional about their stories and their experiences.
4. Because this is a research study, there may also be some unknown risks that are currently
unforeseeable. You will be informed of any significant findings.

**Safeguards, Confidentiality, and Voluntary Nature**

The following safeguards addresses the aforementioned potential risks and inconveniences:

1. The risk for loss of confidentiality is highly unlikely since no teacher names or student names will be used. Pseudonyms will be used in place of the student's real name and school. Research records will be kept confidential to the extent allowed by law. Research records may be reviewed by the CSUSM Institutional Review Board.

2. Because the study is voluntary, students who become bored or fatigued may skip a question or discontinue the interview.

3. If participants become emotional during interviews, the interviewee will pause the interview and assess the student's ability to continue. The student may be removed from the study by the researcher without penalty to protect the participant.

4. The researcher will notify the participant and/or parent of any significant unforeseeable risks. The researcher will attempt to mitigate any and all see-able and unforeseeable risks.

**Voluntary Participation**

Participating in this study is completely voluntary and you may withdraw at any time. There are no consequences if you decide not to participate. The alternatives to participation in this study are for students to respond to the interview in a less than complete way by skipping a question(s), or to not participate in the interview, wherein the student will remain in class with his teacher and other classmates, doing regular schoolwork.

**Benefits**

There may or may not be a direct benefit to students from participating this study. The interview may serve students to reflect on how they feel about school (participation, relationships, etc.) The researcher may learn more about CTE in schools, and society may benefit from this knowledge. Your student will be given a $5 gift card as an incentive for their participation in this study.

**Questions/Contact Information**

If you have any additional questions or research-related problems, you may reach Ebon Brown at (951) 816-0789 or at ebonbrown57@gmail.com. This study has been approved by the California State University San Marcos Institutional Review Board. Questions about your student’s rights as a research participant should be directed to the Institutional Review Board at irb@csusm.edu or (760) 750-4029. You will be given a copy of this form to keep for your records.
To parents: If you would like a copy of the interview questions in advance, please contact me at the information above.

☐ I agree to permit my child to participate in the interview.

☐ I agree to permit my son/daughter to be audio-recorded.

☐ I am an 18+ year old student and agree to participate in the study.

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<td>Student Name</td>
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<td>Researcher Name</td>
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This document has been approved by the Institutional Review Board at California State University San Marcos

Expiration Date: April 7, 2015
Appendix C: Student Interview Protocol

Student Interview Protocol


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Thank you for agreeing to participate in this interview. The purpose of this study is to understand how students experience Career Technical Education at school.

Your interview data will be kept confidential, available only to the researcher for analysis purposes. Only the researcher and a professional transcriptionist will listen to and transcribe the information you provide. The audio tapes will be destroyed following final analysis; no later than May, 2015.

Your participation is entirely voluntary, and may be withdrawn at any time. If the length of the interview becomes inconvenient, you may stop at any time. There are no consequences if you decide not to participate.

Questions:

General:

1. How do you feel about this school?

2. What do you enjoy most about school?

3. What do you enjoy least about school?
4. If you have a problem or challenge at school, what do you do?

5. When you wake up in the morning, what makes you want to attend school? If you do not want to attend school, why is that?

6. Tell me about the classes you are currently taking at this school.

7. Over the course of your high school career, what classes do you remember the most and why?

8. How did you arrive in your CTE Program of Study (POS)?

9. As you have progressed in your POS, have you been motivated to continue? If so, why?

**Academic and Social Experiences:**

10. Do you have friends in CTE classes?

11. Do you feel a connection to this school? If no, why? If yes, what is it about this school that provides you with that sense of connection?

   a. (if yes) Does your participation in CTE impact your sense of connection to this school?

12. How do you feel about your CTE teacher?

13. Does your CTE instructor challenge you academically?

14. Does your CTE instructor challenge you in your future career aspirations?

15. Does your CTE – POS challenge you? Do you feel your CTE-POS is rigorous?

16. Can you explain any differences you have experienced in your CTE class/classes as compared to your non-CTE class/classes?

17. How has your CTE class/classes impacted your academic experiences?

**Perceptions:**
18. What type of students do you think should take CTE classes?

19. Have you ever experienced positive reactions from being in CTE?

20. Have you ever experienced negative reactions from being in CTE?

21. Do you feel that your experiences in your CTE – POS have prepared you for your future?

22. Do you feel that you have learned technical skills related to your CTE-POS? If so, do you feel those skills have prepared you for a career in the future?

**Future:**

23. What do you think you will do after high school?

24. Is your CTE Program of Study (POS) directly related to what you think will be your future career?

**Family**

25. Do your parents know you are enrolled in CTE? If so, how do they feel about it?

26. Have you talked with your parents about your CTE-POS as it relates to your future?

**Involvement:**

27. Are you involved in any activities on campus? If so, how has your experience in CTE influenced the activities you participate in?

28. Are there any opportunities in your CTE class/classes to compete in CTE related competitions? If so, what are they and have you chosen to participate? If yes, why did you participate? If no, why not?

**Concluding Questions:**
29. If you could change anything about your CTE-POS experience, what would it be?

30. Is there any other information about your CTE-POS that you think I should know?
Appendix D: Document Analysis Protocol

**Document Analysis**


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<td>Specific Document Analyzed (use a separate protocol for each document)</td>
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<td>Researcher Notes</td>
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*The purpose of these analyses is to explore the academic impacts of LI CTE student participants and concentrators. The researcher will explore the academic progress of CTE students from the onset of the student enrolling in a CTE course to date.*
References


Lewis, M. V., & Kosine, N.R., Overman, L. (2008). What will be the impact of programs of study? A preliminary assessment based on similar previous initiatives, state plans for implementation, and career development theory. Louisville, KY: University of Louisville, National Research Center for Career and Technical Education.


Stern, D., Dayton, C., Paik, I., Weisberg, A., & Evans, J. (1988). Combining academic and vocational courses in an integrated program to reduce high school


