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PERCEPTION INFLUENCED BY PHENOMENA: IDENTIFY CORE-SUBJECT TEACHER PERCEPTIONS OF CAREER TECHNICAL EDUCATION

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PERCEPTION INFLUENCED BY PHENOMENA: IDENTIFY
CORE-SUBJECT TEACHER PERCEPTIONS
OF CAREER TECHNICAL EDUCATION

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Sheri Lynn Tucker

June 2019

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Approved by:

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ABSTRACT

The purpose of this study is to identify the perception influenced by phenomena impacting core-subject teacher perceptions of career technical education (CTE). Studies show that CTE is highly successful at preparing California's students for college and career (Friedman, 2006). However, some educators see "CTE maintain less value in helping to encourage student success" (Shanklin, 2014, p. 3). The phenomenological study examined the perception influencing lived experiences with focus groups and one-on-one interviews. Core-subject teachers participated in these face-to-face interviews. Findings show that core-subject teachers are biased against CTE. Analysis of the survey results determined perception influenced by phenomena experienced by core-subject instructors included perfectionistic characteristics among parents, a society obsessed with outdoing the other person and very little evidence of educational reforms. The study asked questions to raise the teachers' perceptions of the rigor and relevance in CTE, to identify support that teachers give students applying to CTE instead of college, and how do teachers support integrated curriculum. Future results will see educational leaders and teachers improve the perception of CTE using new training. A policy change would allow English Language Learners exiting an English Language Development centered schedule to be eligible for CTE at any age. Essential to the future of CTE are (1) lengthening the school day to accommodate a more diversified schedule and (2) eliminating the requirement to stay in one industry sector for up to four years.

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To all of you, thank you for the kind and generous part you played to see me reach the goal of a lifetime.

DEDICATION

To my son, I dedicate this body of work. Joseph, you are the first reason I do what I do. You are my most ardent supporter, and your unconditional love and unshakeable faith are the sustaining forces in my life. You patiently waited while I took on multiple degrees and credentials, seminars, and conferences. I am blessed by all that you do and all that you are. It gives me great joy to acknowledge your irrepressible strength and love. Just for being you, I am as proud and as grateful as anyone ever. Thank you, son.

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CHAPTER ONE

INTRODUCTION

Overview

Studies exist which evaluate teacher perceptions on integrating core academic skills into career technical education (CTE) curriculum (Hagen, 2010; Hausman, 2012; and Shanklin, 2014). Also, there is a non-experimental quantitative correlational study by Greybeck (2015) on mandated student participation in CTE and studies conducted to evaluate administrators' perceptions of CTE as those perceptions have a subsequent impact on academic achievement of CTE students (Hausman, 2012 and McDuffie, 2013). A quantitative study on the perceptions of current advising needs, students' advisors, and administrators exists as well (Hernandez, II, 2016) and the importance of 21st century skills necessary for success in employment or postsecondary education was reported on by Shanklin (2014). However, there was limited research evaluating the impact of core-subject teachers' perceptions of the value of CTE and the phenomena that influenced their perceptions. In a study conducted in Colorado, (Shanklin, 2014) which looked at "the extent to which core teachers, student advisors, and administrators value CTE in relation to 21st century skills ... compared with the values held by CTE teachers" (p. 69), found that the skills are a valuable benefit of CTE. This researcher did not find a

study which evaluates the phenomena that influence how much teachers value CTE.

Problem Statement

The problem to be addressed by this study is the lack of understanding on the part of educators with regards to the value of career technical education (CTE). As reported by Hudson and Shafer (2002), we do not know what value core-subject teachers place on CTE. Neither is it known whether core-subject teachers believe that CTE equals the rigor of academic courses in teaching the skills necessary to meet the needs of the workforce for the 21st century. The fact that teachers looked at CTE courses as an option fit only for unmotivated, disinterested students since the beginning of the 20th century, has been well documented. In Schwartz (2014, p. 27), "American policymakers continue to find reasons to avoid designing vocational systems that can help students make the transition from secondary school to work."

According to Gray (2004), the current debate about CTE in schools has continued since the early 1900s. The rejection of CTE by some educators begins with a stereotype that these classes prepare students only for employment after school. Critics of CTE argue that "its students are mostly male, too often minorities, academically backward, and destined for dead-end jobs" (Gray, 2004, p. 129). While this description could have been correct at one time, the students who are in today's CTE classes come with a wide variety of skill levels, and the

statement does not accurately describe the majority of students currently in CTE. Teacher judgments like this can have a detrimental impact on whether students will remain in CTE. Learning what phenomena is influencing teacher perceptions can help the process of improving the relationship between academics and CTE. The identification of influencing phenomena can lead to improved training and credentialing programs for teachers and educational leaders. Improved training can infuse the profession with a more positive and supportive perception regarding the value of CTE. The positive perception of CTE value can increase student-learning outcomes by increasing the CTE completion rate (Hausman, 2012).

Gray (2004) found that:

If the goal of education, is to leave no child behind, then choices in the curriculum along with choices of students who aspire to attend college at the pre-baccalaureate technical education level, are counted together.

CTE is then an important complement to the standard academic curriculum for more than half of all school students. Students will benefit from leadership, which is more accurately informed about how CTE works and what it can offer. (p. 129)

Purpose Statement

The purpose of this phenomenological qualitative study is to identify the participants' lived experiences and discuss the phenomena which influence their

sense of value in career technical education (CTE) at a public school. The influencers of core-subject teacher perceptions are defined as those lived experiences, or phenomena that contribute to the perception of the value of CTE. The participants are credentialed educators working in a California public school. This study is designed to identify their perception of the level of rigor and relevance of CTE. The study also seeks to identify the methods teachers use to encourage students to pursue CTE training in post-secondary institutions. The study seeks to understand teachers' positions on integrating CTE curriculum throughout academic subjects. Overall, this study was designed to reveal whether core-subject teachers expect CTE courses to include valuable 21st century skills and knowledge for success. The students for whom college is not the best fit, deserve as complete an education as any college-bound student and equitable promotion of CTE can deliver that valuable option.

The results of this study may support a larger statewide study which can be used to improve educational leader and teacher credentialing and training. A larger study will have the flexibility to look at data from a broader range of participants, therefore, provide more in-depth information. This phenomenological qualitative research study is designed to identify core-subject teachers' perceptions regarding the academic value of CTE in a public school. It is designed to identify influencing phenomena to improve the delivery of information about CTE to students who are already in CTE and those who have not yet enrolled.

Research Questions

The following research questions guided the study:

1. Do core-subject teachers perceive career technical education (CTE) curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?
2. In what ways do core-subject teachers show students they endorse a choice for a technical education program as enthusiastically as they encourage students to attend four-year universities?
3. What are core-subject teacher's perceptions of integrating academics and CTE across the curriculum?

Significance of the Study

Identifying and defining core-subject teacher perceptions of career technical education (CTE) is significant to the field of education. Core-subject teachers' perceived value of CTE misdirects the academic guidance related to CTE provided for students. As a result, teacher preparation programs and educational leader training may find the study results useful in developing more targeted training that could increase teachers' support and administrators' understanding of CTE.

CTE doesn't just represent training for traditional trades; CTE is a gateway between the theory of academics and physical practice. CTE can provide an

environment for a practical application allowing the student to experience the gratification of completing an operation or task and producing an end product. Core-subject teachers' belief that CTE is less than and not for college-bound students results in underserving those students who will benefit from CTE courses. The perception of CTE is a complex issue influenced by many phenomena. The different perspectives held by stakeholders provides insights linked to CTE (Shanklin, 2014). The similarities and differences of these insights have a bearing on the role of CTE for students. In Plank, DeLuca, and Estacion (2008), it is reported that students who are 14 years of age or younger when they enter ninth grade exhibited a lower risk of dropping out when academic, and CTE curriculum are blended. The Advisory Committee (as cited in Plank et al., 2008) included that CTE offers an important attachment and demonstrates the relevance of school for students.

Understanding the relationship between core-subject teachers and CTE is important to comprehend so that core-subject matter can be incorporated into CTE class lessons to enrich student learning and comprehension through the program of study, an advantage that supports student success and reduces the school dropout rate (Creswell, 2014). The idea that our growing worldwide economy makes educational reform a necessity has become the cry of the nation's educational system. Mouzakitis (2010) suggested in Gordon (2014), the following as advantages of a CTE curriculum:

- will provide instruction for several areas of study that need 21st century skills,
- can encourage CTE students to focus more on preparing for a specific career path and,
- will enable CTE to be available from several sources.

Consistently through history, the United States government has answered the nation's economic and social needs of its citizens through educational legislation. The arrival of the 20th and 21st centuries followed the same path. Plank et al., (2008) wrote that while vocational education programs were historically designed to prepare students for work, the last 17 years have witnessed the addition of efforts to extend the amount of time spent in studies. In his Foreword, Gordon (2014) wrote: "Career technical education has the potential to shape the future of education most spectacularly in the 21st century." Even with the growing body of evidence which validates the worthiness of CTE, (Association for Career and Technical Education, 2015; Long, 2008; National Association of Colleges and Employers, 2018; Shanklin, 2014; Stone, 2016; U.S. Department of Education, 2011) the general public continues to resist the idea that positive results come from directing children toward a career path. The findings from this study could be of use to counteract the perception still held by America, that "Americans hate the idea of schoolchildren setting out on career paths --- such predetermination, they think, threatens the ethos of opportunity" (CEA Institute, 2010, p. 2).

Integrated Curriculum and Phenomenological Research

The theoretical base for the study follows that of Shanklin's (2014) work on Educators' Perceptions and Value of Career and Technical Education Programs which were based on "Experiential Learning Theory (ELT) and Contextual Teaching and Learning Theory (CTL). ELT identifies the experience as a perspective on learning, often used in CTE courses, putting the focus on the students" (Kolb, 1984; Sherman, Sanders, & Hyuksoo, 2009). Shanklin (2014) continued with a connection between the two theories by writings by John Dewey. ETL and CTL are based on the "works of John Dewey, who believed in school communities and curriculum that encouraged students to make a connection between the concept being taught and real-world roles and responsibilities" (Lynch, 2006; Reese, 2002). Integrated curriculum is designed to connect academic theory and real-world application. Through integrating curriculum based on ELT and CTL, by putting the focus on the students, the students can develop tangible skills and an understanding of their interests and talents.

Integrated Curriculum

Integrated curriculum refers to a curriculum where children have the opportunity to explore a variety of subjects which relate to elements of their environment (Humphreys, 1981). Integrated curriculum is the uniting of subject matter and life events. For instance, math can be taught through clog dancing because mathematics and clogging are about patterns and writing can be taught

through drawing comic strips, because dialog requires that the writer maintain continuity in the discussion. Student achievement is the primary focus. The teacher becomes a facilitator, and the student's explorers and discoverers. Integrated curriculum is also called a multidisciplinary, interdisciplinary, transdisciplinary curriculum (Savas, Senemoglu, and Kocabas, 2012). Research shows that integrated curriculum supports the constructivist approach to learning, meaning, learners are striving to make a connection between previous knowledge and newly acquired knowledge and trying to integrate new learning experiences (Harris and Alexander, 1998). Educators may experience significant pressure to raise student achievement and be able to show evidence that the work that is being done is going to lead to productive citizenship (Drake and Burns, 2004). Integrating the curriculum through the interdisciplinary approach maximizes the potential for success. Figure 1 (Drake and Burns, 2004) below illustrates the application of the theory of integrated curriculum. Interdisciplinary integration uses the practice of emphasizing the overlap of common learnings within multiple subjects and the cross-curricular advantages of a CTE curriculum.

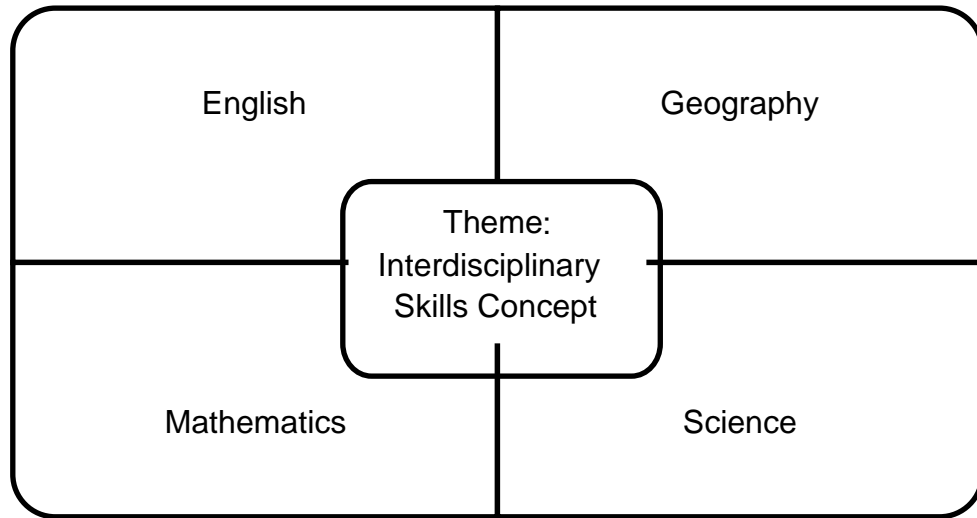


Figure1: Application of the Theory of Integrated Curriculum (Drake and Burns, 2004).

CTE emphasizes the application of academic content to real-world situations.

Figure 2 identifies this application.

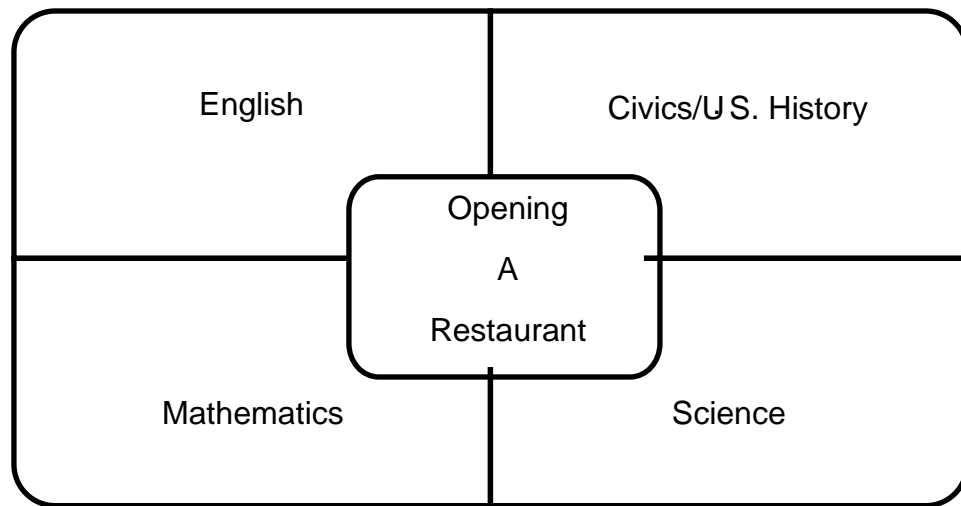


Figure 2: Illustration of Integrated Curriculum to Real-World Application

Phenomenological Research

“Phenomenological research is a design of inquiry coming from philosophy and psychology in which the researcher describes the lived experiences of individuals about a phenomenon as described by participants” (Creswell, 2014, p. 24). This description culminates in the essence of the experiences for several individuals who have all experienced the phenomenon. This design has strong philosophical underpinnings and typically involves conducting interviews (Giorgi and Mouzakitis, as cited in Creswell, 2014). Both one-on-one interviews and focus groups will incorporate open-ended questions as the methods of inquiry. Using open-ended questions will encourage participants to expand on their responses. These methods will allow the researcher to collect information which will then be analyzed to determine

whether multiple individuals have experienced the same perception influencing phenomenon. Unlike narrative research, the researcher will not combine personal views with the participants but allow the participants lived experiences to provide the story.

Assumptions

A number of assumptions will be made in this phenomenological qualitative study for purposes of practicality and efficiency. It will be assumed that

- All participants in the focus groups and interviews will have a personal interest in promoting the best system of post-secondary preparation for students.
- The participants will provide genuine and accurate responses. It is assumed that the participants will have an adequate exposure to and knowledge of integrating curriculum.
- The participant educators engage in recommendations to students for post-secondary options.
- The study will seek to interview core-subject teachers who understand the expected levels of rigor for academic courses.
- A sufficient number of participants will respond in order to have enough data to generate common themes for a valid analysis.

- The familiarity which exists between the researcher and the participants can be minimized from impacting the analysis.

Limitations

1. This project was limited to a single academic site in California.
2. Only full-time, core-subject teachers at the subject site were asked to participate in the focus groups and in the interviews.
3. Data were collected from a single school in California which may prevent adequate diversity and limit applicability to other schools.
4. The interviews and focus groups meetings were conducted during the timeframe of December 2018 through February of 2019 which may have had an adverse effect on people's availability and ability to respond. During this time period, a substantial number of days are unavailable for scheduling due to the holiday break. This is also the end of the first full term and educators are preoccupied with finals and grades. As a result, several teachers contacted this researcher after the study had closed in compliance with IRB, to volunteer for participation. It is the recommendation of this researcher that holiday times be avoided.
5. An element of familiarity exists among the participants and the researcher which could lead to an inclination on the part of the participants to attempt to provide answers that were more for the personal benefit of the researcher

and less for the accuracy of the study, creating a possible bias in the analysis.

Positionality

Before my son was born, I began a list of universities from which he would one day choose. There was no concern in my mind about him attending, the only questions would be where and what would be his major? A 4-year college education at the conclusion of high school was the path I took, and I was certain that it would be the best plan for this as yet, unborn human. Eighteen years later, after years spent in college preparatory classes in private school, after spending time visiting schools, pouring over course catalogs and delaying vacations to save money, my son informed me that as far as career preparation was concerned, he had a very different plan. He selected a path all his own. He wanted to go to work, to start his own company. He wasn't going to college because they couldn't teach him what he needed to know, and I had to admit, he was correct. That experience was my introduction into career technical education (CTE).

My initial exposure to CTE classes was through the certificate courses my son took to gain industry credibility but without the time commitment for general education classes that had no direct bearing on his goals. He was gaining experience and making money. More importantly, he was being taught the things he needed to know, the things he wanted to know. I understood then that a

traditional 4-year college degree could not have brought him happiness in the same way.

As I gained more appreciation for the courses my son was taking that were essentially opportunities to apprentice, or in other words, CTE classes, I was also setting out on a path that would eventually lead me right back to seeing the value in CTE. I was in the process of changing careers and moving toward education. In 2000, I left a lucrative position with the electric utility where I had developed and directed a successful concierge service for the foodservice industry. The purpose of the program was to educate restaurant and institution cafeteria operators on the benefits of electricity in commercial kitchens and through the process, I learned a great deal about the world of foodservice and culinary arts.

My studies at college for my master's degree and teachers' credential were nearing the end and I was already teaching fulltime. I saw an opportunity to move to a smaller, less metropolitan district so I accepted an offer to teach a core-subject at the middle school. It was soon after that I learned of an opening that tied into my Home Economics undergraduate degree and my experience at the utility company. The high school was looking for a teacher for its Culinary Arts program. As a result of a very helpful credential analyst and an assistant superintendent, I received an additional credential and moved to the high school to teach in the CTE department.

Thirteen years have been spent as the lead instructor, coordinator, and director for a Culinary Arts program with 160 – 175 students enrolled each year. In that time, students found their passion and left high school with experience and a marketable skill. This is not always the case. Just like me, parents, teachers, counselors and administrators who want, what they believe in their hearts to be the only way for their students, repeatedly provide just half the information necessary for post-secondary education. Nearly every capable individual is directed, encouraged, and influenced to attend a 4-year college. College isn't the only way. Despite evidence to the contrary, educators resist the notion that post-secondary education can involve training just as well as academic coursework. It is clearer now that a change in the acceptance of CTE courses is critical if we wish to continue to prosper and grow.

After conducting the study, it seems more realistic to predict that CTE courses will continue to be underestimated for some time. The phenomena experienced by the participants was the power of a perfection-driven society. The participants in the study presented very sincere and carefully developed convictions, they considered their answers, and in the case of the focus groups, they contributed what they honestly believe, interacting well and building on one another's thoughts. However, their responses reflected their conscious appreciation for CTE, but their actions were purely supportive of 4-year college degrees. The responses collected suggest that additional studies would be warranted, including a longitudinal study in which observation of behavior of a

teacher or teachers, over time, in which part of the study is to make recommendations which will result in decisions for pursuing a CTE course of study, when that is the best course of action for the student involved.

Additional phenomena contribute to a lack of support for CTE directed career pathways. The first is parents who do not look objectively at the situation or the child to determine, in that specific example, what is the best course for that person. Also, in our perfectionistic society, we are always looking for some advantage to be better than someone else. Even when a success story involving the value in CTE is witnessed firsthand, people will dismiss the idea as positive, just not personally applicable. I learned very well through this study, that college was never meant for everyone, it is designed to infuse a specific kind of information, to a specific type of individual, who has a very specific need, and the ability to apply that information in a productive, socially beneficial manner. It is in the best interest of the students and the future of our society to provide an improvement for those who still have so much potential.

Definitions of Key Terms

The following terms are used in this study and are presented in alphabetical order:

1. Academics: Applies predominantly to the four core subjects; mathematics, science letters, English, and history. It can also include humanities, and

communications; social sciences; art and design and education. (Gordon, 2008).

2. Apprenticeship: Programs registered with the Department of Labor or a state apprenticeship agency in accordance with the Act of August 16, 1937 (commonly known as the National Apprenticeship Act) that are conducted or sponsored by an employer, a group of employers, or a joint apprenticeship committee representing both employers and a union, and that contain all terms and conditions for the qualification, recruitment, selection, employment, and training of apprentices. Today, apprenticeship typically combines on-the-job training with supplemental reading or coursework (Gordon, 2014).
3. Association for Career and Technical Education (ACTE): The largest national association dedicated to the advancement of education to prepare youth and adults for careers (Gordon, 2014).
4. At-Risk Students: Certain segments of society whose members have disabilities and disadvantages, such as minority groups, women, persons who are economically and/or academically disadvantaged, and those who are physical and/or mentally disabled (Gordon, 2014).
5. California Partnership Academies: Small learning communities within the larger school, usually enrolling students in grades 10 – 12. Each year students take classes together, including core academic subjects and at least one career-technical course related to the academy's career theme.

A team of teachers works with the same group of students over several years, linking instruction across disciplines and over time. Employers provide internships and other opportunities for students to learn outside the classroom.

6. Career Technical Education (CTE): “Develop and integrate standards-based academics with a career-relevant, sequenced curriculum following industry-themed pathways that are aligned to high-need, high-growth, or emerging economic sectors. Provide articulate pathways to postsecondary education aligned with regional economies” (California Career Pathways Trust, 2014).
7. Career Technical Education Concentrator: A CTE concentrator earns a minimum of four credits in a CTE pathway, one of which was in a second level or capstone course. Public Schools of North Carolina (as cited in McDuffie, 2013).
8. Career Technical Education Student: A student, grade 9-14, who is enrolled in an exploratory, introductory, or occupational specific course, within an approved occupational education program area (Gordon, 2014).
9. Carl D. Perkins Reauthorization Act of 2006: This act provides an increased focus on the academic achievement of CTE students, strengthen the connections between secondary and postsecondary education, and improve state and local accountability (Threeton, 2009).

10. Common Core State Standards: A single set of English-language arts and mathematics standards designed to ensure that all students graduate school prepared to enter college or the workforce. The standards define knowledge and skills students need to thrive in entry-level, credit-bearing, academic college courses, and workforce training programs (Gordon, 2014).
11. Constructivism: A set of assumptions about the nature of human learning that guide constructivist learning theories and teaching methods (Gordon, 2014).
12. Core Content: Content, all students in a major, are expected to master (Gordon, 2014).
13. Core-Subject Teachers: Instructors of the traditional academic school subjects to include but not be limited to mathematics, science, English, world languages, and history.
14. High-Skill Occupations: Occupational field that led to (a) a certificate of completion or associate degree, (b) and apprenticeship. Or (c) state license or certification (Gordon, 2014).
15. Integrating Academics and Career Technical Education: Combining the best curriculum and educational practices of academics and career technical education into a single, integrated program, available to all students. Rojewski (as cited in Turnipseed, 2008).

16. Internship: An employment opportunity through which students receive hands-on knowledge and training while working for an actual business (Gordon, 2014).
17. Land Grant College or University: The purpose of the land-grant colleges was to teach branches of learning associated with agriculture and mechanic arts without excluding scientific and classical studies so that the state legislatures would promote liberal and practical education of the industrial classes in several pursuits. (Whalen, 2001).
18. Morrill Act of 1862 and 1890: The primary purpose of the Act of 1862 was to promote the liberal and practical education of the industrial classes in pursuits and professions of living. The 1890 Morrill Act intended to provide educational opportunities for African-American students (Gordon, 2014).
19. No Child Left Behind Act: The centerpiece of President George W. Bush's domestic agenda, the act constitutes a blend of standards-based accountability, educational choice, and old-fashioned bureaucratic mandates, not all of which work together harmoniously. Teachers and lawmakers, nationwide have criticized the measure, saying that it costs too much, and its requirements are too strict (Gordon, 2014).
20. Non-Traditional Students: Special populations also include students enrolled in nontraditional courses such as male students in nursing

courses. Career Technical Special Population Training and Resource Education Center (as cited in McDuffie, 2013).

21. Perceptions: Perceptions describe the overlap between cognitive (defining and conceptualizing advising needs) and non-cognitive (attitude or motivation) factors Bond, Perkins, and Ramirez (as cited in Hernandez, 2016).
22. Persistence: Completing the entire two-year school (CTE) sequence, graduating from school, and completing an industry-related course at a post-secondary institution.
23. Prosser's Sixteen Theorems on Vocational Education: Prosser's Theorems are the basis for sound and successful programs. Many attempts have been made to improve upon them but with no success. There is little reason to believe that these basic standards have changed materially since the early development of the program (Prosser & Quigley, 1949).
24. Rigor and Relevance Curriculum Framework: A tool developed by the staff of the International Center in Education to examine curriculum, instruction, and assessment (Gordon, 2014).
25. School-to-Work Opportunities Act (STWOA) of 1994: The School-To-Work (STW) Program—required that three basic components be blended together; work-based learning, school-based learning; and connecting

activities. To facilitate students' entry into post-secondary training or education. Support and evaluation are two key elements.

26. Smith-Hughes Act of 1917: Federal legislation that provided an annual grant of approximately \$7.2 million in perpetuity to the states for the promotion of vocational education in agricultural, trade and industrial, and home economics educations (Gordon, 2014).

27. Tracking: The process of placing students in classes based on their perceived academic abilities, race, socioeconomic status, or ability to succeed (Hausman, 2012).

28. Vocational Education: "The 1990 federal law defined vocational education, for purposes of federal funding, as preparation for 'occupations requiring other than a baccalaureate or advanced degree'" Derived from the passage of the Smith Hughes Act Of 1917 (Hausman, 2012).

29. Vocationalism: The method used by schools, particularly high schools, to organize their curriculums so the students may develop skills, both vocational and academic, that will give them the strategic labor market advantages needed to compete for good jobs (Gordon, 2014).

Summary

Chapter One of this qualitative research study introduced the topic to identify phenomena influencing core subject teacher perceptions of the academic value of career technical education (CTE) in California public schools. The

problem to be addressed by this study is the lack of understanding on the part of educators with regards to the value of CTE to post-secondary students. As reported by Hudson and Shafer (2002), we do not know what value core-subject teachers place on career technical education (CTE). Studies exist which evaluate the teachers' perspective of integrating core academic skills into CTE curriculum (Hagen, 2010), and on mandated student participation in CTE (Greybeck, 2015). No study was found which evaluates the phenomena that influence how much value teachers place on CTE. This study will explore the contributing phenomenon that influences the perceptions of CTE by core subject teachers. The purpose of this phenomenological qualitative study is to identify the participants' lived experiences and discuss the phenomena which influence their sense of value in CTE at a public school. The students for whom college is not the best fit, deserve as complete an education as any college-bound student and equitable promotion of CTE can deliver that valuable option. The following research questions guided the study:

- 1 Do core-subject teachers perceive the CTE curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?
- 2 In what ways do core-subject teachers show students they endorse a choice for a technical education program as enthusiastically as they encourage students to attend four-year universities?
- 3 What are core-subject teacher's perceptions of integrating academics and CTE across the curriculum?

Identifying and defining core-subject teacher perceptions of CTE is significant to the field of education. Core-subject teachers' perceived value of CTE misdirects the academic guidance related to CTE provided for students. Understanding the relationship between core-subject teachers and CTE is important to comprehend so that core-subject matter can be incorporated into CTE class lessons to enrich student learning and comprehension through the program of study, an advantage that supports student success and reduces the school dropout rate (Creswell, 2014).

After conducting the study, it seems more realistic to predict that CTE courses will continue to be underestimated for some time. The participants in the study presented very sincere and carefully developed convictions, they considered their answers, and in the case of the focus groups, they contributed what they seem to honestly believe, interacting well and building on one another's thoughts. The responses collected suggest that additional studies would be warranted, including a longitudinal study in which observation of the behavior of a teacher or teachers, over time, which results in a decision for or against pursuing a CTE course of study.

Chapter Two provides a review of the literature, which follows the history of CTE and how history contributes to the current legacy. Chapter Two explores the dichotomy of CTE and core-academic subjects and introduces qualitative design. General education and vocational education are the two components found in most secondary school educational systems around the world (Malamud

& Pop-Eleches, 2006, p. 1). The respective benefits of the two types of educational systems have long been debated, however, more recently “education, in general, seems to have recognized the value in vocational education” (Foster, 1997, p. 77). The foundations of the American educational system were built on the types of education that evolved in Europe during the 19th century.

An early advocate of teaching methods that were designed to strengthen a student’s abilities, Johann Pestalozzi’s (“Johann Heinrich Pestalozzi,” 2018) pedagogical doctrines emphasized the position that learning should flow from the familiar to the new, incorporate the arts and experience emotional reactions. High-quality CTE can help more students persist in and complete high school. A CTE course of study can be a catalyst to facilitate preparing students for the postsecondary education and training that will be critical to future economic successes; CTE can attain this level of success by increasing student engagement; by building positive relationships; and by providing inventive delivery methods. (Association for Career and Technical Education, 2015, p. 3). A shift in American awareness of the need for vocational education was among the changes experienced in the '30s and '40s. In Weingarten (2015), “Nicholas Pinchuk, chairman, and CEO of Snap-On Tools, says CTE ‘ is the single best weapon’ companies have in today’s global competition for jobs.” (n. p.). But for the most part during the 20th century, “industrial educators, in policy and practice, committed to ideologies of commercialism ... and aligned their points of view ...

with businessmen and industrialists” (Petrina, 1995, p. 78). The theoretical base for the study follows that of Shanklin’s (2014) work on Educators’ Perceptions and Value of Career and Technical Education Programs which were based on “Experiential Learning Theory (ELT) and Contextual Teaching and Learning Theory (CTL).

Chapter Three presents a qualitative perspective of the research design and explains how focus groups and one-on-one interviews were used in the study. The chapter also outlines the theoretical framework for choosing a qualitative approach for this study. The chapter describes the solid base implementing focus groups and one-on-one interviews on which to build this study. The theoretical framework for choosing a qualitative approach for this study is explained in this chapter. Limitations of the study are included. Three research questions guide this phenomenological study to identify the lived experiences common to 16 study participants (P). Identifying the lived experiences can lead to an explanation of the present-day perceptions by educators. The fact that educators have looked at CTE courses as an option fit only for unmotivated, disinterested students since the beginning of the 20th century, has been well documented. In Schwartz (2014, p. 27), “American policymakers continue to find reasons to avoid designing vocational systems that can help students make the transition from secondary school to work”.

Chapter Four presents the results of the data from the study interviews. The emergent themes are discussed, and the findings are evaluated from the

perspective of the original three research questions. This chapter presents the findings from three focus groups and nine one-on-one interviews with core-subject teachers in a public school in California. Through this conversational communication, the researcher identified and examined the lived experiences of 16 participants to gather information sufficient to identify core-subject teachers' perceptions of Career Technical Education: Phenomena influencing perceptions. The interviews were designed to inform the researcher of the teacher's perceptions of rigor and relevance of CTE programs, the level of commitment by teacher's to actively encourage students to pursue CTE training as a viable form of post-secondary education and teacher's perceptions regarding the practice of integrating academics and CTE curriculum.

Education is a profession often handed down from one generation to another. Responses from the survey showed several participants with close ties to education and CTE. There are five of the 11 participants who have at least one parent who was a teacher, and two of those participants also have a life partner who teaches. Other than these four, there are five more participants who have at least one parent who went to college, and five participants have children who have attended college and one who is in a vocational school. There are four of the five participants whose children have attended college who are teachers themselves.

Chapter Five concludes the project with recommendations for teachers and educational leaders to consider a broader, more accurate distribution of

postsecondary education options. Chapter Five includes a discussion of the application of emergent themes and connects them to the existing literature. The implications of the study for higher education are suggested, and ideas for future research on the topic are also presented, as well as the researcher's conclusions. To ensure consistency throughout the analysis, one researcher mediated the focus groups, conducted the one-on-one interviews, transcribed and coded the audio recordings, and compiled the results. Assistance was provided during the process to minimize the impact of the findings through researcher bias.

CHAPTER TWO

LITERATURE REVIEW

Overview

Webster's New Twentieth Century Dictionary (1975) defines perception as the process or faculty of perceiving. *Merriam-Webster's Online Dictionary (2018)* defines perceiving as to take hold of, to feel, to comprehend. Human perceptions are integral to shaping our reality. Our perceptions are formed based on our interpretation of the various experiences we have lived in. Throughout the history of education in the United States, core-subject teachers' lived experiences have formed their realities. Experiences such as educational changes in professional practice, expansion of educational leadership, educational approaches to economic influence, and government involvement constitute phenomena that have and continue to impact core-subject teachers' perceptions of career technical education(CTE). This study will identify core-subject teachers' perceptions of CTE, while discussing the complex phenomena that have influenced these perceptions, beginning with a review of the relationship between general education and vocational education in America.

General education and vocational education are the two components found in most secondary school educational systems around the world (Malamud & Pop-Eleches, 2006, p. 1). The respective benefits of the two types of educational systems have long been debated; however, more recently "education in general

seems to have recognized the value in vocational education” (Foster, 1997, p. 77). The foundations of the American educational system were built on the types of education that evolved in Europe during the 19th century. Two individuals whose work contributed to the key concepts in the American system of education were Jean-Jacques Rousseau and Johann Pestalozzi. Rousseau believed that human beings were good by nature and that education should serve to empower people to cooperate in society. He believed education would provide the way out of societal constraints.

An early advocate of teaching-methods that were designed to strengthen a student’s own abilities, Johann Pestalozzi (“Johann Heinrich Pestalozzi,” 2018), crafted pedagogical doctrines that emphasized that learning should flow from the familiar to the new, should incorporate the arts, and should experience emotional reactions. Pestalozzi promoted the value of vocational education as a component of the school curriculum throughout Europe and across to the United States. The *History and Growth of Career and Technical Education in America* by Howard R. D. Gordon (2014) explains the transformation of vocational education to career technical education (CTE) and the influence that CTE has had on society’s cultural and economic changes. “Any attempt to address current issues without an understanding of the past will prove arduous at best” (Gordon, 2014, p. 2). This chapter begins with the history of the American educational heritage of CTE, then moves through the separation of traditional education from vocational education, and concludes the history with a discussion on the skills for success

for the 21st century. (Table 1). Following the history of CTE growth, the chapter will begin to identify core-subject teachers' perceptions of CTE and a discussion of the complex phenomena which have contributed to their perceptions. An explanation addressing the dichotomy between CTE and core-subject teachers will demonstrate a likely application for future expansion of this study. An analysis of the available information on the perceptions of stakeholders in and beyond the classroom concludes the chapter.

Table 1

Career Technical Education Growth: Vocational Education to College and Career Readiness

1776 – 1849	Free Public Education	Educate future leaders. Girls didn't attend until early 1800s.
1850 – 1899	Agricultural Society	Children taught life skills & trade on the farm. Formal education rare.
1900 – 1949	Industrial Revolution	Schools supplied factory workers. Classrooms set procedures and CTE.
1950 – 1969	Information Age	Challenges for classrooms. CTE is popular.

Table 1 continued

1970 – 1999	Global Market	Focus was on College-bound.
2000 –	21 st Century	Vocational education reintroduced
Present Day	Skills for Success	in public schools with little updated.

Study Rationale

Stone (2014) reported that after years of being considered “the program for someone else’s child” (p. 4), CTE is being rediscovered. Vocational education has long been looked at as a method to prepare socioeconomically challenged students for the work force (Bishop & Mane, 2004). Even after the legacy of vocational education in America, beginning with the system of apprenticeship, continuing through the early 1900s when the Smith-Hughes Act of 1917 became the first vocational education act for high schools, and on to the Carl D. Perkins Career and Technical Education Improvement Act (Perkins IV), work-based learning programs (manual training, vocational education, vocationalism, career technical education [CTE]) provided an opportunity to obtain postsecondary education and career skills. Career Technical Education (CTE) became the descriptor for work-based learning with the passage of The Carl D. Perkins Career and Technical Education Act of 2006. Leading up to that time, vocational preparation programs had been through a series of name or

descriptor changes, each invoking a different set of perceptions based on the level of success the program had been recently experiencing.

High-quality CTE “can help more students persist in and complete high school. A CTE course of study can be a catalyst to prepare students for postsecondary education and training that will be critical to future economic successes. CTE can attain this level of success by increasing student engagement, by building positive relationships, and by providing inventive delivery methods (Association for Career and Technical Education, 2015, p. 3).

CTE won't attain this level of success if teachers' perceptions of CTE is that the program has little or no value for the general population. The phenomena which influences teacher perception comes from long-standing beliefs and supporting actions which reinforce the idea that vocational education only benefits the unmotivated and that “technical education was a ‘deceptive farce’ which was a threat to the intellect and unacceptable in public schools” (Gordon, 2014, p. 24).

The Colorado Career and Technical Education Organization Counseling Division expressed interest in a study of the perceptions of high school teachers, administrators, and student advisors for the purpose of developing a state-wide study to continue to professionally develop particular faculty and staff positions in regard to CTE (Shanklin, 2014). This addition to the Colorado State credentialing program could bring educators perceptions more in line with current information.

History

Similarly, in California, the Career Technical Education (CTE) Pathways Initiative is preparing students to succeed in the workforce through newly formed partnerships between California Community Colleges and the California Department of Education. These partnerships provide students with a seamless CTE from the middle grades through community college (*The Career Technical Education Pathways Initiative*, 2011).

“A Strategy for Education Equity and Excellence” states that:

to achieve the excellence and equity in education on which our future depends, we need a system of American public education that ensures all students have a real and meaningful opportunity to achieve rigorous college-and career-ready-standards. A world-class education consists not solely of mastery of core subjects, but also of training in critical thinking and problem-solving, as well as in 21st century concerns like global awareness and financial literacy.

The significance of this study is in identifying current core-subject teachers’ perceptions of CTE, while discussing the complex phenomena that have influenced these perceptions to ensure that the educational community is cognizant of the value of CTE.

Introduction of a Free Public Education – 1776 - 1849

Formal education has not always been available to everyone in America. Prior to the adoption of the free and public education system in the 1800s, the type of education for those who came from wealthy classes was different than that for those who came from working-class backgrounds (Gordon, 2014). Education for the lower classes was built on the system of apprenticeship which the colonists brought from Europe. Apprenticeship is the oldest known type of vocational education in the United States: “The foundations of the American educational system were built on the types of education, including apprenticeships that evolved in Europe” (Gordon, 2014, p. 7). Germany and England were among the countries with extensive apprenticeship systems. “Germany was the center of th[e] ‘manual training’ movement (an early descriptor for vocational education) for the middle and lower classes” (Gordon, 2014, p. 2). Apprenticeships began as an important part of the European educational system as early as the sixteenth century. Late in the sixteenth century, the English economy, specifically, was in a distressed condition. Impoverished families were attempting to survive a move from agriculture to manufacturing that was occurring throughout the country resulting in laws being passed in an attempt to “equip children of poor families with a salable skill” (Gordon, 2014, p. 7). The English Poor Law of 1601 allowed the children of poor families to be placed in apprenticeship.

Thompson (as cited in Gordon, 2014), wrote The English Poor Law of 1601 was successful, and became a great influence on the future of CTE in America. Provisions of The Poor Law resulted in English boys and girls being apprenticed for a period of years during which they received general education and were trained in a trade (Gordon, 2014, p. 7). Colonists brought the system of apprenticeship with them.

Apprenticeship programs have provided a basic method of work-based learning in America since colonial times. The practice of apprenticeship that the colonists brought from European countries created the primary form of training for industrial employment for years until machines began to be used extensively.

Initial perception of the apprenticeship program in America was positive and provided a viable training option for those who would not have access to formal education. Roberts (as cited in Gordon, 2014, p. 6) wrote that even though apprenticeships were not considered part of the school curriculum, apprenticeships were adapted to fit the conditions in the colonies and were said to have been “the most important educational agency of the period of colonization and settlement.” The apprenticeship program and the various forms of work-based learning that followed were designed as a separate entity from the public-school curriculum. The decision to separate vocational education from academic/classical education would impact the perception of vocational education well into the 21st century.

When public education began to be implemented in America in 1790, the state constitution of Pennsylvania required free public education for children in families who could not afford to pay for an education. Also concerned about the education of poor children, the New York Public School Society in 1805 set up schools that had a schoolmaster to teach the older children, and a system in place for the older children to teach those who were younger. Private schools and personal tutors were exclusively for white males and solely for training professionals and the clergy (Holland, 1943). Meanwhile, the apprenticeship program made favorable progress in America in the 19th century by establishing partnerships with industry (Gordon, 2014).

The apprenticeship program continued to make favorable progress training students for gainful employment; however, contributing to the complexity of the phenomena that would impact the perceptions of career technical education (CTE) by core-subject teachers was an article published in the Oxford Review of Education. (Winch, 1998) On two opposing versions of the nature of vocational education and training by Adam Smith, the lesser known Friedrich List and Adam Smith were regarded as the “champion of the free market” (Blenman, 2016, p. 2). Smith’s position on how vocational education plays a role in explaining the classical political economy juxtaposed against Friedrich List and his lesser known ‘social capitalist’ model (Winch, 1998). In *Wealth of Nations*, Smith proposes a market-led low-skill model of training, while List proposes a high-skill model sustained by the State. Smith believed in an all-inclusive primary

education that was not completely run by the State and a division of labor, which made educating people unnecessarily. The division of labor was to allow a segment of the workforce who spent time performing simple operations to be the reason for not needing further academic learning. Smith saw that a division of labor could reduce the amount of training needed by placing low-skilled workers in positions with close supervision (Winch, 1998). The two models present the foundation for the divided positions on the value of vocational education that is still evident in 21st century CTE: “There were now two similar, yet distinctly different, forms of industrial education provided for by the American public educational system” (Foster, 1997, The Vocational Education Act of 1917, para. 2).

The ideas of democratic liberalism, benevolence, and tolerance were espoused by Jean-Jacques Rousseau and Johann Heinrich Pestalozzi during the eighteenth century. At that time, schools were divided by social class, but Pestalozzi separated students, instead, by their abilities. Pestalozzi has been called, “The Father of Education” (“Johann Heinrich Pestalozzi,” 2018, p. 2). His several attempts failed and yet his philosophy permeates the American elementary school system. Pestalozzi was an impressive personality, highly esteemed by his contemporaries. His concept of education embraced politics, economics, and philosophy, and the influence of his ‘method’ was immense. Pestalozzi emphasized group rather than individual recitation and focused on participatory activities to encourage team-building and for those students who

were separated from the group due to difficulties in learning, provided a source of confidence. CTE courses provide the same family of connectedness (“Johann Heinrich Pestalozzi,” 2018). Both men advocated for vocational education and committed much of their time to the idea of improving the plight of the poor. Rousseau believed that manual work could serve as mental exercise which established a reason for vocational education. Pestalozzi’s position was that formal education should be available to any child and that teachers must stimulate learning and the foundation of that learning should be established on facts and practical circumstances (Gordon, 2014).

During these early years, CTE was known as the manual arts. Between the years 1820 and 1860, the development of vocational and practical education was being requested by the agricultural element in the country (Gordon, 2014). Those who were already working didn’t want skills training; they were looking for education like what they would receive in college. Even so, as time went on, the reputation of the program became closely associated with the idea that only individuals with little or no motivation or ambition had joined. This division of opinion may have contributed to a phenomenon which could be used to interpret the perceptions of the value of CTE that are still held by core-subject teachers in the 21st century.

Education in an Agricultural Society – 1850 - 1899

As the manual arts movement grew, there was increasing pressure to extend the training to underrepresented groups. In 1837, Ohio’s Oberlin College

became the first college to accept women, in addition to men (Oberlin History Oberlin College and Conservatory, 1833). The opposition was strong; however, by the end of the decade, manual training was evident throughout the schools.

It was at this time that a political movement in favor of creating agriculture colleges was led by Professor Jonathan Baldwin Turner of Illinois College. In 1853, a land-grant bill was drafted by Turner to fund a system of industrial colleges, one per state. In 1862, the bill was finally passed after being sponsored by Senator Justin Morrill of Vermont. The Morrill Act, also known as the Land Grant College Act of 1862, made education in the new western states available to their citizens by providing public land grants for colleges in the agricultural and mechanical arts. (U.S. National Archives and Records Administration, 2015). The Morrill Act was the first time that Federal aid was made available to higher education, although the government was aware from the beginning of the Republic of its responsibility to provide schools for its future citizens. (Gordon, 2014).

Available land was abundant, and one way for the Federal Government to establish involvement in education was to grant land to the states which could be sold to pay for the construction of the school. By the Morrill Act, the Federal Government granted 30,000 acres for each Representative and Senator to every state for the construction of colleges. This system of state colleges brought higher education to millions of students and ultimately helped to reshape the nation's social and economic fabric. CTE in today's schools originates from the

1862 Morrill Land-Grant Colleges Act. The author of the Morrill Act, Congressman Justin Morrill established that the bill would allow young men to dedicate time to classical studies along with technical education (Stone, 2014). The Morrill Act did not provide for colleges to which African-Americans could attend until the Second Morrill Act.

The “Maintenance Act,” as referenced by Gordon (2014, p. 60), was passed to create a system of grants to include African-American institutions (Gordon, 2008, p. 60). The Morrill Acts shifted the focus of education from exclusively classical studies to more applied studies which prepared students for the world they would face outside of school (U.S. National Archives and Records Administration, 2015). As the world prepared to enter a new millennium, manual training was about to be replaced. The mid-1800s was marked by population growth and the Civil War, which placed heavy demands on production. Manufactured goods increased trade, which created demands for improvements and more innovation. This period of technology moved the artisan to the level of a technician. There was no social consciousness on the part of the employer during this time. (Gordon, 2014, p. 20).

Wirth (1972) reported the manual arts training movement continued to grow and attract students through mid-century. Even “colleges such as Harvard and Yale were established to prepare persons for the ministry and other professions. This type of education was not viewed as particularly practical either by or for the general populace. Agriculture and industry were the two great

resources of the nation, and technically trained workers were needed to develop their potentials” (Gordon, 2014, p. 74). Gordon reported in 2014 that “the greatest stimulus to the manual training movement, however, was the Russian exhibit at the Centennial Exposition in Philadelphia in 1876” (p. 17). The Centennial was rumored to have inspired Massachusetts Institute of Technology President John Runkle to expand facilities for the engineering students and to develop a School of Mechanic Arts in 1878 (Gordon, 2014).

Manual training had been widely accepted, according to Foster (1997, p. 75) since 1876, when manual training seems to have been noticed by a few influential Centennial show planners. In 1918, manual training began to make way for federally-funded vocational education. For approximately 15 years, the educational philosophy was to raise children by freeing their capabilities and letting them “learn by doing” (Foster, 1997, pp. 3, 4).

Also, moving from traditional courses which were exclusively classical or manual training courses which focused more on applied studies, Dr. Charles A. Prosser, the first National Director of Vocational Education, developed sixteen theorems which established the baseline on how to build a successful career technical education (CTE) program. Although attempts have been made throughout the years to revise or improve on Dr. Prosser’s Theorems, there have been no successful revisions. As California moves forward, expanding and improving programs throughout the state, using these directives could work well to inform new perceptions. California Total funds for \$500 million have been

made available to California school districts, county superintendents of school, charter schools, and community college districts in the form of one-time competitive grants. (Prosser and Quigley, 1949).

Dr. Prosser's Sixteen Theorems on Vocational Education provide a sound basis for vocational philosophy:

1. Vocational education will be efficient in proportion as the environment in which the learner is trained a replica of the environment in which he must subsequently work.
2. Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools, and the same machines as in the occupation itself.

These first two statements can be effectively implemented when student-teacher ratios are advantageous for both parties, and when the training environment closely mirrors the actual place of employment. The perception of the value of CTE courses which are operated by these dictates would be positive. A supportive, competent environment would be the message.

3. Vocational education will be effective in proportion as it trains the individual directly and specifically in the thinking habits and the manipulative habits required in the occupation itself.
4. Vocational education will be effective in proportion as it enables each to capitalize his interest, aptitudes, and intrinsic intelligence to the highest possible degree.

5. Effective vocational education for any profession, calling, trade, occupation, or job can only be given to the selected group of individuals who need it, want it, and can profit by it.
6. Vocational training will be effective in proportion as the specific training experiences for forming the right habits of doing and thinking are repeated to the point the habits developed are those of the finished skills necessary for gainful employment.

In the case of the third through the sixth statements, it is appropriate to highlight that the emphasis and the benefit to students is the objective of the acquisition and application of thinking skills, not just the physical skill necessary to manipulate tools.

7. Vocational education will be effective in proportion as the instructor has had a successful experience in the application of skills and knowledge to the operations and processes; he undertakes to teach.
8. For every occupation, there is a minimum of the productive ability which an individual must possess to secure or retain employment in that occupation. If vocational education is not carried to that point with that individual, it is neither personally or socially effective.
9. Vocational education must recognize conditions as they are and must train individuals to meet the demands of the "market" even though it may be true that more efficient ways of conducting the occupation may be known and that better working conditions are highly desirable.

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

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

The seventh through the tenth declarations have the vital need for complete exposure to the real job in common and the important element of the instructor personally having performed all of the functions of the job, as well as studied the topic for mastery of the information.

12. For every occupation, there is a body of content which is peculiar to that occupation and to which has practically no functional value in any other occupation.

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

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

The next to the last series of Dr. Prosser's words to the wise, revolves around the idea of knowing, irrefutably, the how and why of the job. In those admonitions, the owners/operators of the training facilities are strongly advised to be thorough and cautious when sending trainees out into actual

installations. It is imperative that the interns or apprentices be suitably familiar with the environment to which they are entering to not only be successful but also at least equally important, be safe.

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

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

Dr. Prosser's final two edicts are a caution to the operators of the training; whether it be manual arts training, vocational education or career, and technical education, the message is the same: to make (money) progress, care must be given to the level of ongoing investment. Just as it is today in classrooms all around the nation, without an authentic function, the time and effort invested would be better spent in another endeavor. The perception assigned to a program that is attempting to promote despite underfunding would be a negative perception and probably not worth the time or money.

Prosser's Theorems give form and substance to CTE through the practicality of the advice and the depth of the understanding of the application. In California, practical advice and understanding have been addressed with the release of the Common Core State Standards in 2010. The Common Core Standards add rigor and relevance to the existing State Standard Framework.

California 's Common Core Standards depend upon the ability of the instructors to connect the real and academic worlds. Adhering to Prosser's Theorems may improve the effectiveness of providing practical career advice. Also, to increase the substance of CTE curriculum, across all subject areas.

California wrote criteria for an additional credential for CTE teachers. The new CTE credential stipulates expectations for a minimum level of rigor and relevance. The addition of this supplemental credential is intended to ensure the most highly skilled are teaching CTE and is likely to increase the perception of the courses. Experiencing the phenomena of heightened expectations of educators, the expansion of instruction that could reasonably follow and the advances in student success that could occur as a result may improve core-subject teachers' perceptions of the value of CTE.

Education for the Industrial Revolution – 1900 - 1949

Gordon (2014) stated that at the turn of the 20th century, the mood of the general population was unhappy. People were displeased that only 8% of the youth were graduating from high school and that while almost all white males went to college, the females went into white collar work. According to Plawin (as cited in Gordon, 2014). Proponents of vocational education argued for a broader curriculum to better prepare for the new industrial age. Financial funding was about to be available (Table 2).

Table 2

Timeline of Funding of Federal Vocational/Career Technical Education

Legislation

Year Enacted	Title / Responsible Party	Description / Purpose
1917	Smith-Hughes Act	1st Fed. Money for high schools
1918	Smith-Sears Act	WWI veterans
1920	Smith-Bankhead Act	Rehabilitation
1934	George-Ellzey Act	Agriculture, home economics, trade, and industrial programs
1935	Bankhead Jones Act	State agriculture experiment stations
1936	George Deen Act	Education - \$12 million annually Marketing - \$1.2 million annually
1946	George-Barden Act	Development - \$28.5 million annually (Replaced George-Deen)
1958	National Defense Education Act	Technical programs
1961	Area Redevelopment Act	\$4.5 million annually through 1965
1962	Manpower Dev and Training Act	Training underemployed adults
1963	Health Professions, Ed. Asst. Act	Teaching facilities and student loans

Early in the 1900s, legislation was passed establishing vocational funds for teacher professional development, research opportunities, and to enhance and extend vocational education. The Smith-Hughes Act of 1917 was the first vocational education act for high schools, and provided for, among other things, “teacher training” (Gordon, 2014, p. 447). The National Association of Manufacturers (NAM) produced a report in 1905 identifying the failure of the apprenticeship system along with high dropout rates and recommended the creation of a system of trade schools (Gordon, 2014). Further recommendations were made in a report in 1912 to provide for “the administration of the (trade) schools by a coalition of business and labor to ensure that industrial education not be corrupted by educators the way manual training had been” (Gordon, 2014, p. 85). The report further recommended using the Morrill and Hatch Acts federal funds to improve industrial education as agricultural education had been improved with the Hatch Act of 1887. Each state was provided for \$15,000 to each state for the development of agricultural stations Wirth (as cited in Gordon, 2014). Throughout the evolution of career technical education (CTE), several groups of the population were excluded, including African-Americans, women, and those with special needs. An advocate for the African-American student, Nathan B. Young was devoted to a struggle against the assumption that African-Americans should only receive vocational education (Holland, 1943). Having graduated from Talladega College and Oberlin, Young held a series of prominent positions eventually leading to the presidency of Florida Agricultural and

Mechanical College from 1901 – 1921, where, by strategically manipulating federal and state funds, Young built a genuine, academic college with a strong, traditional curriculum. Other schools had been started as well. In 1866, General Samuel Chapman Armstrong began to develop a school with the philosophy that all students were expected to work for their tuition. This began the manual labor movement in America (Gordon, 2014).

Along with several other bills, it helped to define post–Civil War America. Despite the advances that allow students to learn more than just career skills, there are individuals who still base their evaluation of the value of vocational education on the growing phenomena which state that only the socioeconomically challenged students can benefit from vocational education. Present day integration of the curriculum incorporates academics with vocational training and provides for the addition of soft skills such as public speaking, critical thinking, and problem-solving. The changes that can come to CTE through curriculum integration have the potential to inspire core-subject educators to recognize and appreciate the level of value brought to an academic course. By engaging in dialog with other educators, core-subject teachers could begin to acknowledge and understand the significance of CTE as an effective instructional strategy. Further discussion has the potential to enlighten the discussion of the phenomena they collectively experienced.

By 1910, vocational education was already influencing business leaders, government, unions, and the educational system (Cuban, 2001). Issues of the

economy, education, and issues of society contributed to the development of CTE, beginning with the process used in colonial times for establishing the practice of apprenticeship (Gordon, 2014). However, after World War I and the resulting reduction in numbers of immigrating skilled laborer/artisans, it became necessary to develop a system by which America could meet its own needs for tradespeople, (as cited by Aliga et al., 2012). The money used to fund vocational education programs originated from the federal government with the passage of the Smith-Hughes Act of 1917 (Webb, 2006). The first vocational education act for high schools, the Smith-Hughes Act “provided money for training in agriculture, home economics, trades, industry, and teacher-training” (Gordon, 2014, p. 447).

Additionally, Martinez (2007) found that The Smith-Hughes Act of 1917 called for a curriculum that would better meet the needs of working-class students who were not intended for the professions. Kincheloe (as cited in Martinez, 2007) discussed the debate between Charles Prosser and John Dewey on the philosophical basis of vocational education. Prosser believed that academically stronger students were better matched with a traditional academic curriculum; as opposed to the students who did not fit that curriculum and instead were a better match for vocational curricula. The separation resulted in the form of tracking. Dewey, on the other hand, promoted vocational education for all schools (Gordon, 2014). These arguments about CTE are still ongoing in the 21st century.

Changes to vocational education came about because of World War I. Mechanics were needed by the army along with other technicians such as those who could work on gasoline engines and operate radios. At this time, a pre-college program was implemented by the Federal Government and was carried through the Great Depression up to World War II (Seidel, as cited in Gordon, 2014). Over 400,000 civilians and approximately 207,000 military personnel were trained for the needs of World War II. The 2nd World War marked the beginning of the inclusion of women in welding, aircraft mechanics, and other traditionally male-only industries, (McClure, Chrisman, & Perry, as cited in Gordon, 2014). “The two major benefits that came from the effects of war training from World Wars I and II, the Korean conflict and the Vietnam War were first, that the country became aware of the need for vocational education and that second, vocational education was not simply a means by which children could be kept in school, but a viable option for anyone needing to prepare for life (Gordon, 2014, p. 95).

Wonacott (2003) wrote that even someone who is committed to work-based learning would agree that the particular form of vocational education that had been the most prevalent in the last century was flawed; it was class-based and often established on less-than-perfect estimates of the abilities, talents, and prospective jobs of those for whom this form of education was designed. Wonacott (2003) continued by commenting that vocational education training

became an appropriate antidote to the superiority of Japanese and German manufacturing.

The Smith-Hughes National Vocational Education Act of 1917 provided funding for schools to provide learning that would promote a skilled workforce of trained workers for semi-skilled jobs by requiring specific skills training through the students' enrollment in college or secondary education (Gordon, Daggett, McCaslin, Parks, & Castro, 2002). Smith-Hughes established vocational education as part of the U.S. public school system. The Smith-Hughes Act passed as part of a policy to better position the United States in the global economy in the newly industrialized world of the 20th century. (Kantor, as cited in Aliaga et al., 2012, p. 2). As it was, the Smith-Hughes Act of 1917 provided for an alternative high school education from what was typical at the time. The Smith-Hughes Act provided for state boards to oversee the expenditure of federal funds and to ensure compliance with the program was consistent. (Wonacott, 2003) The Smith-Hughes Act also established state boards to oversee traditional education as well. The intent was to separate vocational students from those in the classical curriculum and prepare them for factories, farms, and homes. Despite ongoing discussions about the democratic way in which students were assigned classes in comprehensive high schools, "by and large these institutions were organized in ways that perpetuated existing racial and economic stratification, with low-income and minority students disproportionately concentrated in the vocational track" (Schwartz, 2014, p. 25).

Fortunately, a change in educational reform occurred in the 1960s with the passage of the Vocation Education Act of 1963. The government stepped in to ensure that women, the disabled, and African-Americans, along with the poor were no longer excluded or treated unequally but were being equitably served. A shortage of workforce-ready individuals, along with a decreased propensity to accept the inherent value of vocational education programs, became the norm (Gray, 2004; Bray, 2011). Vocational education has been so disparaged that it's few advocates resorted to giving it the new name of career technical education (CTE). Later, came the Carl D. Perkins Act of 1984, which was significant legislation passed affirming the legislators' belief that CTE was a key contributor economically and scholastically.

CTE, as this work-based program continues to be known, originated early in the 20th century. Apprenticeships were common for learning a trade and utilized widely (Gordon, 2014, p. 6). Roberts (as cited in Gordon, 2014) said that apprenticeships were a valued system of training. This study will validate that the training under the direction of a master tradesman is still an effective educational method. The value in learning under the studied eye of a master tradesman reinforces the reasons for maintaining CTE courses in secondary and postsecondary schools, colleges, and universities. To maintain the integrity of apprenticeship programs, Gordon (2014) explains that a federal committee was created in 1934, and by 1940, twenty-four states had enacted apprenticeship laws or formed apprenticeship councils. The councils and laws act as part of a

formal registration program for apprentices. “Today’s 21st century Registered Apprenticeship program offers an excellent pathway for CTE graduates to become economically self-sufficient” (Gordon, 2014, p. 11). The success of the Registered Apprenticeship may become part of the complex phenomenology through which core-subject teachers’ perception of the value of CTE could be positively affected.

A shift in American awareness of the need for vocational education was among the changes experienced in the 30s and 40s. In Weingarten (2015), “Nicholas Pinchuk, chairman and CEO of Snap-On Tools, says CTE ‘is the single best weapon’ companies have in today’s global competition for jobs “But for the most part during the 20th century, industrial educators, in policy and practice, committed to ideologies of commercialism,...and aligned their points of view...with businessmen and industrialists” (Petrina, 1995, p. 78).

With a CTE program, a student who might otherwise have wondered about the value of school could see a direct connection between graduation and a good job (as cited in Gordon, 2014). The change caused the public to accept that “vocational education was part of the preparation for living that would be needed by all individuals” (Gordon, 2014 p. 83). The Serviceman’s Readjustment Act of 1944 (The G.I. Bill) was to assist veterans in attending college. Post-World War II legislation, the George-Barden Act of 1946, which replaced the George-Deen Act of 1936, was passed to authorize an

appropriation of \$28.5 million annually for World War II veterans to receive employable skills training.

During this same period, the larger circle of influence of the educational community was having a significant impact on the state of the American Indian culture. Hudson, reported (as cited in Gordon 2014, p. 193) that “a study which revealed deplorable living conditions on the reservations, led to the passage of the 1934 Indian Reorganization Act.” This Act marked the first time that the federal government recognized the American Indians’ right to self-govern and provided input as to the education of the tribes. Federal funds were also a strong influence in the direction vocational education grew. The Smith-Hughes Act favored a segregated curriculum which has led to a separation that defines CTE today; Educator associations, student leadership organizations, and trade education segments have always been segregated, and the structure influences the success of the vocational education programs. This influence then acts as a collective lived experience and becomes a phenomenon that may affect the perceptions of core-subject teachers on the value of CTE.

Changing into the Age of Information – 1950 - 1969

Vocational education curricula were founded on the idea of integrating apprenticeships with classroom instruction as part of the public schools’ offerings at the beginning of the 20th century. Originally vocational education began as an agreement to place individuals in an apprenticeship to learn a skilled trade before entering the workplace (Lynch, 2000). Teachers established standard

procedures and policies which directly applied to the needs of several industries such as agriculture and manufacturing. The teachers' policy of establishing procedures in reaction to industry resulted in the education system becoming the primary supplier of routine-adapted factory workers.

In contrast to the perception that vocational education was only for the poor or unmotivated, executive secretary of the Association for Career and Technical Education (ACTE), Major Dennis Mobley accepted and promoted an idea advanced by the 1962 Report of the Panel of Consultants on Vocational Education – *Education for a Changing World of Work*. Barlow and Burkett (as cited in Gordon 2014, p.49) found the concept held that vocational education should be for all people:

The heart of Mobley's philosophy that career technical education (CTE) was not something separate from education in general; that career technical education must be available to all people; and that youth groups must be considered part of the total career, and technical education program was a testimony to the reason for his beliefs enduring.

Vocational education developed into a program that would, in the future, make available industrial and agricultural workforce preparedness programs in schools. This phase of technological development was often referred to simply as automation Buckingham (as cited in Gordon, 2014 p. 20). Educational trends during the 1960s showed industrial arts unable or unwilling to move toward a more liberal conception of education and therefore continued to experience

declining enrollment, reported Button and Provenzo (as cited in Foster, 1997). Foster (1997) wrote, "Once again, public schools were under proverbial attack. This time, the criticism was from the left." Despite the waning enrollment, the Federal government continued to pass legislation in support of CTE. Working together, the Health Amendments Act added practical nursing and health occupation programs to the list of vocational programs eligible to receive federal funds. Additionally, the George-Barden Act Fishing Amendment provided for vocational training in fishing occupations. Vocational education had developed beyond the perception that students lacked initiative or were academically unable when boys were being dumped into high school metal or wood shop classes, and girls were being sent into home economics. While the number of 17-year-olds bound for four-year universities doubled to 69% between the years 1981 and 2003, the Council of Economic Advisors projected faster-growing demand for graduates with two-year technical college degrees or specific training (Mulcahy, 2007). Mulcahy (2007) further explained that emphasizing the change in direction for academic and career training was the purpose. This shifted the focus from the dwindling manufacturing and industrial business sectors. A less obvious philosophy of change outlining the history of differentiated high school curricula became more apparent through additional studies.

Lewis and Cheng (2006) found that "even after the system of vocational education began to undergo reform, the socioeconomic status of the student

predicted both the dominant track of schools and the dominant destination of the graduates” (p.4). Lewis and Cheng (2006) concluded that students knowing where they might end up would choose a vocational track over general education.

A common belief is that CTE is part of the tracking process. Tracking psychology is a strongly held belief for many teachers. Lewis and Cheng (2006) found that if school professionals believe that a specific type of student is destined for a four-year degree and another type of student is destined for the labor market, that their beliefs might shape school policy and curriculum processes such as tracking. The theory of the “self-fulfilling prophecy” was originated by Merton (1948) who explained this as a false perception of a given situation which initiated a new behavior, resulting in the erroneous idea coming true.

With the initial passage of the Carl D. Perkins Vocational and Technical Education Act in 1984, Congress established the incorporation of “special populations” (LaFollette, 2011). Congress was able to, then attach federal funding to serve the needs of an underserved population. Congress, therefore, turned its attention toward access to vocational education programs which would serve the disabled, single parents, displaced homemakers, economically disadvantaged, academically disadvantaged, English language learners, and also provide gender equity. To help reach the variety of special needs as well as general population students, Career and Technical Student Organizations

(CTSOs), include programs that are integral to the industry that may be associated with CTE and can serve CTE students and teachers in one or more of the 16 Career Clusters, as identified in The National Career Clusters Framework. “CTSOs enhance student learning through contextual instruction, leadership, and personal development, applied learning and real-world application” (Gordon, 2014, p. 444; National Coordinating Council, 2016, p. 2; Neumark, 2007; Shanklin, 2014, p. 2). The CTSOs also serve as student ambassadors of CTE. Experiencing the impact of CTS’s on students, particularly those students who have not established a direction, can create a phenomenon of influence which may positively affect core-subject teachers and others for their effort.

Competition for the Global Market – 1970 - 1999

The competitive advantage of the United States mass production over the rest of the world shifted in the early 1970s, according to (Carnevale, 2008). Quality expectations for mass-produced, factory-grade, standardized goods were intensifying. The continually rising quality of market goods and services was made possible by the successful advances in technology. The global economy is markedly different from what it was 25 years ago. The technological revolution has made an impact that is perhaps greater than the industrial revolution. As a result, employers are demanding increasingly more skilled workers. Rouse and Kemple (as cited in Haussman, 2012) wrote, the impact of globalization is forcing less skilled workers in the United States to compete with

other low-skilled workers throughout the world Rouse and Kemple (as cited in Hausman, 2012).

Grubb and Lazerson (2005) reported that changes in high schools around the beginning of the 20th century started to move away from emphasizing traditional core-subject education to the creation of vocational tracks. The reduction in apprenticeships is thought to be the impetus for those changes. Formal schooling was a method to improve the antiquated apprenticeship system.

Vocational Education began a metamorphosis because of the demands that the global marketplace placed on American manufacturing. Perkins, I required a national assessment of vocational education to be conducted, and a formal report be submitted to Congress (Scott & Sarkees-Wircenski, 2008). Perkins, I (1984) was amended and extended by Congress with the passage of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II). This version of the legislation provided the most funds ever to CTE and held the states responsible for teaching the needed skills and competencies. Efforts to promote both integrations of academic and vocational instruction and articulation between secondary and postsecondary education were stimulated by the Tech-Prep Education Act in Perkins II. Perkins II (1990) was reauthorized through the Carl D Perkins Vocational and Technical Education Act of 1998 (Perkins III). Perkins III was Congress' reaction to the national concern that American students were graduating from high school without being literate or

competent in mathematics. Perkins III continued the Tech Prep effort from Perkins II and gave more support for career guidance. The 109th Congress passed the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) which provided \$1.3 billion in federal support of career technical education programs across America. At the same time, “Vocational education ha(d) been so discredited that it's few proponents changed the name to CTE” (CEA Institute, 2010, p. 1). The Carl D. Perkins Act of 2006 adopted the term CTE to be used instead of vocational education throughout the country which permanently changed the name from vocational education.

As leaders from both the private and public sectors grapple with the changes in our rapidly evolving global economies, the methods of educating our youth are under increased scrutiny. Career technical education (CTE) offers opportunities for those who are committed to change. Through real-world application, students can experience actual work environments. When the School-to-Work Opportunities Act (STWOA) passed in 1994, it was perceived to be an outstanding mechanism through which students could be helped to better prepare for careers and college by experiencing work-based learning opportunities. Gordon (2014, p. 443) reported: “The legislation evolved out of studies revealing that, compared with our competitors, the United States lacked a coherent system to connect education with employment in the part of the labor market where four-year college degrees are not required.” CTE that incorporates internships is best equipped to deliver these opportunities. Unfortunately, when

the nation, including California, shifted its attention away from academic instruction integration and became more focused on curriculum standards, funding for school-to-work, (or as it is commonly called in California, school-to-career), was reduced to 8% of the total funding for CTE programs that were serving California high school students (California Department of Education, 2005). Lewis and Cheng (2006) claim “Over the past two decades, as a reaction to *A Nation at Risk* (National Commission on Excellence in Education, 1983), high school vocational education in the United States has undergone reconceptualization, the primary change being to make it more compatible with the academic curriculum” (p. 67). When the U. S. Congress passed the Carl D. Perkins Vocational and Applied Act of 1990, the possibility of change became an official mandate. Lewis and Cheng (2006) cite two studies from 1991 that with the reconceptualization of high school vocational education “came the integration of academic and vocational education and with it, the opportunity for the subject to emerge from social isolation in the high school” (as cited in Lewis & Cheng, 2006, p. 68).

Traditionally, no consideration would have been given to the idea of integrating CTE curriculum. The practice has been to identify at-risk students through test scores and grade records and to encourage them to enroll in a vocational education course of the students’ choosing. The expectation is that in a fresh learning environment, the student will adopt an anticipatory attitude

toward the possibility of success in school. The student's optimism leads to improved self-esteem, which is hypothesized to then lead to further successes.

In seeking to encourage a student toward higher self-esteem, it is necessary for the education system to begin to change. Change is slow or non-existent in the system of public education. Haussman, Grub, and Lazerson (2005) summarized what they referred to as the Education Gospel in the following:

The Knowledge Revolution (or Information Society or the Communication Revolution) is changing the nature of work, shifting away from occupations rooted in industrial production to occupations associated with knowledge and information. The transformation has both increased the skills required for new occupations and updated the three Rs, enhancing the importance of "higher-order" skills, including communication skills, problem-solving, and reasoning. (2005, p. 298)

A recent school reform movement was prompted by the 1983 publication, *A Nation at Risk*, (National Commission on Excellence in Education, 1983). Research conducted by Lynch (2000a) concluded that there was not a single statistic, survey, or anecdote that effectively framed the negative public sentiment towards the poor results from American high schools. He identified *A Nation at Risk* as having the greatest probability to be the seminal event that framed the call for reform. In that report, references were made regarding the

rising tide of mediocrity of American education. It called for dramatic reforms in education primarily directed at high schools.

Orozco and Cauthen's study (as cited by Wheary & Orozco, 2010) found that nearly 60% of young community college students in either certificate or associates degree programs were required to take developmental coursework to make up for inadequate college preparation before they could enroll in college-level courses. Additionally, American students have failed to make appreciable gains in math, science, and literacy compared to other advanced industrial nations (National Commission on Excellence in Education, 1983). The report goes on to explain the dynamics of global competition. When educated and productive workers in other countries can compete with the United States for lower wages, the losses to our economy become alarming. American workers are in direct competition with workers throughout the world. The recent school reform movement has rehashed some of the old arguments, and in effect, attempted to reinvent the wheel. A more constructive alternative would be to initiate the process to integrate CTE curriculum across core-subjects.

Friedman (2006) agreed that the system of public education in the United States has not succeeded in stimulating young people into wanting education and careers in math, science, and engineering. In response, "Project Lead the Way" (PLTW) (National Governors Association. Center for Best Practices, 2007, p. 7) was developed in 1997, to create a pathway for science, technology, engineering and math (STEM) professionals to design a system of curricula,

professional development, and assessment. According to Frant (2008), the United States' system of education ignores high school graduates who do not attend college. Our education system has not generated the necessary reforms to help high school dropouts and non-college bound students acquire the skills to be productive members of society. Nowhere in the system is there a process by which a student at the top of a certificate program could be recognized as the high achieving academic students are. This inequity continues throughout the American system of education and perpetuates the legacy of CTE being a program for the worthless. Carnevale (2008) points out that since high schools seldom have terminal CTE alternatives, postsecondary education and training will become ever more essential. High school principals admit that without a career technical education programs, they would not be able to offer career readiness opportunities to a significant number of students (Gray, 2004). Leaders, superintendents, and principals wield considerable influence on the employees that they hire. Counselors, especially those at the high school level, also have a powerful influence on students and their futures.

21st Century Skills for Success – 2000 – Present Day

Kumari (2014) claims:

The new millennium has been characterized by an unprecedented breakthrough in knowledge and technology...The 'Delores Report' (UNESCO, 1996) sets out an agenda ... which implies that if significant changes are needed in preservice teacher education programs to select

and prepare a new generation of teachers equipped with the knowledge, skills, and values to help their culturally different and their socially disadvantaged students to learn, to reduce conflicts peacefully, to respect each other's dignity and cultures and to become socially responsible citizens. (Kumari, S. N., 2014, p. 31)

To accomplish the task of encouraging students to prepare for the responsibilities of adulthood, states, and school districts should make a greater effort to close the achievement gap.

Recommended reforms are:

1. An orientation toward workforce preparation for a majority of the secondary school-body,
2. Emphasis on developing cognitive and technical skills in an integrated context,
3. Preparing nonbaccalaureate students for postsecondary education in community colleges and technical institutes through arrangements such as Tech Prep programs, and
4. Student participation in work experience programs (Gordon, 2014, p. 255).

Gordon (2014, p. 248) states that "teacher quality has increasingly become a focus of policymakers' interest in regular K – 12 education, but less attention has been paid to how well career technical education (CTE) teachers are being prepared for their jobs." A significant amount of research has shown that preservice teacher education has a substantial impact on the early career of

teachers' teaching skills and their philosophies of teaching. In response, qualifications for new CTE teachers have been suggested at the federal, state, and local levels. States and individual school districts are reacting to reforms required by Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) and implementing new expectations for teacher preparation.

The reforms for which teachers will need to be prepared include:

- Teacher preparation programs should ensure that teachers possess a good background in pedagogical knowledge, subject-matter knowledge, and general knowledge.
- Programs should be organized around mission, not titles. Programs are often downsized or altered due to the specific area they cover. By focusing CTE on the mission of preparation and instruction, more fields can be encompassed into a larger program structure, providing unique instruction in multiple areas.
- Alternative licensure models should be developed. With the large shortage of teachers in CTE, programs need to attract more prospective teachers (Maurer,2001)" (Gordon, 2014, pp. 257–258).
- School reform is ongoing and continues to be an important subject.

Programs such as carpentry are evolving into programs that now educate students for a variety of careers throughout the construction industry (National Governors Association Center for Best Practices, 2007). Newer CTE programs, like computer networking and pre-engineering, have been created to educate

students for careers in the scientific and technology industries. As the worldwide market ignites the flame of competition, the United States has not been able to reestablish its competitive advantage. As curriculum integration has become widely incorporated, additional courses are available at postsecondary campuses. CTE courses are offered at 2-year and 4-year colleges and universities. They are also offered online, through trade schools, through private vocational schools as well as traditional postsecondary institutions. National Governors Association Center for Best Practices (2007) reports that “the new CTE strongly encourages students to attend a postsecondary institution by linking high school programs with those at the community college level” (p. 10). Offering dual enrollment or concurrent enrollment courses are increasingly successful for both the high school offering the courses and the local community colleges providing articulation to allow the students to receive dual credit.

“At the secondary level, career technical education is a large and complex system”(Gordon, 2014, p. 225). Until recently, most programs were not designed to teach academic skills. Early research on the effect of CTE on academic performance was not encouraging. Students enrolling in vocational education courses that lacked academic elements did not see an improvement in their academic achievement. When students take a curriculum that incorporates rigor and relevance, they perform better on standardized academic tests. The decisions and recommendations made to students by classroom instructors have a powerful impact on the students’ choice to complete their CTE program.

Although, in the past, CTE has been reputed to be a less challenging course of study, “research proves that CTE engages and motivates students by offering them real-world learning opportunities, leading to lower dropout rates and greater earnings for high school graduates. When CTE courses also incorporate more academic rigor, research shows that student achievement significantly increases.” (National Governors Association. Center for Best Practices, 2007, p. 1)

Wonacott (2002, p. 2) reported that taking three CTE courses for every four-academic courses; the dropout rate is cut by up to four times more than for those students only taking academic courses:

Increasing numbers of high schools are offering dual enrollment or concurrent enrollment classes in partnership with the local community college. Dual enrollment classes are taught on a high school campus, by fully credentialed high school teachers (who meet the qualifications to teach at the community college level), exclusively to currently enrolled high school students, and allow the student to receive dual credit.

Concurrent enrollment is also an articulation with the community college and offers the high school student dual credit for the course. The difference between dual and concurrent enrollment is that concurrent courses are open to regular college students and are still taught on a high school campus, but the instructor is a professor with the community college.

Grubb and Lazerson (2005) discussed the “fictionalized” second-tier regional universities and the move of academic majors such as business, health occupations, engineering, and information technology toward a focus on occupations. Grubb and Lazerson (2005) also included that community colleges are more focused on occupational preparation. A keynote address, “CTE at a Crossroads” (Daggett, 2009) succinctly defined the current position of CTE. Daggett called for CTE to bring itself to academics and stop isolating the culture of CTE from the rest of education. Kelly and Price (2009) reported Levesque's research that over 88% of comprehensive high schools in the United States offer at least one vocational program to more than 92% of the students who attend public schools.

Integrating academics and CTE along with an increased focus on readiness skills for the workplace and more effort on planning and preparing for transitioning into postsecondary education was also suggested by Lynch, (2000b). The 2006 reauthorization of Carl Perkins reflected this thinking. Stone reported (as cited in National Governors Association Center for Best Practices, 2007, p. 5) that [his] “research findings support a new paradigm; CTE that combines rigor and relevance promises a school redesign strategy. Today’s schools can no longer look at CTE as separate from the balance of the curriculum; rather, they need to be integrated into the curricular framework.”

Kelly and Price (2009) looked at the hypothesis that vocational education programs capture the attention of disengaged students and stimulate them with

a clean slate, an opportunity to start over. For the past 20 years, it has been said that the individuals who were less likely to choose postsecondary education as their first choice, after high school were underachievers and not competent enough to successfully attend postsecondary institutions. However, Berliner and Biddle (1996, p. 2) wrote that “the negative effects of vocational education may be likely because of not enough time in the schedule to take additional advanced academic courses. The limit on academic courses can be the explanation for an achievement gap; not the fact that students took vocational education classes.”

In the last two decades, the “new vocationalism” became more closely aligned with academia. The new vocationalism allowed for a system to connect students with real-world and technical and community colleges. Martinez (2007) presented John Dewey’s 1915 substantial effect on the modern-day practices of CTE. Lewis & Cheng (2006), stated that focusing not on specific skills but on generic and on career pathways reflects the ideals of vocationalism as articulated by Dewey, as he pondered the new vocationalism. Dewey promoted the philosophy of Democratic Humanism, which emphasized that vocational education was beneficial for all students. The new approaches provided structure for students and brought them in contact with the workplace and with trade schools, 2-year, and 4-year colleges and universities. He supported the plan to teach students through the vocations instead of teaching only the vocation or trade. Dewey saw value in joining the curriculum of academics and

vocational education and focused on problem-solving, global perspectives, and understanding of the role of work in our lives.

Kelly and Price (2009) identified five key elements of vocational education to improve students' social-psychological adjustment in school.

Those elements are:

- Experiential learning
- Multidimensional performance data
- Teacher-student mentoring relationships
- Choice
- Career focus

Kelly and Price (2009) proposed that these components represented a chance or a clean slate for students to begin again with a more positive attitude. The purpose of a clean slate is to compensate for low self-efficacy or low self-worth resulting from lower achievement levels in earlier grades. Vocational education can offer a new and different learning experience and enable students to re-engage in their education.

Partnerships between business and the schools make career exploration a feasible option for many high school students. Paid and unpaid internships are the primary vehicle for this individualized investigation. Internships also offer the opportunity for innovation. New for CTE program improvement is the concept, introduced by Pellegrino and Hilton (2012), of deeper learning. Deeper learning is defined as “occurring in a positive learning environment where students gain

the ability and the strength to transfer cognitive skills from one event or course to another” (p. 6). Evaluation of these methods will also continue to evolve.

The School-to-Work Opportunities Act (STWOA) of 1994 served as an example of a positive impact and was an effective tool in providing for a highly skilled workforce. When it passed, it was visualized as a comprehensive effort to help students better prepare for careers and college by providing work-based learning experiences. The legislation evolved out of studies revealing that, compared with our competitors, the United States lacked a coherent system to connect education with employment in the part of the labor market where 4-year college degrees are not required. The program expired in 2001, and now the states have the responsibility to fund the effort which are operated through foundations in several states. (Gordon, 2008, pp. 443–446). In addition, a program currently being run is Linked Learning.

A 1998 University of Michigan study found that “high-risk students are 8 times less likely to drop out in the 11th and 12th grades if they enroll in a career technical program instead of a general program.

Linked Learning is a specific program within CTE.

Linked Learning is a program predominantly for incoming freshmen, Linked Learning is designed as an instructional strategy to introduce students to the variety of career academies available on high school campuses. The strategy is to develop career academies such as biomedical and health sciences and arts, media and entertainment. Each

academy is designed in such a way as to meet the academic course-taking requirements for admission to California's 4-year universities as well as to provide advanced technical preparation in a career area.

In 2005, the Job Training Act (H.R. 27), "Workforce Investment Act (WIA) Amendments of 2005 (S. 1021) was introduced to reauthorize the WIA" (Gordon, 2014, p. 130). The purpose of Senate Bill 1021 was to improve the workforce investment system created in 1998, under the WIA.

According to Gordon, (2014, p. 130), a few of the major themes of the WIA reauthorization provisions are:

- Increase flexibility to meet state and local needs
- Improve upon the existing one-stop career center delivery system to ensure that it can respond quickly and effectively to the changing needs of employers and workers in the new economy and can address the needs of special populations, including individuals with disabilities
- Encourage job training and employment services to be demand-driven and responsive to additional needs of employers, both large and small
- Improve access to services in all areas, including rural areas
- Reduce the number of required members on local workplace boards to reduce bureaucracy and encourage business involvement in local job training decisions
- Maintain the ability of local workforce areas to agree upon equitable contributions from partners for infrastructure funding

- Ensure individuals are placed in jobs, education, or training that lead to comparable pay
- Improve youth job-training activities by directing more resources to those out-of-school youth who are most in need of assistance
- Enhance assistance to youth ages 16 to 21 who face barriers to employment.

Career Technical Education – Currently in California

Career technical education (CTE) is defined as: A program of study that involves a multiyear sequence of courses integrating core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers (California Department of Education, 2005).

This section is written to identify California's core-subject teachers' perceptions of (CTE), while discussing the complex phenomena that have influenced these perceptions. Throughout the 20th century, job skills and serving struggling students was the focus of a type of vocational program in which a portion of a school's students would attend such classes such as wood shop or home economics. As early as 1917, in support of this type of program, California received government funding per the Smith-Hughes Act.

The oldest and largest vocational education program first came to California in the form of Regional Occupation Centers and Programs

(ROCPs) in 1967. Those regional centers were set up to train students in any one of more than 100 career topic areas. ROCPs were regulated by California law and required to offer courses in line with demands of the current labor market. The 1980s and 1990s saw a large increase in consumer-driven styles and services; in the 21st century these phenomena will continue to accelerate the rate of change and unexpectedness in the development of technology as well as markets (Gordon, 2014). During the 2003 – 2004 academic school year, ROCP enrollment was close to 500,000. This included approximately 165,000 adults and the balance high school age. Participants in ROCPs can earn high school and/or college credit. Another program in California is, Tech Prep: “Tech Prep education is a significant innovation in the education reform movement in the United States. Explained through Office of Career, Technical, and Adult Education Tech Prep was given major emphasis in the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. Seven specific joint in-service trainings of secondary and postsecondary educators began at that time. In addition, California Partnership of Academies was funded by the state to a total of \$23 million to support 269 Career Academies in 2004-2005. Tech Prep is an important part of California’s educational system.

Dichotomy between Career Technical Education and Core-Subject Teachers

Shanklin (2014) looked at the perceptions and values of secondary faculty and staff and found that when compared to career technical education (CTE) teachers there was a small difference in their positions with respect to 21st century skills. Theoretically, both CTE and core-subject teachers recognize that CTE is important to guaranteeing a successful transition from secondary to either postsecondary or to a career. Yet, at a time when educators were offered the opportunity to integrate CTE and core subjects, the educators reverted to the traditional position that CTE courses don't always prepare students for more than low-level positions in the workplace, and so, it is best to keep the two types of curriculum separate from each other. McNamara (as cited in Shanklin, 2014) reported findings which support the core-subject teachers' position. When *No Child Left Behind (NCLB)* became law, school administrators were forced to reduce or eliminate CTE, which "decreas[ed] the value and quality of CTE, according to Hausman" (as cited in Shanklin, 2014, p.3). McNamara (as cited in Shanklin, 2014) stated that employers were lamenting that youth are now attempting to enter the job market without such basic skills.

Terry (as cited in Turnipseed, 2008) reported that integrating academics and "CTE can improve students' academic and technical skills when it is a component of a well-taught curriculum. CTE has the ability to introduce students to an integrated curriculum and can help students get and keep a job" (p. 88) by

encouraging training and practice in interpersonal skills, similar to organizational skills and teamwork.

Teaching an integrated curriculum can be a challenging situation for some veteran, traditional-classroom teachers. States such as Colorado and California are making changes and increasing professional development to promote the integration of academic and CTE curriculum. In a study by Turnipseed (2008), California is making progress bridging the gap between CTE and core-subject teachers with regards to expanding the use of integrated curriculum. The value in providing a cohesive curriculum can be seen in a reduction in dropout rates. Students who are electing to participate in a CTE program and who are not intending to pursue a degree at a four-year university may be perceived to be choosing a less rigorous curriculum and as such be subject to systematic classification and placement known as tracking. “American high schools continued to function largely as sorting and selecting machines, identifying those students deemed to have the talent for higher learning and providing them with a rigorous academic education while expecting everyone else to enter the labor market directly upon graduation” (Schwartz, 2014, p. 25).

Perceptions of Career Technical Education

Perception is defined by *Webster's Dictionary* (McKechnie, 1977, p. 1330) as 1. “consciousness; awareness. 2. the awareness of objects or other data through the medium of the senses.” In recent times, Beach and Duncan (as cited

by Aliaga et al., 2012, p. 1) reported that perceptions or “concerns have been expressed regarding the effectiveness of our educational system, and of career technical education (CTE), in preparing high school students academically for their postsecondary endeavors.” Despite the advances that allow students to learn more than just career skills, there are still many negative perceptions of career technical education (CTE) Gordon, (2014) reports that CTE is different today from what it was just 10 years ago. “[S]tudents’ outcome goals for CTE were expanded from transition from school to work to transition from school to college or work” (Gray, 2004, p. 129). The negative opinion held by some educators is due “In large part, because CTE has been chronically neglected by American education leaders and policymakers ... there was a time when ‘vocational education’ (now, CTE) was a pathway to nowhere ... especially low - income and minority students were sent to low-paying, menial jobs” (Dougherty, 2016, p. 1). CTE is applicable for students at any level, college-bound or career-driven.

Findings from the study conducted by Kelly and Price (2009) revealed that students who participate in CTE come into the programs with lower grade point averages, lower self-esteem, and for many, a fatalistic perspective on math. Students are at-risk and will fail if not reoriented with an inclusive environment or program such as CTE. The recommendation is to offer students an opportunity to start over, and instead of going a few days per week there should be a plan to have a daily interface with other CTE students in the same

area of interest. In the U.S. economy, large percentages of young adults do not have the necessary skills and work ethics to obtain and hold jobs that offer entrance to a middle-class standard of living (as cited in Hausman, 2012). When compared to non-CTE teachers, little information can be found when attempting to identify what CTE teachers think of the contribution of CTE in relation to valuable 21st century skills. These skills, such as public speaking and adeptness with technology, help promote students to potential employers. Along with staff and faculty with supportive professional relationships, the changes will aid in the growth of CTE programs that are needed to train students for success in employment and postsecondary endeavors.

Plank, DeLuca, and Estacion (2008) acknowledged that CTE is not without its critics. This has been driven by federal budget debates that involve a focus on the core academic areas and the subsequent testing. They cite the old paradigm, which regards CTE as a dumping ground for unmotivated youth who face low expectations and outdated training. Yet Horn (2002) listed vocational education as one of the most successful reform initiatives in the 20th century. Research conducted by (Lynch, 2000a) concluded that at about 1990 into the end of the 20th century, career technical education gradually shifted in philosophy and practice. Those changes were towards rigorous industry standards, high academic standards related to general education requirements, an emphasis on technology, and general employment competencies or soft skills.

General Public

Two perspectives on vocational education were presented by House (1921). The first was to accept the present economic system with little criticism by fitting the child to the job. Based on John Dewey's work, the basis for the second perspective was formulated. This perspective proposed that all students study the vocations, which included, introducing students to the life of work (Dewey, 1916).

Many people have an overall negative picture of career technical education (CTE), based on the original definition of vocational education (Wonacott, 2003). A long-lasting perception is that vocational education is for the noncollege-bound. Data collected for comparison shows that 1 in 8 academic students take more vocational courses than vocational students do (Wonacott, 2000). Two reasons why the misconception regarding the negative impact a student will suffer by taking a CTE course instead of an academic class and parents who believe that a four-year degree is a guarantee for a place in the middle class are two reasons why uncovering the factors that influence our teachers' perceptions of the value of CTE is so important.

Public interest in the educational needs of the labor force were stimulated by a report directed by Governor William Douglas of Massachusetts in 1905. The report called for a greater dispersal of industrial intelligence and was key in developing the concept of "vocationalism" in public schools. Favorable public

interest possibly even contributed to the existence of the Smith-Hughes Act of 1917 (Gordon, 2014, p. 96).

This section further explores CTE as a leader in business, industry, and how the government seeks solutions to regain a competitive edge in the global marketplace. High school graduates who are ready for college and careers are sought after by business and industry. The potential to be college and career ready is in the availability of a variety of courses. Some schools offer an assortment of CTE, while others, as Hudson and Shafer reported (as cited in Gordon, 2008) offer only one occupation-driven CTE course and one standard-industry-driven CTE course. In 2014, Gordon wrote that in the late 1980s a wave of reform found many educators and researchers in favor of restructuring CTE. This supportive perspective elevates a positive perception of CTE and contributes to an overall increase in the perceived value of CTE. While this support is highly valued by those associated with CTE, the phenomenon of widespread dismissal is still experienced collectively by schools and teachers who offer CTE courses to their secondary students.

The current goal of career technical education is to prepare students for careers after graduation from high school or college (Gentry, Peters, & Mann, 2007). A current trend for CTE has been to become more expansive and inclusive (Martinez, 2007). The boundaries between college preparation and career preparation are reduced through student enrollment in contemporary CTE

(Vail, 2007). The objective of the new career technical education is to integrate academic content with occupational applications (Plank et al., 2008).

Administration

Common Core standards become the norm for evaluating courses and programs, teaching for transfer will become more prevalent. Teaching for transfer is the concept which considers the subject matter from the perspective of its components. For example, to a casual observer, auto mechanics and culinary arts may seem like completely different subjects, but on closer investigation, it is revealed both topics require similar math aptitude and technical writing comprehension. Either skill can be taught in a common course such as math, for learning unit conversion or measurement equivalents, or science for learning proper process protocol. Teaching for transfer is another method to transfer operational practices and procedures from one area of study to another. Hallinger et al., (as cited in Long 2008b) suggested that a principal's instructional leadership role can be divided into three dimensions:

- Defining the school's mission
- Managing the instructional program, and
Promoting a positive school learning climate.

Core-Subject Teachers

In the late 1980s, a wave of reform found many educators and researchers in favor of restructuring career technical education (CTE) (Gordon, 2014, p. 146). This supportive perspective elevates a positive perception of CTE

and contributes to an overall increase in the perceived value of career technical education. Despite this period of supportive regard for CTE, core-subject teachers have been less than enthusiastic about vocational education being integrated with general education. This has caused CTE instructors to experience disregard for CTE despite a growing body of evidence which shows the variety of benefits for society as a whole, schools, and the individual. A dismissive attitude on behalf of the core-subject teachers is only one instance of the phenomenon collectively experienced by career technical education educators. Shanklin (2014) looked at the perceptions and values of secondary faculty and staff and found that when compared to CTE teachers, there was little difference in their positions concerning 21st-century skills. Overall, CTE and Non-CTE teachers recognize that CTE is important to guarantee a successful transition from secondary to either postsecondary or a career.

Colorado is making changes and increasing professional development, as is California. In a study by Turnipseed (2008), California is making progress bridging the gap between CTE and non-CTE teachers. The value in providing a cohesive curriculum can be seen in a reduction in dropout rates. Turnipseed (2008) found that getting the students perceptions of student learning capacity may determine which classes and subjects were assigned. As a result, some students who were believed to be particularly intelligent and socially accomplished were placed in college-bound classes. According to Pellicer, (as cited in Long, 2008b), leaders, such as classroom teachers, need to support

those individuals for whom they are responsible through personal attention and actions. The type of leadership that can have a positive impact on followers will elevate motivation and morale. (Long, 2008b). O'Donnell and White (2005) found that higher teacher perceptions of leadership behaviors correlate with higher student achievement in reading and mathematics (Long, 2008a).

Qualitative Study

Creswell (2014) promoted the idea that the goal of a researcher in qualitative research is to understand and explain. The purpose of this qualitative study will be to identify the perceptions of core-subject teachers through focus groups and one-on-one interviews. This phenomenological qualitative research study will be designed to identify the perceptions of teachers regarding the academic value of career technical education (CTE) in a California school and identify influencing factors on the teacher's perceptions of the rigor and relevance of CTE. The data will be analyzed to determine what phenomena influences a teacher's willingness to support a students' decision equally for CTE or for attending a 4-year university. The study will consider the academic value of CTE at a public school. Elements such as student preparedness for post-secondary education will be analyzed from this study to determine what phenomena influence the teacher's willingness to support a students' decision equally for CTE or, for attending a 4-year university. The objective is to examine the phenomena influencing teachers' values.

Overall, this research study is expected to reveal that core-subject teachers do not expect CTE courses to include valuable 21st-century skills and activities for success. However, the results of this study are expected to be used to promote a larger statewide study from which results can be used to lead to the development of improved CTE teacher credentialing and training and greater frequency of training toward clarification for administrators' understanding.

In 2012, Hausman asked a question regarding the perceptions of administrators in Arizona and learned that CTE concentrators were not a priority for administrators. Although his study was quantitative, Hausman (2012) determined that the administrators lacked training and experience, which could result in a detrimental impact on CTE courses and could hurt the students. A purpose of his study was to compare the 2011 Arizona Department of Education AIMS pass rates of CTE students to the statewide CTE student AIMS pass rates. Hausman's findings determined that further study was necessary, and interviews would provide researchers an opportunity to look more closely at the administrator's ingrained beliefs, about the subject of CTE. Hausman's study supports the purpose of this study by posing the question for future research, which asked if the stigma of CTE will limit the expectations of administrators.

Shanklin (2014) conducted a qualitative study on the perceptions and values held by secondary core teachers, student advisors, and administrators as compared with CTE teachers. Shanklin looked at the benefits of a cross-curricular relationship as well as, on topic with this study, asking about 21st

century skills about CTE. The findings were consistent with prior studies about a desire on behalf of some teachers to work together to improve the public's perception of the value of CTE. Additional studies in this area were recommended by both Haussman (2012) and Shanklin (2014).

Summary

The literature reviewed in this chapter establishes the extent to which perceptions held by three stakeholder audiences reflect the historical position that career technical education (CTE) is not of great value to the motivated and academically high-performing students in our schools. CTE has held the reputation for serving only underperforming, non-college bound students for much of the 20th century. And now into the 21st century, CTE has been unable to substantially alter the primary perception of the position that CTE has great value for secondary and post-secondary students and graduates. The chapter traced the evolution of the industry from the beginning of a free and public education system through an agrarian period, the industrial revolution, two wars and completed the timeline by looking ahead at what graduates will need in the way of knowledge and experience through this 22nd century.

Also, the literature highlighted the fact that teacher perception of CTEs' value impacts the program completion rate.

The discussion divided the population into three groups beginning with the General Public and their overarching perception that CTE is for non-college bound students.

The belief that CTE is exclusively for non-college bound students may be the justification for a recent move on behalf of the state to bring improvement in teacher training and the possible, subsequent improved image for CTE through increased teacher support. The perception of the general public was evaluated by comparing and contrasting observations collected by this researcher, the findings derived from several interviews and administrators' interview responses. Administrators were the 2nd group of stakeholders to be evaluated for their position on CTE's value for students. The administrations' participation was self-limited to one administrator. The one-on-one interview responses from the study participant, representing the 2nd audience responses were focused on the Common Core curriculum. The third segment of the population to have its' attitude and beliefs examined was the core-subject teachers. Core-subject teachers present the most potential for a change in perception. Enhanced and modified teacher instruction for professional development are highly supported for implementation. The chapter ends with a rationale for conducting a qualitative study.

The literature on the history of CTE was divided into six chronological segments, from the introduction of free public education to the 21st century skills for success. The perceptions of three key stakeholder groups supported the idea

that teachers' perceptions can be misdirected because of the complexity of a CTE system of programs at the secondary level. CTE courses are offered on various topics, in varying combinations for any given school or district. The courses are offered to all grades, all levels of ability, at multiple levels from introductory to advanced, similar to the wide variety of academic subject offerings.

Aside from a limited scope study from Colorado, (Shanklin, 2014) little information can be found when attempting to identify what CTE teachers think of the contribution of CTE about valuable 21st-century skills. These skills, along with supportive professional relationships, aid in the growth of CTE that is needed to train students for success in employment and postsecondary endeavors. Although the study in Colorado identified the same results as this study expects, the breadth of experience of the participants was significantly less. There was one advanced course instructor identified, only for math and no instructors for the highly rigorous International Baccalaureate curriculum. Also, the school population was much smaller which presents the limitation of fewer faculty from whom to choose.

Looking ahead, proponents of CTE face a difficult choice: either make the necessary adjustments to the needs of the 21st century or risk becoming obsolete. Bill Gates famously declared (Harris and Wakelyn, 2007) today's high school "obsolete." He believes that schools were designed for an era more willing to accept less academic rigor and relevant learning experiences. While

schools wrestle with high school redesign, they are in a better position to reorganize CTE into an important improvement strategy, as was noted in the executive summary of the 2004 National Assessment of Vocational Education:

Vocational education, increasingly known as career technical education, is a longstanding program whose place in American education continues to evolve. The broadening of its goals, the ongoing diversity of participants, and the changing education and labor market climate in which it operates suggest vocational education is a flexible option for schools and students. With this flexibility comes some challenges, however. At the high school level, participation in vocational education is an elective choice that faces increasing pressure from an emphasis on academic improvement. For both secondary and postsecondary vocational education, the wide range of participants and objectives raises a question about how effective a role federal policy plays and whether that policy can or should promote a clearer set of priorities. (p. 21)

Today, instead of supporting our agrarian society, the CTE programs have grown with change and become portals to technology. They are more about sustainable practices with regards to the food supply, computer-based design, and biosciences. Preparing students for high skill, high wage, or high demand occupations in current or future professions is one of the most important functions of CTE. Won (Hausman, 2012) reported that throughout the past 21 years the federal government has worked to create a pipeline to postsecondary

education and employment (Plank et al., 2008) by incorporating CTE and core academic subjects. Kelly and Price, (2009), reasoned that the 1990 application of the Carl D. Perkins Vocational and Technical Education Act was designed to integrate academic standards into vocational programs. The purpose is to generate more graduates with CTE who are work-force ready. The philosophy surrounding this is often deeply rooted in the belief systems of teachers.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Overview

Three research questions guide this phenomenological study to identify the lived experiences common to 16 study participants (P). Identifying the lived experiences can lead to an explanation of the present-day perceptions by educators. The fact that educators have looked at career technical education (CTE) courses as an option fit only for unmotivated, disinterested students since the beginning of the 20th century, has been well documented. In Schwartz (2014, p. 27), “American policymakers continue to find reasons to avoid designing vocational systems that can help students make the transition from secondary school to work.”

Chapter 3 presents a qualitative perspective of the research design and explains how focus groups and one-on-one interviews were used in the study. The chapter also outlines the theoretical framework for choosing a qualitative approach for this study. The limitations of the study are included.

Research Design

As the purpose of this study is to identify core-subject teachers’ perceptions of the value of career technical education (CTE), a qualitative research study is a good choice. Creswell (2014) explained that one important reason for using a

qualitative study is that the study is exploratory. Creswell (2014) continues to say that “inquirers use the literature in a manner consistent with the assumptions of learning from the participant.” The questions that need to be answered do not come from the researcher’s perspective. Therefore, not many questions are written before the interview. Instead, the researcher listens to the participant and builds an understanding based on what is heard. (Creswell, 2014). The qualitative research design is suitable to identify phenomena influencing core-subject teacher perceptions of the academic value of career technical education (CTE) in California schools. It is appropriate to use qualitative research (Creswell, 2013) when a problem or issue should be explored. The phenomenological design captures the stories of the participants and identifies the lived experiences in common, which contribute to similar perceptions. Creswell (2014) defines phenomenological research as a formally organized plan of inquiry in which a researcher describes the lived experiences of individuals about a phenomenon that was explained by the participants. The study explores what the contributing phenomena are that influence the perceptions of CTE by core-subject teachers. Exploring individuals’ collective lived experiences can provide deep understanding of complex issues. A phenomenological design reduces individual experiences with a phenomenon to a description of the universal essence that the study needs to collect participants’ lived experiences as they could inform the body of research of their perception of CTE.

Research Methodology

This phenomenological research design included conducting focus groups and one-on-one interviews with 16 credentialed educators in California to answer the research questions for this study. The experiences of the educator participants and the impact of those experiences are included in this description.

Beginning December 7, 2018, and after approval was secured from the district assistant superintendent and the site principal, an email was sent to approximately 200 secondary teachers and site administrators. The email contained an explanation of the intent of the study and a copy of the Informed Consent documents which had previously been approved by IRB. Every individual who was accepted as a participant for this study first submitted a completed and signed Informed Consent Form. Focus groups and one-on-one interviews did not take place before the Informed Consent being signed by the directives of IRB. This phenomenological study used the preferred methods of data collection, face-to-face focus groups, and one-on-one interviews. Three focus groups and nine one-on-one interviews were held to gather the data.

Research Setting

The first step in determining the setting was to identify the participants. The principal received an email from the researcher requesting permission to invite core-subject teachers to participate in focus group or one-on-one interviews. The voluntary, self-select respondents were individually and

confidentially notified of the time and place for the focus group interviews. The focus group interviews were held in an area convenient for the participants in which internet or Wi-Fi (wireless local area network) access was available. The setting was part of the school site configured specifically to protect the identity of the participants. The focus group interviews consisted of questions designed to elicit responses germane to the study's essential questions. The one-on-one interviews were conducted in participant classrooms at a time that was convenient for the individual, which also simultaneously protected the participant's identity. After the interviews were concluded, an email was sent to each of the 16 participants with a link to an online survey designed to provide demographic information. The 28 questions provided demographic and credentialing information for the participants and education levels of their immediate family.

Research Sample

The sample for this study consisted of 16 high school educators from one school site in California. Although the sample was not random, the participants combine to contribute a reasonable spectrum of teaching experiences. Also, the sample represented a group of educators who spanned a broad age range, were diverse in gender and subjects taught.

Demographics

The researcher invited participants through district email between December 1, 2018, and January 30, 2019. The direct email included a short description of the proposed research, the invitation to participate, and a link to the Informed Consent webpage. Also, hard copies of the three documents were delivered to on-site mailboxes.

Participants

Participants were all self-selected. All respondents participated in either the focus group or one-on-one interviews. Participants were high school educators who possess a valid California state issued single-subject credential and are currently employed at the school.

Research Instrumentation

The researcher generated questions for the one-on-one interviews intended to assess core-subject teachers' perceptions of career technical education (CTE), college/postsecondary preparation, career preparation, students who participated in CTE, CTE curriculum, and academic tracking. The focus group topic and the open-ended questions were developed and asked by an interviewer (see Appendix "D"). The researcher conducted the interviews employing questions generated during the interview in response to the direction the participant was taking the interview. This strategy was used to replicate a

situation as close as possible to actual direct student interaction as closely as possible.

Data Collection

Data collection took place between 12/01/2018 and 01/31/2019. The questions used to initiate the one-on-one interviews are in Appendix D. Data collection proved beneficial as viable, lived experiences, phenomenon was identified. Caution, care, and established IRB protocol has been used to protect the identity of the participants (Table 3).

Table 3

Phenomenological Study Timeline

Date	Activity
October 15, 2018	Apply to IRB
October 24, 2018	Request permission from District Superintendent
October 25, 2018	An authorization received from Senior Director of Secondary Curriculum, Instruction & Assessment
November 13, 2018	Request permission from site Principal

Table 3 continued

November 13, 2018	An authorization received from site Principal
November 27, 2018	IRB approval received
December 4, 2018	Invitations to participate sent to core-subject instructors
December 13, 2018	Conduct Focus Group #1
December 14, 2018	Conduct Focus Group #2
December 7, 2018	Conduct Focus Group #3
December 19 – 24, 2018 -	Conduct Interviews 1 – 5
December 29, 2018 – January 4, 2019	Conduct Interviews 6 – 11
January 7 – 15, 2019	Conduct Interviews 12 - 16
January 8- 20, 2019	Transcribe Focus Groups and One-on-One Interviews. Distribute surveys to collect demographics
Jan 21 - Feb 1, 2019	Code Transcriptions Analyze demographic data for commonalities
February 2 - 15, 2019	Conduct Data Analysis to Identify Themes
February 16 – 28, 2019	Compose text for Chapter 4 and 5
March – April 2019	Continue analysis and composition for final dissertation defense

Data Analysis

The qualitative analysis of data was comprised of similarities and differences and coding and categorizing. All 16 of the interviews yielded open-ended responses. All focus groups and one-on-one interviews were taped and transcribed word for word. Interviews were compared to one another after the interviews were collected to identify similarities and differences, and categories were formed and coded. Themes were determined for the research questions. Comparison of interviews was conducted throughout the data collection and then analyzed. By transcribing from audio to written and then initiating the coding process on all data permitted this researcher the opportunity to become effectively familiar with how CTE courses continue to be looked upon as pseudo-education.

Once the initial theme identification was nearly complete, it became evident that the lived experiences divided more accurately into two themes. At this time, all interviews had been read multiple times, transcribed, coded for applicable data and the identified themes organized by supportive or not, and segregated by teacher responses and educator responses. The data proved to be very consistent within the confines of the small sample and consistent with the projected findings. Early concerns of accurate and truthful responses were unwarranted. Instead, this researcher found a high degree of integrity among the participants.

Role of the Researcher

The role of the researcher uses practices of research to test the theory that core-subject teachers' perceptions of the academic value of career technical education (CTE) influence the decisions of students. To learn about their perceptions, the researcher will choose natural settings to protect the one-on-one time from interruption or interference. A core-subject teacher's perception and communicated message of the academic value of CTE, has an impact on the choices of students who are or are contemplating enrolling in CTE. To ensure an accurate collection of data, the researcher will record all discussions for later transcription. The researcher conducted interviews designed to explore the participants' lived experiences as related to their perception of CTEs' value. Multiple sources of data were available through the focus groups and one-on-one interviews. Deliberate steps were taken to "keep a focus on learning the meaning that the participants hold about (CTE)" (Creswell, 2014). The researcher has a prolonged history of acquaintance with the participants (P), which was described in the information in Positionality in Chapter One to inform this study of values and personal background that shape the interpretations formed during the study. The researcher endeavored to remain impartial in evaluating data, abiding by the parameters of the study. However, the researcher is deeply committed to the expansion of CTEs' reach to more students. This passion is likely to influence the conclusions, but will not hinder a complete analysis. The researcher taught a CTE course for thirteen years and

has maintained an acquaintance with some of the participants in this study. The study will show what phenomena are experienced to create the teachers' perceptions of academic value. The researcher teaches 9th through 12th grade and believes that personal knowledge of the programs will benefit the ability to analyze the data. The role of the researcher will include the careful reflection of personal involvement and scrutiny for bias. It is expected that new knowledge will be identified. The knowledge provides the understanding to ask the correct questions and project future needs.

Summary

The basic characteristics of qualitative research were taken into consideration for the data collection and processing for this study. A natural setting was used to conduct the interviews to observe the participants' reactions and answers as they shared their experiences in engaging with their students, to discuss and make recommendations for post-secondary options. Both the focus groups and one-on-one interviews were conducted as is in keeping with the recommended protocol for a qualitative study applying a phenomenological research design. This researcher conducted all of the interviews, using open-ended questioning and allowing the opportunity to build understanding based on what was heard, not on this researcher's standpoint. A survey questionnaire was used only for specific demographic information and information about the participants' familial, educational history. Emergent themes were identified

through extensive data analysis by coding and categorizing each response. The dataset was reviewed to obtain a sense of the information and then the codes were cross-referenced to ensure accurate retrieval and compilation of the data. The application of inductive reasoning helped to build patterns and themes until there was a comprehensive set of themes. Deductive reasoning was incorporated to look at the data and determine that no additional information would be needed. The researcher focused on the participants' connection with the experience and through the use of recording equipment, accurately captured each comment. Reflexivity was accomplished through carefully listening to the participants' responses and applying caution and thoughtfulness to the process of analysis. Please refer to Table 7 showing the timeline of the study. The positionality section in Chapter One was discussed to provide further explanation. Finally, this researcher assembled a composite picture of several phenomena contributing to teachers' perception of CTE academic value.

In the next chapter, the findings from the data collection will be presented and explained. The dataset was collected between December 13, 2018, and January 31, 2019. Once transcribed, coded, and categorized, it became evident that Experiential Learning Theory (ETL) and Contextual Teaching and Learning Theory (CTL) have application in the data findings. Dewey (1915) believed in connecting real-world applications and academic theory to give a complete learning experience. In ETL, the focus is on the student, and although the data showed that students might not get complete information, the participants

believe the content of career technical education (CTE) is good. Beginning from a favorable impression can help move CTE to a more integrated state and help inspire more instructors to promote CTE as a viable post-secondary option. The outcome of the study supports the literature and this researcher's expectation that the value of CTE has been underrated, but CTE is becoming more integrated into academic curricula and students may be presented with more opportunities to pursue their dreams and passions.

CHAPTER FOUR

RESULTS

Overview

This chapter presents the findings from three focus group and nine one-on-one interviews with core-subject teachers in a public school in California. Through this conversational communication, the researcher identified and examined the lived experiences of 16 participants to gather information sufficient to identify core-subject teachers' perceptions of career technical education (CTE): phenomena influencing perceptions. The interviews were designed to inform the researcher of the teachers' perceptions of rigor and relevance of CTE programs, the level of commitment by teacher's to actively encourage students to pursue CTE training as a viable form of post-secondary education and teachers' perceptions regarding the practice of integrating academics and CTE curriculum. In addition to the focus groups and one-on-one interviews, a Qualtrics self-reporting survey was distributed to the participants publicly accessible email addresses. The survey captured specific demographic information on the participants' employment history, their prior college education, their relationship with CTE, and the education and work history of their immediate family members. The survey was made available on the Internet via Google, where the results were easily retrieved through the website. Sixteen people took part in the interviews. Ten participants attended the focus groups, and six additional

individuals participated in the one-on-one interviews. Eleven of the sixteen participants completed the survey. The remaining five abstained. The responses from all 16 participants are included in the findings, in response to each corresponding research question.

The findings from the study were in response to these three research questions:

1. Do core-subject teachers perceive the CTE curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?
2. In what ways do core-subject teachers show students that they endorse a choice for technical education program as enthusiastically as they encourage students to attend four-year universities?
3. What are core-subject teachers' perceptions of integrating academics and CTE across the curriculum?

Demographics

Sixteen full-time educators participated in completed a supplemental survey which collected data used to identify demographics of the participants.

The participants who responded to the survey thought: (a) what number of years in education (b) what levels, or grades taught, and how many years at each; (c) credentials held; and (d) subject or subjects taught. The 11 participants are credentialed and currently under contract to a school district in California.

Collectively, they have 231 years' experience in education; two of the teachers

have been in the classroom for 30 years each. Science, Technology, Engineering and Mathematics (STEM) had the most participants (4 out of 11; 3 from the Math department and 1 from Science) with an average of 23 years' experience. The subject area with the fewest participants was art, which is represented by only one participant. Six of the participants had 25 or more years classroom experience and only one participant had fewer than 15 years' experience but has supplemented by volunteering and assisting master instructors. (See Table 4).

Table 4

Demographics

Variables								
Sex	Teaching Experience	Years Teaching at Various Levels				Credential		Subject
	total # of years	Elem	Mid.	Hi.	Coll.	Sing. Sub.	Multi. Sub.	
F	21	10		11	5	✓	✓	Art
F	25		1	24		✓		Math
M	20		2	18	7	✓		English & ELD
M	28		4	24		✓		Soc. Science
F	30			30			✓	English & Music
F	25			25		✓		Soc. Science

Table 4 continued

M	25	1	24		✓	Math & Business
F	16		16	✓	✓	Soc. Science
F	30	3	27	✓		Math
M	11	2	9	✓		Science & Soc. Science
M	27		27	✓		English

Following in the footsteps of a parent is a time-honored tradition, much like the practice of training under a master artist. Learning from the best is a policy that could apply to the concept of apprenticeships, which began as an important part of the European education system as early as the sixteenth century (Gordon, 2014). It was the primary method of training artisans and craftsmen for generations and is the pattern after which the predecessor for Career Technical Education was designed.

Education is a profession often handed down from one generation to another. Responses from the survey showed several participants with close ties to education and to CTE. There are five of the 11 participants who have at least one parent who was a teacher, and two of those participants also have a life partner who teaches. Other than these four, there are five more participants who have at least one parent who went to college, and five participants have children who have attended college and one who is in a vocational school. There are four

of the five participants whose children have attended college who are teachers themselves. (See Table 5).

Table 5

Participant Connection with Career Technical Education

Connections to Career Technical Education other than Education					
Partic.	Bachelor's degree in CTE Industry Sector	Work Experience in a CTE Industry Sector	Partner Works in CTE Industry Sector	Parent Worked in CTE Industry Sector	Children Work in CTE Industry Sector
1	✓	✓		✓	
3	✓		✓		✓
4	✓	✓		✓	✓
5	✓	✓			✓
7	✓			✓	✓
8				✓	✓
9	✓	✓		✓	
10	✓	✓	✓	✓	✓
11		✓		✓	
15		✓			
16	✓	✓		✓	✓

Table 6 addresses the education and employment histories of the participants' family members. A number of participants have at least one parent and one child who hold a college degree. There are several family members who did not pursue a four-year degree but chose alternative training. In vocational training there are seven family members who chose this route. (See Table 6)

Table 6

Frequency Counts of Participants' Connections to Career Technical Education

Family Members					
Education					
(Highest Level)					
	Life Partner	Father	Mother	Child 1	Child 2
High School	1	3	4	1	1
Diploma Only					
Vocational Sch	3	2	1	1	
Some College	2		2	1	2
College Degree	1	4	2	5	3
Advanced Degree			2	5	5
Employment					
Unemployed	1	3	3	3	
Self-employed	1				
Trade/ Vocation	2	5	1	1	2

Table 6 continued

Military		1			
Professional (Non-teacher)	1	5	4	1	2
Teacher/ Education	2	3	4	4	

Education divides subjects into areas of study. Examples are mathematics, science, and history. Apprenticeships are also divided by subject such as masonry and plumbing. In the data, eight areas of study were identified. There are a total of 22 areas of study which combine to endow the art of educating. Education is similar to apprenticeships as it is taught, well only by those who have mastered the art. The practice or art of educating is perpetuated in the same manner as traditional trades and crafts. It is passed on from an experienced master professional to an apprentice student novice, who then practices the skills until mastery and then the process repeats. Considering this close relationship of education as an art, this system of apprenticeship, the same method of training used historically by a master craftsman passing on the wisdom of his trade to an apprentice, suggests that education itself could be recognized as a CTE program. P 8 said, "I believe in the post-secondary pursuit of education for the development of the individual ... worth it for its' own sake ... you'll come out a better citizen."

There are distinct similarities between the art of education and the creativity of career technical education. Acknowledging those likenesses brings a new understanding of CTE as identified by P 5: “I believe that we’re here to get kids ready for adulthood so we’re trying to educate them in content and skills and we’re going to try to instill a sense of citizenship.” Ironically findings show that out of 53 responses total, 23 out of 53 or 43% of questions answered by survey participants resulted in a positive comment for the school’s programs and the remaining 22 responses, 57% are split between the suggestion that CTE programs are still the place to put the unplaceable and CTE programs offer an opportunity to discover interests but they’re not sufficient for providing for a successful future.

Themes

From the findings two separate themes emerged. Several sub-topics were identified within the themes and will be explained in the Level of Teacher Involvement and Level of Administrative Support sections. This section on themes is arranged in research question number order and will align the two themes and the appropriate sub-topics with the corresponding research question(s). The presence of influencing phenomenon became evident as the analysis progressed. High on the list for societal structures is the need for perfectionism. Parents can become unable to see the needs of their children if the needs are counter to the societal image the parents feel the need to portray.

When a need for external motivators, such as degrees becomes the focus more than the well-being of the whole person, those for whom an academic pursuit is not the best fit can end up unsatisfied. When the compulsion to only recognize academic learning as valuable tender becomes more important than a person growing in their own way, people will give up and quit. When a degree or attending a specific school overshadows what the person is doing to gain the notoriety becomes the focal point, it leaves entire segments of the population, those individuals who belong in a different style of training and learning in an underrecognized status. It leaves people destined to be good at something, unfulfilled in anything.

Level of Administrative Support

This first theme discusses the actions of school administrators and instances in which they do or do not support career technical education (CTE) programs. Administrators reported interest in how teachers are doing in classes. They discuss funding the programs adequately and providing ongoing, interdepartmental trainings for the teachers. A dichotomy exists between what the administrators report they believe and what their actions indicate. The findings show the extent to which administrators actively encourage students to pursue CTE or attend a four-year university. In the data, the support for CTE programs by allocating adequate funds is seen to be often threatened with little opposition from the administration, and/or support for CTE teachers through opportunities for professional growth and collaboration with other educators

doesn't always gain a high priority. Policies which prevent CTE programs from continuing to be the place to put "unplaceable" students are often ignored in the name of just getting students in a class. However, it is not always the administration's unpleasant duty to show little support for CTE. In the case of P 4 it was established that there would be "support for an option to allow a student entry to an academy or pathway after a period of time and then staying in that particular program." P 4 added that "academy employment perspective sometimes grab[s] students and it helps to reduce the dropout rates." In these two examples, a stronger level of administrative support is displayed. If these decisions could become policy, it would show a high degree of support for CTE and they could be the decisions that would bring about positive changes.

Level of Teacher Involvement

This second theme presents examples of the teachers' desire to guide and direct their students' post-secondary choices. Each of the 16 participants has experienced a phenomenon creating their strongly held beliefs about the value of career technical education (CTE). The dichotomy of the teachers' stated positions is that they report they support CTE; while their behavior does not reflect their responses. Findings revealed that when talking about AVID or IB, teachers are passionate about the academic advantages these two programs provide. The findings of this set of interviews do not readily show the same enthusiasm when the discussion is to pursue immediate employment, certificate programs or trade schools. The findings reveal that students who are enrolled in

a CTE program, do not receive the same comprehensive assistance as the students who are pursuing a purely academic schedule. The 23 responses to question two are attributable to sixteen participants. Participant 3 (P3) responses identified factors which provide a positive influence on the participant's perception of the value of CTE. Participant 3 (P 3) responded, "I'm a huge proponent of CTE when it is done right." When asked, "What is 'done right'?" "I would say being done right is that there's not a stigma attached to it," replied P 3. Following the discussion regarding a stigma, P 8 said, " [The] level of the quality of education for all students whether it's CP (college prep), AP (Advanced Placement), or IB (International Baccalaureate), students [are] buoyed up by CTE and are then more successful." Another participant, P 10, stated during a focus group interview that "I do believe that CTE is viable and it should be part of; not everyone is going to college." P 7 reported to the researcher that, "I'm proud to be a part of this school that has these programs; I know Culinary exists, I know that people have benefitted from it; I know that people do learn a lot and go out and use these skills; When I hear about that someone's in them, I say, good for you, the more, the better." An additional comment from P 8 included the statement that " but with medical health that's part and parcel of the expectation of joining that program. A program designed to facilitate entry into post-secondary education." As a final positive comment from the participants, P 4 shared that "teachers are supportive, want students to be connected to schools,

generally supportive of CTE programs at school, helps them look towards college and career.”

In contrast, often, it is women and minorities who are overlooked when support is being offered. White males have dominated the positions in CTE for much of the time it has been a part of the education system. Up until the time of the Hatch Acts, women and minorities were left out completely. These are groups who would benefit from understanding that CTE has multiple applications. They were most affected by the significant increase in school tuitions; they would be the most positively impacted if they were appropriately directed to CTE programs where earning a living and learning are simultaneous.

Research Questions

1. Do core-subject teachers perceive the CTE curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?

Teachers expressed their satisfaction with the results of student participation in CTE programs. P 8 and P 1 commented, respectively on the overall benefits by saying, “CTE and the pathways definitely help students figure out what they want to do [in] as a career, they give them guidance, they give, [a] I think, those programs give meaning and purpose to students,” “They continue to say that “Everything is useful, no matter what you end up doing. You don’t know what you’re going to need, and you don’t know what kind of information or skills are going to be needed, but skills overlap.” P 14 stated that “teachers who work

as a team to help support them [too] so like our PLC (Professional Learning Community) ... we can discuss students [whom] we have in common.” Core-subject teachers have the opportunity to collaborate in influencing the direction and decisions of students, particularly concerning postsecondary education. P 14 expressed that “every public school is a way for somebody to get an idea of what they want to do, have a direction of what they want to do after they graduate so I do encourage CTE vocational, but all my kids are going to college.” The evidence remains clear; teachers continue to see CTE as an exploratory exercise but see college as the correct post-graduation education. Finally, P 14 shared that one way in which a high level of teacher involvement is manifested is in “exposure to careers they (students) may wish to follow later ... an advantage for them down the road.” P 16 added that “a real focus on making sure that [academy cohort] core classes have an emphasis that is different than [the] regular academic class.” is one way in which the study showed the high level of subject content in the core classes.

Twenty out of 53 responses were supportive and positive comments. A statement made during a focus group interview by P 14 shared, “academies... did a really good job; focusing on a group of kids that don’t necessarily get much attention.”

The three factors; “academies doing a good job”; “public school is a way for somebody to find out what they want”; and “a real focus on academy classes being more than college prep classes.” contribute to providing evidence toward

the sufficiency of CTE to meet the Common Core State Standards. The phenomena experienced by this participant and the respective PLC created a strong and positive reaction to CTE programs.

Participants also had observations to share which when the original occurrences were witnessed, created negative reactions toward CTE. P 2 reflected on the dichotomy that exists between the idea of being in favor of CTE but seeing it only as a temporary measure and not as a lifestyle choice and also expressing support for a four-year education, but only in academics. While P 2 states, "we're teaching just the skillsets to be successful in college and giving them everything they need because they don't have parents to help them with college language, it's where we fill in a gap. CTE fills a different gap." P 2 goes on to provide a situation that illuminates the dichotomy of college and CTE, and that is, while stating that they support CTE fully, they also say that CTE alone won't get a student into college and college is the prime target. In further demonstration of the dichotomy of college and CTE comes from P 2, "working with AVID (Advanced Via Individual Determination), we everything about our program is pushing academics, it's pushing for a year; our whole program is to support them, to teach them how to persevere to push through things that when they get into college they'll be able to do that so while we completely push for four-year university, I think that I don't see AVID in competition with CTE and pathways." While P 2 purports to simultaneously support AVID and CTE, CTE is regarded as valuable but not significant enough to get a student to the ultimate

goal, which is into college.” P 3 summed up the situation, “It looks the stigmatized program among the students and probably the parents.” Responses were insightful, P 12 saw that an increase in the level of administrative support could possibly assist in avoiding a situation where a student is exited from an ELD (English Language Development) centered schedule and is excluded from any CTE course or program because there are no seats left in any of the academy’s or the pathways, “ I wish I knew more about the CTE program and what it consists about and who qualifies because the thing is that those kids are on the side because they have ELD.”

2. In what ways do core-subject teachers show students they endorse a choice for a technical education program as enthusiastically as they encourage students to attend four-year universities?

Responses that align with both themes, Level of Administrative Involvement, and Level of Teacher Support contribute significant evidence in answering research question 2. Twenty-three out of 53 affirming statement responses were submitted from 16 participants Separating the positive and supportive participants regarding the recommendations of a four-year university vs. going straight into a trad; twelve are in favor of a four-year degree. P 10 stated, emphatically recommended that CTE vocational is “all of [this participants’], kids are going to college.” P 3 said, “ all the way, federal, state, all the way down to our administration, all the way down to our faculty meetings that everything is college prep, college ready, ‘A’ through ‘G.’” (A reference to the

University of California’s system of qualifying applicants. Please see Key Terms in chapter two for further explanation.) P 2 commented that “you can be in those CTE pathways, but you could still go to college, and you can still get your degree, and then you have your degree to go into those fields but what you experience in school can just enrich that.” The teachers have had evidence submitted that confirms an understanding of the way to work — the dichotomy faced by this misunderstanding the correct relationship between CTE and a degree from a four-year college. P 2 stated, “CTE and the pathways help students figure out what they want to do [in] as a career, they (CTE programs) give them (students) guidance. [they give a] I think those programs give meaning and purpose to students, they give them a place of belonging and excitement.” and added, “I think overall, I would completely support CTE or I do support CTE and pathway, but at the same time, I fully support [the like] going to a [university] four-year university.” Part of the misconception understands that being in CTE doesn’t preclude going to college; they are not mutually exclusive. Another expression of some confusion, P 8 was concerned that IB, AP and CTE couldn’t be simultaneously supported, I[’m quite] don’t support it (that mold) even though [I] I’m very [much a big proponent of IB and AP... we offer a variety of programs.”

Little direct evidence was identified to substantiate a moderate to strong supportive administration. P 8 stated in the one-on-one interview that “I don’t think this administration; I think tried very weakly last year... our current administration doesn’t seem to be tuned into that (alternative Schedule) at all in

my estimation.” In another interview, P 3 reflected on the issue of rigor when the statement was made that “the students are not willing to adjust, meet our (teachers) bar. Now if you get a higher academic student in ... the CTE classes, they know how to meet a teacher’s expectations, but again you’re not being funneled those students, so you just have to keep dumbing it down.” A stronger level of administrative support could produce class rosters of students who understand that they too must contribute. P 3 stated that “CTE classes aren’t rigorous because students are not high achievers”.

3. What are core-subject teacher’s perceptions of integrating academics and CTE across the curriculum?

Twenty-three responses are attributable to ten of the sixteen participants. Of those, two responses identified factors which provide a positive influence on the participant’s perception of the value of career technical education (CTE). Participant 9 (P 9) responded, about the result in changes in behavior which is a product of the value of CTE, “they [the students] have experience with something that they know is serious. They have interactions with adults in terms of work experience; they see real people doing real things, so when they come to math class, they focus better.” P 9 was emphatic about the positive influence the CTE program, in this case, a Public Service Academy, has on math students. Additionally, an example of the value of CTE is in what P 16 said, “CTE is huge proponent elements in getting students into the college level.” P 14 had a positive comment regarding the value of a generous level of teacher involvement,

“teachers that work as a team to help support them [students] too so like our PLC (Professional Learning Community) we can discuss students with whom we have in common.”

Of the 13 responses to question three, ten are attributable to five of the participants; participants (P 3, P 4, P 8, and P 10). Of those from the participants, two responses identified factors which provide a positive influence on the participant’s perception of the value of CTE. Although P 3 expressed concern about familiarity with the program, “ I don’t know how well informed I am about what the actual programs are so I’m making assumptions based on what I know” The next comment was on target. P 3 specifically answered question three saying, “I think that there’s a tremendous benefit for a career-focused program in conjunction with an academic requirement.” And then went on to say, “ every student should feel inclined to get some practical experience in context for their learning.” In a demonstration of support, the administration has an opportunity to bring CTE out of the legacy of being the rest stop for the downtrodden and dropouts. The Level of Administrative Support can be manifested in the correction of the ongoing challenges associated with being the class where the difficult to place students are left. “Many elective teachers share a unique classroom characteristic with one another; students have a cavalier attitude about their approach to CTE because ultimately, it doesn’t matter. It’s not being tested... at least in the end, the kids respect me and know me and know they need me” (P 3). The Level of Administrative Support is tenuous at best when it

comes to student placement. When a new student arrived, the administrator did not suggest an academy or a pathway for the “A” student. However, when a student arrived the following day, direct from a 2-year prison sentence, the first class that was scheduled, was CTE. The observation made by two participants came in the form of a question, “Does the administration figure CTE is not for academic students, but it is fine for convicts.” Understanding that CTE can stand alone, but it can also be a valuable tool in the pursuit of other knowledge. CTE can provide training in its entirety in many cases, but it can also be superb training for post-secondary study. Making a positive comment on the Level of Teacher Involvement, P 4 suggested that “teachers were supportive, want students to be connected to schools, generally supportive of CTE programs at school, helps them look toward college and career.”

Applying for admission as an upperclassman can be difficult. It has been suggested that the admissions process be modified, that under some circumstances, it would be possible to allow for the addition, or release of students mid-year,” P 3 commented that [the admissions policy] feels a little restrictive because I don't think it's a question a kid choosing at 14 is going to know who they're going to be. As stated by P 4, the Level of Teacher Involvement is lessened by “Teachers who are not supportive in part because of a lack of information...administration can do a better job of helping teachers by monitoring the number of programs on campus,” thus preventing students jumping from one academy or pathway to another and breaking the continuity of

content. In the end, despite all of the elaborate funding that the government is doing, the overarching opinion is that yes, the perception is still predominant in society that a four-year university education is the best path.

Summary

This chapter presented the findings from three focus group and nine one-on-one interviews with core-subject teachers in a public school in California. Through these conversations, the researcher identified the lived experiences of 16 participants to gather information sufficient to identify core-subject teachers' perceptions of career technical education (CTE): phenomena influencing perceptions. Sixteen full-time educators participated in the focus groups and one-on-one interviews. 11 full-time educators completed a supplemental survey which collected data used to identify demographics of the participants. Those who completed the survey are described by the following characteristics: (a) a number of years in education (b) the levels or grades taught, and how many years at each; (c) credentials held; and (d) subject or subjects taught. The responses from all 16 participants are included in the findings, in response to each corresponding research question.

The 11 participants are credentialed and currently under contract to a school district in California. Collectively, they have 231 years' experience in education; two of the teachers have been in the classroom for 30 years each. Science, Technology, Engineering, and Mathematics (STEM) had the most

participants (4 out of 11; 3 from the Math department and one from Science) with an average of 23 years' experience. The subject area with the fewest participants was art, which is represented by only one participant. Six of the participants had 25 or more years of classroom experience, and only one participant had fewer than 15 years' experience but has supplemented by volunteering and assisting master instructors.

Education is a profession often handed down from one generation to another. Responses from the survey showed several participants with close ties to education and to CTE. The practice or art of educating is perpetuated in the same manner as traditional trades and crafts. It is passed on from an experienced master professional to an apprentice student novice, who then practices the skills until mastery and then the process repeats. The first theme discusses the actions of school administrators and instances in which they do or do not support career technical education (CTE) programs. The second theme presents examples of the teachers' desire to guide and direct their students' post-secondary choices. Each of the 16 participants has experienced a phenomenon creating their strongly held beliefs about the value of career technical education (CTE). Despite the extensive legislation providing funding, the overarching opinion is that a four-year university education is the best path.

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSIONS

Overview

This research study was designed to identify the phenomena influencing core-subject teacher perceptions of Career Technical Education (CTE). The response analysis of the three research questions offers significant findings which will be presented in this chapter. The three questions were asked in three focus groups and nine one-on-one interviews. The participants in the focus groups and one-on-one interviews are certificated teachers under contract at one school site in California. The research questions asked are:

1. Do core-subject teachers perceive the CTE curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?
2. In what ways do core-subject teachers show students they endorse a choice for a technical education program as enthusiastically as they encourage students to attend four-year universities?
3. What are core-subject teacher's perceptions of integrating academics and CTE across the curriculum?

The responses to the questions were audio-taped to preserve the integrity of the interviews and transcribed in their entirety. A total of 53 responses were recorded and transcribed.

To ensure consistency throughout the analysis, one researcher mediated the focus groups, conducted the one-on-one interviews, transcribed and coded the audio recordings, and compiled the results. Assistance was provided during the process to prevent researcher bias from impacting the findings.

The findings show that educators predominantly make a recommendation for graduating seniors to attend a 4-year university. Participant 10 said, “I do encourage CTE Vocational, but all of my kids are going to college” and further added, “whenever I see like a really strong student and I see them in the PSA outfit or whatever, it kind of surprises me sometimes because I think of, you know, I would think that they would be moving on to college.” The study uncovered a significant finding with regards to our society’s unequivocal belief in the magic of 4-year university education. The most significant discovery in this study was that teachers think they support CTE, but their answers to the interview questions and their contributions to the focus groups revealed that their actual recommendations and expectations support a 4-year university education. Participant 8 was very direct: “Yes, the perception is still predominant in society that 4-year is the best path.” Participant 2 reinforced the lack of faith in the ability of CTE to provide sufficient training and education to produce a reasonable income and said, “you can be in those CTE pathways, but you could still go to college, and you can still get your degree.” In the same spirit, Participant 2 added, “but if they keep their academics up, they can certainly go to get a degree. You know for us; this is our push.”

The study revealed that while educators believe they fully support CTE, they in fact (1) don't understand what CTE is and (2) they consider CTE to be a helpful add-on to an education, not a source of career preparation. Evidence of the lack of understanding comes from Participant 1: "every public school is a way for somebody to get an idea of what they want to do, have a direction of what they want to do after they graduate so I do encourage CTE vocational, but my kids are all going to college." As further evidence of the position on the lack of understanding is a response from Participant 2, "I think overall, I support CTE, but at the same time, I fully support the like [sic] going to university, 4-year university." Educators continue to see CTE as a parallel option, albeit less quality and completely removed, instead of recognizing the potential to integrate the work-based learning aspects into an academic program. The second finding showed an appreciation for the content of CTE but only as an additional piece of information, not as an option capable of delivering a sufficient alternative to a 4-year university.

College is not for everyone. The average cost for one year in college is more than \$20,000.00 (NCES, 2018) and after as many as six years, no more than 54% of the students have graduated. That leaves 46% of the university's enrollment either destined to struggle on, accumulating more debt, or walk away with \$60,000.00 or \$70,000.00 debt and probably limited means to repay the loans. A recommendation to address this concern is to suggest students do not go to college. Graduates may be better served if they aren't sent to college

before they know what they want from post-secondary education. Encouraging graduates to take a job and postpone further education until there is an identified purpose for the expense of time and money, maybe the best advice. It is quite possible that they will discover a passion and with technical training or an apprenticeship, be ready for a career that is satisfying, and that does not come with a large bill. While it is true, all people should have access to attend; not all should attend.

The participants in the study presented very sincere and carefully developed convictions, they considered their answers, and in the case of the focus groups, they contributed what they seem to honestly believe, interacting well and building on one another's thoughts. The responses collected suggest that additional studies would be warranted, including a longitudinal study in which a teacher or teachers are observed for their behaviors, over time, which result in a decision for or against pursuing a CTE course of study.

The purpose of this study is to identify core-subject teachers' perceptions of Career Technical Education (CTE) and the phenomena that influence those perceptions. These results succinctly indicated the phenomena which influence core-subject teachers' perceptions of the value placed on programs. These issues were researched through one-on-one interviews and focus groups. They are presented here in the form of three separate questions.

The first research question asks whether core-subject teachers see rigor and relevance in the curriculum for CTE classes, which is equivalent to core

academic subjects. Before conducting this study, it wasn't known whether core-subject teachers believed that CTE equaled the rigor of academic courses in teaching the skills necessary to meet the needs of the workforce of the 21st century. The implications were that teachers looked at CTE courses as an option fit only for unmotivated, disinterested students, and it was well documented. In Gray (2004), it is reported that since the early 1900s, the debate about CTE being in high school has continued. The results of this study identify reasons this debate persists and what to do about the disagreement.

The second research question asks if core-subject teachers celebrate a student receiving a postsecondary technical school acceptance award as enthusiastically as a student receiving an acceptance to a renowned university. Kelly and Price (2009) looked at the hypothesis that vocational education programs capture the attention of disengaged students and stimulate them with a clean slate, an opportunity to start over. For the past 20 years, it has been said that the individuals who were less likely to choose postsecondary education as their first choice after high school were underachievers and not competent to successfully attend postsecondary institutions. However, Berliner and Biddle (1996, p. 2) wrote that "the negative effects of vocational education may be likely because of not enough time in the schedule to take additional advanced academic courses. The limit on academic courses can be the explanation for an achievement gap; not the fact that students took vocational education classes."

This issue was addressed by a response from P 3 with the observation that “I think administration probably figures it’s not for academic kids.” CTE was founded on the idea of integrating apprenticeships with classroom instruction as part of the public schools’ curriculum at the beginning of the 20th century. Despite the well-intentioned plans to enroll students in Vocational Education, which became known as CTE, to place individuals in an apprenticeship to learn a skilled trade before entering the workplace (Lynch, 2006), the classes became the easy place to put underachievers.

The third research question considers the issue of the integration of academics and CTE across the curriculum. Knowing how the course content impacts the students is data that should be collected after the fact. P 7 stated would like to see more follow-up of grads after they leave.” This could create a systematic approach to collecting more data and provide a broader, more comprehensive database. When interviewed, P 2 reported that CTE could be supported, but students still needed college.

The dismissal of CTE by the educational community in general starts with a stereotype of the classes that prepare students only for employment after high school. With the results from this study, an evaluation can be made of the impact lived experience phenomena have on core-subject teachers’ perceptions of the value of CTE and the ability of the CTE program to instill the skills and knowledge needed to be successful in the 21st century. In communicating the mutual exclusivity of college and CTE, teachers demonstrated a lack of

understanding of the essence of CTE. Pursuing CTE does not exclude the option of college. Instead, if CTE skills are fully integrated into academics, then both curricula are enhanced. As an example, studying law is an academic pursuit, a law student will learn the meaning of the law, the history of the law and what types of laws exist but law school doesn't teach students how to go to court, how to file a brief, or get on calendar, that is what CTE does so well. CTE is work-based learning; teaching the practical side of work is where it is the most effective. Medical school graduates are equally unprepared for the day-to-day business of time management, office protocol, and billing; all activities that an integrated curriculum with CTE would produce.

Analysis of Research Questions

The previously introduced research questions guided the study. The questions are listed once again to facilitate analysis:

1. Do core-subject teachers perceive the CTE curriculum to be designed with rigor and relevance sufficient to meet the Common Core State Standards?
2. In what ways do core-subject teachers show students they endorse a choice for a technical education program as enthusiastically as they encourage students to attend four-year universities?
3. What are core-subject teacher's perceptions of integrating academics and CTE across the curriculum?

Research Question 1:

The first question asked about the rigor of and relevance to the Common Core State Standards of CTE courses. While hospitality and tourism don't have common core standards, foodservice, restaurant, and hospitality management are inherently dependent upon mathematics and English-language arts, which are both standards subjects. Culinary Arts presents the ideal situation for providing real-world opportunities to grasp concepts such as fractions. Learning of the history of food and foodservice creates ample opportunity to "analyze a particular cultural experience reflected in a world of literature from outside the United States," (Common Core Stds, 2010). CTE courses integrate theory with practice by their nature. An additional, excellent example of CTE meeting and exceeding the requirements for Common Core Standards is the extensive vocabulary and critical thinking skills that come with several CTE programs, specifically with medical health courses. Choosing to join a CTE program of study while in high school helps prepare for a variety of lucrative careers. In some cases, without a high school CTE experience, a student attends a subject-content specific postsecondary institution, and after completing the coursework, the student learns that the chosen industry is not a good fit.

Research Question 2:

The data collected about the second research question reinforces the idea that the participants are positively disposed to the idea of CTE; however, they still plan to send their students to college for four years. The participants do

not as enthusiastically endorse the decision to pursue a career through technical education programs as they decide to attend a four-year university.

The core-subject teacher participants interviewed were, P 1; P 2; P 4; P 8; P 10; and P 14; each emphatically verbalized their support of CTE in general, and some of their comments were “fine to enrich the high school experience, but the students were all going straight to 4-year universities.” “My students are all going to college.”; I think it’s like the arts, a huge push toward college.” These teachers are sincere, student-centered educators who not only spend their contract hours but their own time investigating instructional strategies and getting to know the thoughts and dreams and turmoil of their students’ lives. This is what makes the resistance to wholly recommending career technical education pursuits so difficult. When people who are willing to learn about these choices aren’t willing to commit to an unconditional endorsement, then it’s more likely that an individual who has little-to-moderate interest in looking outside the normal circle of influence will inflict damage and be likely to dissuade a perfect candidate for CTE from pursuing a technical career.

Phenomena which influence teacher perception come from long-standing beliefs and supporting actions which reinforce the idea that vocational education only benefits the unmotivated and that “technical education was a ‘deceptive farce’ which was a threat to the intellect and unacceptable in public schools” (Gordon, 2014, p. 24). A phenomenon that teachers have in common is the assumption that student failure is a result of parents not pushing their children

hard enough, rather than the student's taking responsibility themselves for their lack of motivation and low skill level. When administrators make the misguided decision to place unwilling or under motivated students in a CTE class, they dilute the value of the class for more enthusiastic students. Administrators compound the problem by requiring the malcontents to remain in the class despite disruptive, disobedient, and disrespectful behavior. By making the choice to hold disinterested students in the programs, interested, and invested students are penalized by the time lost in student discipline.

Research Question #3:

The final research question is concerned with the core-subject teachers' perceptions of integrating academics and CTE across the curriculum. P 2 stated that "we're teaching just the skillsets to be successful in college and giving them everything they need because they don't have parents to help them with college language, it's where we fill in a gap." Even in a class which is not strictly academic, the instructors don't see the need to incorporate CTE. Administrators see little need for inclusion. P 1 shared the thought that the treatment of CTE is much the same as the arts: it's a nice bonus but it won't develop into a career. Only one participant was a strong advocate for integrating academics and CTE across the curriculum. P 3 stated very succinctly, "every student should feel inclined to get some practical experience in context with their learning." Practical experience embedded in an academic curriculum is a significant part of CTE and it is completely misunderstood.

Implications

Initial perception of the apprenticeship program in America was positive and provided a viable training option for those who would not have access to formal education. In time, America made the decision to separate work-based learning from academics which brought about the legacy of a program valuable only to those who place no value on education. By continuing to deny the value inherent in CTE through its rich heritage in the early years of our country and its continuing application throughout Europe, educators in the United States are withholding the key to best practices for many students, especially with respect to post-secondary education. Instead of taking a stand, administrators misdirect the populace. Educators and administrators both are handicapping the industrial sector of the economy.

Recommendations for Educational Leaders

College is not the ultimate goal for everyone. The phenomena of only promoting 4-year institutions discounts the value that CTE brings to a number of people. The recommendation to educational leaders for CTE is to recognize the intrinsic value, to acknowledge that for many, it represents equivalent training, particularly in the case of an individual who would otherwise have flunked out of school or never pursued post-secondary education at all. A CTE program integrated into academics would provide the skills training necessary. The time

to see going to college as the single, ultimate goal has passed. The world has forever changed, and it won't likely change back anytime soon.

Two additional recommendations for educational leaders are (1) to provide a sufficient number of periods in the day to allow students the ability to try different programs without having to displace other subjects and (2) provide for students who, once they test out of the English Language Development (ELD) centered course schedule, may go directly into any CTE class of their choice. There should be parameters established that any exiting ELD student is eligible to join CTE.

Recommendations for Teachers

Teachers often work in a semi-isolated environment. They spend long hours in their classrooms, for example frequently working through lunch to help a struggling student. Being separated from the balance of the faculty does not lend itself well to encouraging a strong sense of community among the staff members. This individualistic nature of the profession also prevents supportive communication about subject content. In order for teachers to begin to change their position on the value of CTE, the phenomena experienced needs to be different and if the teachers are predominantly separatists it will be difficult to carry out any recommendations. The recommendation for teachers is to be open to the possibility that things can change for the better and preparing our next generation for the world they will enter-- and not the world as it has been known-- is doing the job the way it should be done.

Limitations and Future Research

Limitations

1. This study was conducted at a singular academic site in California.
2. Only full-time, core-subject teachers and one administrator at the chosen school site volunteered to participate in the focus groups and/or in the interviews. Due to a heavier than normal schedule resulting from the time of year, several faculty members commented after the fact that they would have participated had the time constraints been less.
3. The one-on-one interviews and focus groups were conducted between December 2018 through February of 2019. This time frame created difficulties for potential participants. During these two months, many days are taken away from class because of the holiday break. Also, January marks the end of the first semester and schedules are disrupted to hold finals. With the disturbed schedules and the added burden of additional time spent grading student work, this researcher received multiple requests to participate, after the fact. More participants may have revealed further truths, but this researcher has confidence in the validity of the findings reported here.

Future Research

As educators, and keepers of the gift to lead people to who they are meant to be, it is important to consider what Mack R. Hicks, Ph. D. in Digital Pandemic, Dec. 11, 2004, and Psychology Today, claim that “Most children

should not go to college,” (2014, pg. 1). According to Hicks, large numbers of students don’t complete college in the traditional four years and as a result of high interest rates and low earning ability, they are severely restricted in their effort to handle their school loan debt.

Educators believe that they are in support of CTE. They may mention a CTE course, but it seems more realistic to predict that CTE courses will continue to be underestimated for some time. This field of study will benefit from future research by encouraging administrations to change their own opinions and those of their staffs toward the truth that college may be available to everyone, but not everyone should be available to college. Further investigation into the ability of our country to leave this preconception of who is in and who should be in CTE exceeded the scope of this study but could be a valid future research study.

When this study was first developed, an expectation formed indicating that any lack of support could be rectified with appropriate professional development for teachers. The data from the study indicate instead that the teachers are only the conduit for the widespread opinion about the value of CTE and that it is administrators, coordinators, legislators and parents who so actively perpetuate the idea that all students should go to college. Professional development is necessary to accurately convey the correct information on the value of studying CTE. However, it is not only the teachers who need the training but also the other stakeholders as well.

Conclusion

Teaching is similar to being ring master in a three-ring circus where the multifaceted, often misunderstood world of CTE belongs in the Big Top. Productively delivering new and captivating content to students who are in the room for a wider than normal variety of reasons can be a daunting task and the data from this survey affirm the obstacles faced.

The graduation rate at the local community college is 26%. The graduation rate from the nearby 4-year university is 14% in 4-years and still only as high as 54% even after six years. College is not working for many people, and it is time to stop sending people to post-secondary training when it is clearly not in their best interest. CTE courses will provide the training and the certifications the next generation of workers are going to need. One group in particular will profit from this change. By adopting the recommended changes for creating a system to include in CTE, English Language Learners who have successfully exited from English Language Development program centered course schedules and standardizing the number of periods offered in a day to maximize the number of choices high school students may investigate, educational leaders will increase their effectiveness. Core-subject teachers will be able to attend to their wellness, creating a calming environment all around as they learn to see CTE as equivalent vehicles for the graduates to move out into the world as successful young adults.

Instead of sending our graduates away to college before they have any goal or direction in mind, we should be encouraging them to look into fulltime work, learn what jobs they can get on their own, and learn what it takes to function in the world. They might find a place that suits them perfectly. Even if it doesn't work out, they learned something more about themselves and they may then be better prepared to make a commitment to \$70,000.00 without it ruining their lives. My late husband was known for telling a story about his very first interview. He had just finished undergrad as a zoology, pre-med major, having spent 17 of his 21 years of life in school and needed to find a summer job before starting med-school. When the interviewer asked him, "What is it that you can do?" John responded, "Nothing, I've been in school all of my life." Knowing that he went on to become a successful attorney and loved every day of work, the story is funny, but the reality that we do graduate thousands of students every year with no way to support themselves and no interest to pursue is practically criminal.

This study showed clearly that if not as a society, certainly as a profession who has infinite power to direct future generations, educators do not understand the power and value to be found in CTE. This revelation is particularly true if we have the intelligence and foresight to integrate the academic and career technical education curricula and change the face of education for the better, forever.

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL

IRB-FY2019-78 - Initial: IRB Expedited Review Approval Letter

2 messages

Tue, Nov 27, 2018 at **mgillesp@csusb.edu** <mgillesp@csusb.edu>

4:16 PM To: 000893073@coyote.csusb.edu, andrew.hughes@csusb.edu

November 27, 2018

CSUSB INSTITUTIONAL REVIEW BOARD

Expedited Review

IRB-FY2019-78

Status: Approved

Ms. Sheri Tucker and Prof. Andrew Hughes

Department of Educational Leadership and Technology

Doctoral Studies Program

California State University, San Bernardino

5500 University Parkway

San Bernardino, California 92407

Dear Ms. Tucker and Prof. Hughes:

Your application to use human subjects, titled “Identify core-subject teachers' perceptions of the value of Career Technical Education (CTE), while discussing the phenomena that shaped these perceptions” has been reviewed and approved by the Institutional Review Board (IRB). The informed consent document you submitted is the official version for your study and cannot be changed without prior IRB approval. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended using the IRB Cayuse system protocol change form. The Cayuse IRB system will notify you when your protocol is up for renewal and ensure you file it before your protocol study expiration date.

Your application is approved for one year from November 27, 2018 through November 27, 2019.

Please submit a protocol modification for any additional district/principal letters of support you receive to conduct your study at each site.

Your responsibilities as the researcher/investigator reporting to the IRB Committee include the following four requirements as mandated by the Code of Federal Regulations 45 CFR 46 listed below. Please note that the protocol change form and renewal form are located on the IRB website under the forms menu. Failure to notify the IRB of the above may result in disciplinary

action. You are required to keep copies of the informed consent forms and data for at least three years.

You are required to notify the IRB of the following by submitting the appropriate form (modification, unanticipated/adverse event, renewal, study closure) through the online Cayuse IRB Submission System.

- 1. If you need to make any changes/modifications to your protocol submit a modification form as the IRB must review all changes before implementing in your study to ensure the degree of risk has not changed.**
- 2. If any unanticipated adverse events are experienced by subjects during your research study or project.**
- 3. If your study has not been completed submit a renewal to the IRB.**
- 4. If you are no longer conducting the study or project submit a study closure.**

Please ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the

proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the IRB Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair
CSUSB Institutional Review Board

DG/M

G

Wed, Nov 28, 2018 at 7:21 **Sheri Lynn Tucker** <sherit@coyote.csusb.edu> PM

To: Michael Gillespie <mgillesp@csusb.edu>

Thank you!

My sincere appreciation for seeing us through this most important step.

Thank you for being accessible for the duration and for your succinct and careful communication through the intricacies of the process.

Best wishes for a happy holiday season.

Sheri Lynn Tucker

CSUSB, College of Education

Cohort 9 Ed.D. program

[Quoted text hidden]

APPENDIX B
PARTICIPANT INFORMED
CONSENT FORM

TEACHER INFORMED CONSENT

The study in which you are being asked to participate is designed to investigate core-subject teachers' perceptions of the value of Career Technical Education (CTE) programs, while discussing the phenomena that shaped these perceptions. This study is being conducted by Sheri Lynn Tucker under the supervision of Dr. Andrew Hughes, College of Education, California State University, San Bernardino. This study has been approved by the Institutional Review Board, California State University, San Bernardino.

PURPOSE: The purpose of this qualitative study will be to identify the core-subject teachers' perceptions regarding the academic value of CTE programs at a high school. The study is expected to identify the phenomena which influence those perceptions, and what impact those perceptions may have on a students' decision to participate in a CTE program. A phenomenological qualitative approach will be taken to identify the phenomena which influence the value core teachers place on CTE programs. Elements such as the teacher's perceptions of rigor and relevance of CTE programs, teacher's perceptions of student outcomes and student preparedness for post-secondary education, will be analyzed from this study to determine whether teachers' values impact a students' decision to complete their CTE course of study. The objective is to examine whether a connection exists between teachers' values and CTE program completion. Overall, this research study is expected to reveal that the core-subject teachers do not expect CTE courses to include valuable 21st-century skills and activities for success. The results of this study are expected to support a larger statewide study from which results can be used to lead to development of improved CTE teacher credentialing and training.

DESCRIPTION: This study will examine teachers' perceptions of the value of CTE programs. This researcher will conduct the sessions, which are 1 – 2 focus groups and collect data from the focus groups and one-on-one interviews held with the core-subject teachers from your school site. The results of this study may be used in reports, presentation, or publications. Your name, the name of your school and the school district's names will not be used. Results will be shared in aggregate form.

PARTICIPATION: You've been asked to participate in this research study between the dates of December 2018 and February 2019. The manner of your participation will include the following: 1- 2 focus group sessions and one face to face interview. You can decide to not answer all or part of the questions, even if you have signed this letter of consent. You can freely withdraw from pa. associated with this study or the questions in the interview, even if you have signed this letter of consent. You can freely withdraw from participation at any time, or if you feel you have been placed at risk, you are invited to contact the Research Compliance Officer at mgillesp@csusb.edu.

CONFIDENTIAL: All information is confidential and will only be used for research purposes. Names will not appear in any written reports that stem from data collected for of by the researcher. Data will be stored in researcher's password protected computer

in a locked home office. Written information collected will be stored until Spring 2022. At that time, all information associated with the present study will be destroyed.

DURATION: The entire duration of the study will take place over a six-week period beginning in December 2018 and ending by February 2019. The two focus group sessions will take approximately one hour each and are expected to be held in December and early January. The interviews will last no more than 30 minutes and will begin immediately following the second focus group session. Appointments for the interviews will be made after the first focus group session is held. Interviews will be complete by the end of January. Should you choose to participate in the one-on-one interviews, please be aware that it will be imperative to begin each session on time.

RISKS: There are no foreseeable risks involved in participation in this research beyond those experienced in everyday life. Participation will take place on your school campus. No part of this activity involves physical exertion.

BENEFITS: The researcher believes that as a participant in this research study, you will have an opportunity to gain new understanding of CTE programs and your participation will contribute positively to the outcome of the study. The information produced will improve the perception of the value of CTE programs and support and encourage enrollment in CTE programs.

VIDEO/AUDIO/PHOTOGRAPH: I understand this research will be audio recorded Initials____ Please note that a separate video/audio/photograph permission form is available on the IRB website under the form's menu.

CONTACT: If you have any questions or concerns about this study, please contact:
Sheri Lynn Tucker, Researcher
sherit@csusb.edu (951) 809-2858 -OR-
Dr. Andrew Hughes, Faculty Advisor (909) 537-5637, Cal State Univ, San Bernardino
andrew.hughes@csusb.edu

RESULTS: The results of this study can be obtained through ScholarWorks.

CONFIRMATION STATEMENT:

I have read and understand the consent document and agree to participate in your study.

SIGNATURE:

Name of Teacher (Please Print): (Blue or Black ink): _____ [

Signature: _____ Date: _____

**AUDIO USE
INFORMED CONSENT FORM
FOR NON-MEDICAL HUMAN SUBJECTS**

As part of this research project, we will be making a audiotape recording of you during your participation in the experiment. Please indicate what uses of this audiotape you are willing to consent to by initialing below. You are free to initial any number of spaces from zero to all of the spaces, and your response will in no way affect your credit for participating. We will only use the audiotape in ways that you agree to. In any use of this audiotape, your name would *not* be identified. If you do not initial any of the spaces below, the audiotape will be destroyed.

Please indicate the type of informed consent

Audiotape

(AS APPLICABLE)

- The audiotape can be studied by the research team for use in the research project.

Please initial: _____

- The audiotape can be played to subjects in other experiments.

Please initial: _____

- The audiotape can be used for scientific publications.

Please initial: _____

- The audiotape can be played at meetings of scientists.

Please initial: _____

- The audiotape can be played in classrooms to students.

Please initial: _____

- The audiotape can be played in public presentations to nonscientific groups.

Please initial: _____

- The audiotape can be used on television and radio.

Please initial: _____

I have read the above description and give my consent for the use of the audiotape as indicated above.

The extra copy of this consent form is for your records.

SIGNATURE _____ **DATE** _____

APPENDIX C
PARTICIPANT INTERVIEW QUESTIONS

My name is, Sheri Lynn Tucker. I am a doctoral student at CSU, San Bernardino, currently working on my dissertation on *Identifying core-subject teachers' perceptions of career technical education (CTE), while discussing the phenomena that shaped these perceptions.*

This document will act as framework for the interviews that I will conduct in relation to my dissertation. The participants will be core-subject instructors from a Coachella Valley school.

Questions to ask.

Consider a situation in which:

1. You had the opportunity to make suggestions to your students in regard to their choices for a postsecondary path.

How have you responded in a situation similar to this? How did the experiences that you have had, influence your desire to recommend CTE as an option?

2. You became aware of research studies that declared CTE courses in your school to meet the levels of rigor and relevance necessary to qualify as to what Bill Daggett, Ed.D., International Center for Leadership in Education, would categorize as a Quadrant "D" class.

What is your perception, that this information would be applicable to the CTE courses, programs, and academies in your school?

What have you experienced in your life that would cause you to come to that conclusion?

3. You have been asked to write curriculum for your core-subject class, how would you proceed to integrate CTE content standards in the curriculum for your core-subject?

Have you experienced similar situations?

How did you react?

4. In your school, from your perspective and experience, what is the postsecondary expectation for students who enroll and each consecutive year, re-enroll in CTE?

5. You describe a situation in which a student of yours chooses to take a

CTE class instead of one more academic course.

How did it make you feel?

What do you believe would be the best curriculum choices for a student's personal growth?

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