

Perceptions of Selected Stakeholders about Enrollment in Career and Technical Education
Courses and Programs that are Non-traditional by Gender

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Academic Abstract

The Career and Technical Center in Coalfield County School Division (pseudonym) has maintained a history of student enrollment in career and technical education (CTE) courses and programs that are traditional by gender. That history has changed very little over the years, and students, both male and female, continue to enroll in CTE courses at the career center that are traditional for their gender. This trend persists despite Virginia Department of Education support for non-traditional enrollment and Carl D. Perkins Act legislation which encourages non-traditional enrollment in CTE.

The purpose of this qualitative research was to explore the perceptions of students, parents, teachers, administrators and counselors about student enrollment at the career center in CTE courses that are non-traditional. Through the use of individual interviews, the researcher gathered information from participants regarding their perceptions about barriers to non-traditional enrollment in CTE and also obtained participants' ideas about strategies for increasing non-traditional enrollment in CTE courses, courses that have the potential to positively impact students' career opportunities along with successful entrance into the work force. The results of this research will be shared with the school division as a potential resource for increasing non-traditional enrollment in CTE courses and programs at the career center.

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General Audience Abstract

The Career and Technical Center in Coalfield County School Division (pseudonym) has maintained a history of student enrollment in career and technical education (CTE) courses and programs that are traditional by gender. That history has changed very little over the years, and students, both male and female, continue to enroll in CTE courses at the career center that are traditional for their gender. This trend persists despite Virginia Department of Education support for non-traditional enrollment and Carl D. Perkins Acts legislation which encourages non-traditional enrollment in CTE.

The purpose of this qualitative research was to explore the perceptions of students, parents, teachers, administrators and counselors about student enrollment at the career center in CTE courses that are non-traditional. Through the use of individual interviews, the researcher gathered information from participants regarding their perceptions about barriers to non-traditional enrollment in CTE and also obtained participants' ideas about strategies for increasing non-traditional enrollment in CTE courses, courses that have the potential to positively impact students' career opportunities along with successful entrance into the work force. The results of this research will be shared with the school division as a potential resource for increasing non-traditional enrollment in CTE courses and programs at the career center.

Dedication

This dissertation is dedicated to my family: Bob, Mary-Beth, Andy, Kelly, Shelly, Emily, Ben and Lucy. I am thankful to each of them for their love, unwavering support and consistent encouragement throughout my Ph.D. journey. They have been my cheerleaders throughout this process, and I have relied on them each step of the way. We have always been a team. This dissertation is as much theirs as it is mine. We got to the finish line together.

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List of Abbreviations

ACTE	Association for Career and Technical Education
Center	Coalfield County Career and Technical Center
CTE	Career and Technical Education
LCCT	Learning Career Counseling Theory
Perkins IV	Carl. D. Perkins Act of 2006
Perkins V	Carl D. Perkins Act of 2018
PLTW	Project Lead the Way
SCCT	Social Cognitive Career Theory
SCT	Social Cognitive Theory
VDOE	Virginia Department of Education

Chapter 1

Introduction

The Carl D. Perkins Act of 2006, also known as Perkins IV, defines non-traditional fields of employment as occupations or fields of work, including careers in computer science, technology, and other current and emerging high skill occupations for which individuals from one gender comprise less than 25 percent of the total individuals employed in each such occupation or field of work. In 2018, the United States Congress reauthorized Perkins funding in the form of Perkins V. In the Commonwealth of Virginia, one of the goals of Career and Technical Education (CTE) is for each school division to reach an individual goal of non-traditional enrollment: at least 25 percent enrollment in non-traditional courses and at least 22 percent completion of non-traditional courses (Virginia Department of Education, 2016). Based on Virginia Department of Education (VDOE) School Report Cards for the past ten years, Coalfield County School Division (pseudo name), which is the focus of this research, has consistently reached that goal based on county-wide performance, which includes three high schools and one career center (VDOE, 2015). However, the school division's career center graduation data over the past ten years, along with school division CTE reports to the VDOE, indicate that enrollment in CTE classes has remained predominantly gender traditional (Coalfield County Career Center, 2005-2015; VDOE, 2015; VDOE, 2016). Informal discussions with CTE administrators in Coalfield County School Division indicated support for an increase in the enrollment of students in non-traditional CTE classes and programs, but so far that increase has not occurred at the career center.

Evidence of the gender divide in CTE was well supported with documentation and research. Going back to 2008, Mitts cited that reasons for students' choices of CTE courses are

grounded in the “philosophical tradition of the Western culture,” with abstract thinking and problem solving perceived as an exclusively male province while female students are restricted to activities associated with the home (Mitts, 2008, p. 1). More recently, Toglia’s research in 2013 indicated that gender barriers to non-traditional CTE enrollment continued to persist, even though Title IX of the Educational Amendments of 1972 specifically outlawed sex discrimination in education, and that the gender divide in CTE has “narrowed barely at all” (Toglia, 2013, p. 14). That philosophy aligned with the root causes identified by the National Alliance for Partnerships in Equity Education in 2009, which cited that lack of participation in non-traditional CTE programs was based in part on societal pressures and family constraints. Therefore, culture provides parameters for decision making for both male and female students.

As male and female students enroll in CTE courses and programs in order to prepare for the work force and post-secondary education, equity of access to those courses and programs is critical if all students are to have equal opportunities to meet career aspirations. This is particularly important for women who at one time earned only two-thirds the income of their male counterparts (Domenico and Jones, 2007). However, in 2015 the U.S. Bureau of Labor Statistics provided data indicating a positive trend in women’s earnings, which are now at 83 percent of what men earn for the same job. Part of the significance of this percentage lies in the fact that women currently comprise 57 percent of the workforce based on the U.S. Bureau of Labor Statistics report, “Women in the Labor Force: a databook,” published in 2015.

An example of the issue of gender specific occupations and gender distribution in the workforce is in the field of nursing where women have traditionally dominated as cited ten years ago by Lucci in 2007. Male participation in the field of nursing has increased, but females continue to dominate according to the Bureau of Labor Statistics in 2015, with women now

comprising 90.4 percent of the field. Comparison of earnings among males and females in nursing has narrowed, but there continues to be a gap with the same report showing men earning more than women (U.S. Department of Labor, 2015). These statistics tie closely to program enrollment trends at the Coalfield County Career Center, where Certified Nursing Assistance and Licensed Practical Nursing programs are dominated by female students (VDOE, 2015; School Division CTE Non-traditional Report, 2016). For the 2015-2016 school year, the number of females enrolled in nursing programs at the career center was 13 compared to one male. By comparison, enrollment in automotive technology was 27 males and one female. In 2005, Hayden wrote that CTE programs that offer entry into non-traditional careers, which afford occupational opportunities and high wage-earning potential, are essential for all students in order to support a strong economy. That perspective was reiterated in Toglia's 2013 research, which stated that the consequences of not addressing and solving the problem of non-traditional enrollment in CTE courses have "significant economic and social implications" (Toglia, p. 14). Human potential is a critical resource in the United States, and the continuation of non-traditional enrollment in CTE courses and programs among both males and females results in underdeveloped resources and nationwide limitations (Toglia, 2013).

This study focused on enrollment trends at Coalfield County Career Center, which serves students from the three high schools in the school division. It should be noted that Coalfield County School Division offers CTE courses at each of the high schools, but those courses and their enrollments were not included in this study. Table 1 shows the CTE courses taught at each of the county's high schools and the career center. Courses taught at the career center are not also taught at any of the three high schools. Tables 2 and 3 show data submitted by the school division to the Virginia Department of Education for school year 2015-2016 to report male and

female student non-traditional enrollment in CTE courses. Courses taught at the career center are highlighted in yellow. The definitions of female non-traditional and male non-traditional are provided by the Virginia Department of Education (VDOE, 2016).

As an example, Table 2, Female Non-traditional Enrollment Report, shows that one section of Automotive Technology was taught during the 2015-2016 reporting period.

Automotive Technology is a non-traditional course for females. As Table 2 indicates, the section included 19 males and no females. Automotive Technology is taught only at the career center.

Table 3 is the Male Non-traditional Report submitted to the VDOE by the school division. An example from the report of male participation in non-traditional courses shows no males enrolled in Cosmetology I and II. Cosmetology is a designated non-traditional course for males as defined by the Virginia Department of Education and is taught only at the school division’s career center (VDOE, 2016).

Table 1.
Coalfield County School Division List of CTE Courses Taught and Location AY 2015-2016

School	Course
Career Center	Automotive Technology I
	Automotive Technology II
	Auto Body I – Collision & Repair
	Auto Body II – Painting & Refinishing
	Building Management I
	Building Management III
	Building Trades I
	Cosmetology I
	Cosmetology II
	Criminal Justice
	Culinary Arts I
	Culinary Arts II
	Introduction to Health and Medical Science
	Masonry I
	Nurse Aide I
	Welding I
Welding III	
High School #1	Computer Information Systems
	Advanced Computer Information Systems
	Digital Information Technology
	Computer Applications
	Digital Electronics – Project Lead the Way (PLTW)

PLTW = Project Lead the Way

Table 1.
*Coalfield County School Division List of CTE Courses Taught and Location AY 2015-2016
 (Continued)*

School	Course
High School #1	Introduction to Engineering Design – PLTW
	Engineering Design and Development – PLTW
High School #2	Computer Applications
	Advanced Computer Information Systems
	Agriculture I
	Agriculture II
	Agriculture III
	Agriculture IV
High School #3	Building Maintenance
	Computer Information Systems
	Advanced Computer Information Systems
	Computer Applications
	Design, Multi-Media and Web Technologies
	Advanced Design, Multi-Media and Web Technologies

Table 2.
*Data Coalfield County School Division 2015-2016 Secondary Enrollment and Demographic
 Report Female Non-traditional Report (VDOE – February 17, 2016)*

Program Area	Course	Sections	Female	Male	Total	Percent
Agricultural Education	Operating the Farm Business	5	15	46	61	24.59
	Program Totals	5	15	46	61	
Technology Education	Introduction to Engineering Design – PLTW	3	12	14	26	46.15
	Digital Electronics – PLTW	1	4	7	11	36.36
	Engineering Design & Development – PLTW	2	9	38	47	19.15
	Program Totals	6	25	59	84	
Business & Information Technology	Computer Info Systems – 36 wks.	6	69	56	124	55.65
	Computer Info Systems ADV – 36 wks.	3	25	12	37	67.57
	Design, Multi Media & Web Technologies – 36 wks.	1	10	2	12	83.33
	Design, Multi Media & Web Technologies – 36 wks.	1	13	4	17	76.47
	Programming	1	1	0	1	100.00
	Program Totals	12	118	73	191	
Trade & Industrial Education	Automotive Technology I	1	0	19	19	0.00
	Automotive Technology II	1	1	12	13	7.60
	Masonry I	1	1	18	19	5.26
	Building Trades I	1	1	17	18	5.56
	Building Management I	1	0	7	7	0.00
	Building Management III	1	2	10	12	16.67
	Welding I	1	0	19	19	0.00
	Welding III	1	0	15	15	0.00
	Auto Body Repair I – Collision & Repair	1	0	18	18	0.00
	Auto Body Repair II – Painting & Refinishing	1	0	15	15	0.00

Table 2.

Data Coalfield County School Division 2015-2016 Secondary Enrollment and Demographic Report Female Non-traditional Report (VDOE – February 17, 2016) (Continued)

Program Area	Course	Sections	Female	Male	Total	Percent
Trade & Industrial Education	Criminal Justice	1	6	14	20	30.00
	Program Totals	11	11	14	175	
Family & Consumer Sciences	Culinary Arts I	1	19	1	20	95.00
	Culinary Arts II	1	10	2	12	83.33
	Program Totals	2	29	3	32	
	Division Totals	36	198	195	543	

Note: Highlighted courses are taught only at Coalfield County Career Center. Non-highlighted courses are taught at one or more of the three county high schools.

PLTW = Project Lead the Way

Table 3.

Data Coalfield County School Division 2015-2016 Secondary Enrollment and Demographic Report Male Non-traditional Report (VDOE – February 17, 2016)

Program Area	Course	Sections	Female	Male	Total	Percent
Agricultural Education	Veterinary Assistant I	1	17	2	19	10.53
	Veterinary Assistant II	1	15	3	18	16.67
	Program Totals	2	32	5	37	
Business & Inform Tech	Digital Input Tech – 36 wks.	2	25	15	40	37.50
	Computer app – 36 wks.	15	146	164	307	52.44
	Program Totals	17	171	176	347	
Trade & Industrial Education	Cosmetology I	1	14	0	14	0.00
	Cosmetology II	1	10	0	10	0.00
	Program Totals	2	24	0	24	
Career Connections	Teachers for Tomorrow I	7	28	17	45	37.78
	Program Totals	7	28	17	45	
Health & Medical Sciences	Intro to Health & Medical Science	1	8	1	9	11.11
	Nurse Aide I	1	5	0	5	0.00
	Program Totals	2	13	1	14	
	Division Totals	30	268	199	467	

Note: Highlighted courses are taught only at Coalfield County Career Center. Non-highlighted courses are taught at one or more of the three county high schools.

Using enrollment data presented in these tables, it is evident that enrollment at the career center in non-traditional courses is low according to gender. This may indicate that students who wish to pursue a non-traditional career are not enrolling in gender-based non-traditional courses. If students are not enrolling in gender-based non-traditional courses at the career center and yet they wish to do so, they will need to pursue education and training for these non-traditional careers after high school graduation. By doing so they will incur substantial costs to obtain their education and training. Parameters which erect barriers to CTE enrollment in non-traditional programs, even

when those barriers limit at least temporarily the progress of education for all students, add to the burden of preparing for the work force.

Background of the Problem

The career center addressed in this research study is located in a rural county in southwest Virginia. As previously stated, students attending the career center come from the three high schools in Coalfield County School Division. Students spend half of each day at the home high school that serves their area of the county and then either drive to the career center or are transported by school bus for the other half of the day. To further describe the context in which the study was conducted, two of the school division's high schools are located at opposite ends of the county, approximately 15 to 20 miles from the career center. The third county high school is located in the same town as the career center, making it easier for students to access. The career center consists of two large circular buildings which house classrooms and laboratories for each of the CTE courses offered. Some of the courses are dual enrollment courses with a local community college, including Building Trades, Criminal Justice, Masonry and Welding. In addition, some programs provide instruction leading to industry certification and licensure. Those programs include Certified Nursing Assistance, Cosmetology, and Licensed Practical Nursing.

The career center is well attended, and classes are fully enrolled with some having waiting lists. Students who are CTE completers are sometimes able to find employment in the area because they are assisted through the career center's Jobs for Virginia Graduates (JAG) program along with counseling and training in soft skills and work place readiness skills. The situation remains, however, that students continue to enroll in CTE programs at the career center that are traditional for their gender. Females enroll in CTE programs that lead to mostly low-

paying jobs (with the exception of nursing) and males enroll in programs that offer higher paying salaries based on earnings potential data cited by the Bureau of Labor Statistics (2015).

Statement of the Problem

Since the beginning of Coalfield County Career Center, male and female students have continued to enroll in CTE classes and programs traditional for their gender. Consequently, female students rarely enroll in traditionally male-dominated classes such as Welding and Building Construction and male enrollment in traditionally female-dominated classes such as Nursing and Cosmetology has also been low (VDOE, 2014). Low non-traditional enrollments in these programs have continued throughout the years at the career center, even though the Commonwealth of Virginia has consistently encouraged school divisions to increase non-traditional enrollments and Carl D. Perkins Act legislation prescribe increased non-traditional enrollment. This study was conducted to determine the barriers to increasing non-traditional enrollment in CTE courses offered at Coalfield County Career Center and to identify strategies for overcoming those barriers.

Purpose of the Study

The purpose of this study was to collect data regarding barriers that prevent students from taking non-traditional CTE courses and programs as well as identify strategies for overcoming those barriers. To collect the data, the researcher personally and individually interviewed several groups of individuals. Coalfield County Career Center students, teachers, and parents were interviewed. In addition, principals and guidance counselors from the career center and the three county high schools were interviewed. And finally, Coalfield County Schools CTE director was interviewed.

An analysis of the data helped to clarify the parameters that contribute to student enrollment at the career center and potentially provided avenues for students to enroll in programs that are non-traditional for their gender. The data also provided information that can contribute to planning efforts for the career center in the form of program awareness initiatives for students, parents, teachers, counselors and administrators

Research Questions

The main question to be answered by this research study is: What are the reasons male and female students rarely enroll in CTE non-traditional classes and programs in the school division's career center? The research will incorporate the follow sub-questions.

Question #1: What are the perceptions of selected stakeholders regarding why male and female students rarely enroll in CTE classes and programs that are non-traditional by gender in Coalfield County Career Center?

Sub-question: What barriers do students, parents, teachers, administrators and counselors think exist that prevent a majority of students at the career center from enrolling in non-traditional courses for their gender?

Question #2: What are the perceptions of selected stakeholders regarding how enrollments can be improved by gender in non-traditional CTE classes and programs at Coalfield County Career Center?

Sub-question: What strategies do students, parents, teachers, administrators and counselors recommend for overcoming the barriers that cause low enrollment?

Significance of the Study

The significance of this study lay in identifying the barriers that prevent students from enrolling in non-traditional CTE courses at Coalfield County Career Center. It also provided recommended strategies for overcoming the barriers. The barriers and strategies were identified and recommended by parents, teachers, school administrators, and school counselors.

The study will provide insight into the cultural structure of the school division and how that structure impacts CTE enrollment at the career center. Opportunities for reflection on personal opinions, school policies, family structures and family goals define avenues for professional development and professional learning for school personnel and identified potential guidelines for informational sessions for students and parents. Because non-traditional enrollment in CTE is also a state and national concern, a replication of this study to identify barriers for enrolling in non-traditional courses (and strategies for overcoming them) could be beneficial in other states.

Theoretical Framework

The theoretical framework for this study is based on Lent, Brown and Hackett's social cognitive career theory (SCCT) (Lent et al, 1994). Their theory explored how career and academic interests mature, how career choices are developed, and how those choices are turned into action. The three primary tenets of social cognitive career theory include:

- 1) **Self-efficacy**, which refers to the beliefs people have about their ability to successfully complete the steps required for a given task. Individuals develop their sense of self-efficacy from personal performance, learning by example, social interactions, and how they feel in a situation (Lent et al, 1994).

- 2) **Outcome expectations**, which are the beliefs related to the consequences of performing a specific behavior. Typically, outcome expectations are formed through past experiences, either direct or vicarious, and the perceived results of those experiences (Lent et al, 1994).
- 3) **Goals**, which are seen as playing a primary role in behavior. A goal is defined as the decisions to begin a particular activity or future plan. Behavior is organized or sustained based on previously set goals. (Lent, Brown & Hackett, 1994).

Social cognitive career theory was founded on social cognitive theory developed by Bandura in 1986. The theoretical framework for this study is discussed in detail in Chapter Two.

Overview of the Research Design

The study was conducted using a basic qualitative research methodology consisting of data collected from individual interviews. In addition, other qualitative methods were used including review of school division CTE documents and reports, field notes, and memos. Interviews were conducted with 19 key informants. Participants were selected from each of the following populations at the career center: students, parents and teachers. Principals of the three high schools in the school division were interviewed along with the principal of the career center and the school division CTE director. Finally, interviews were conducted with a counselor from each of the county's three high schools and the career center's job placement director who also serves in a counseling capacity. The interview format was based on a structure developed by Rubin and Rubin (2012) whose research supported the exploration of a topic with a small number of people who have relevant experiences. In this study, that relevant experience was each participant's relationship to the career center. The advantage of this form of data collection was the focus on personal input from each participant. Additional advantages included

descriptions of specific situations that are revealing (Rubin & Rubin, 2012), clarification regarding the lived experiences of the participants and the meaning that they make of those experiences (Seidman, 2013), and the use of a systematic and structured research tool (Seidmann, 2013; Rubin & Rubin, 2012). As recommended by Patton (2002), all interviews were recorded with permission from each participant.

Delimitations

This study was limited to interview data collected from 19 participants in one rural school division located in southwest Virginia along with review of CTE documents and reports, memos, and field notes relevant to the career center. Participants were selected from five groups of key individuals who are related to the career center. Research in this study was limited to addressing research questions about the career center, its non-traditional enrollment, and perspectives from a purposeful selection of participants.

Limitations

A major limitation of this study was the researcher's reliance on the accuracy of information shared by the participants along with their willingness to participate in the interview process. In addition, the school division is small, and courses offered at the career center are limited, unlike the number of courses and programs offered in some larger school divisions throughout Virginia. The results of this study, while revealing and having potentially beneficial information for the school division and specifically the career center, may lack generalizability to other school divisions in Virginia. The opinions and ideas shared reflect only the perspectives of those people interviewed and may not be generalized to the rest of the school division population. Given readers will be able to determine if the results have relevance to their particular school or school division.

Definitions

Career and Technical Education (CTE) - “organized educational activities that (A) offer a sequence of courses that (i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; (ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and (iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and (B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual.” (Perkins Act, 2006, p. 4)

Qualitative Research – “an inquiry approach in which the inquirer explores a central phenomenon, asks participants broad, general questions, and collects detailed views of participants in the form of words or images” (Creswell & Clark, 2004, p. 5).

Non-traditional Fields - "occupations or fields of work, including careers in computer science, technology, and other current and emerging high skill occupations, for which individuals from one gender comprise less than 25 percent of the individuals employed in each such occupation or field of work" (Perkins Act, 2006, p. 6).

CTE Completer - A student who has met the requirements (two or more standard credits for state-approved courses in a CTE program) for a career and technical education concentration (sequence) and all requirements for high school graduation, or an approved alternative education program. Students may take additional career and technical education courses that will enhance their career pathway goals (CTERS Manual, 2017, p. 3).

School Division - The area under the jurisdiction of a school board. Unlike school districts in most other states, Virginia's school divisions are not completely separate units of local government. This is because no school division has taxing authority. Instead, they are dependent upon their associated city, town, or county governments for at least a portion of their funding. Additional funds may come directly to a school division, typically from state and federal sources. (VDOE, 2015).

CTE Career Pathway - A structure for grouping jobs and industries that are related by skills or products. Within each cluster, there are cluster “pathways” that correspond to a collection of courses and training opportunities to prepare for a given career. (Washington Office of Superintendent of Public Instruction, 2016).

CTE Career Cluster - “a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities ranging from entry level to management, including technical and professional careers” (CTERS Manual, 2017, p. 3).

Dual Enrollment – A program that provides high school students with an opportunity to get a head start on their college education. Students can take college level courses that meet both high school and college requirements. This unique program allows students to shorten their time to college graduation and save on the cost of college-level courses (Virginia Community College System, 2016).

Format of the Dissertation

This dissertation utilizes a five-chapter format, with Chapter 1 as the Introduction. Chapter 2 is a review of the literature relevant to this research with emphasis on social cognitive career theory research, its models of interest, choice, performance and satisfaction, and SCCT’s application to practice; a review of Carl D. Perkins Act legislation; a review of non-traditional enrollment in CTE; information about gender barriers in CTE; and research regarding non-traditional career choices, including employment statistics and career forecasts in non-traditional

fields of work. Chapter 2 was expanded throughout the research process to include and expound on additional sources as they are identified and used. Chapter 3 provides a detailed description of the research process, specifically the use of individual interviews, identification of participants and methods of communication with participants for each group (students, CTE teachers, parents, counselors and administrators), the data collection process, and a description of the data analysis process. Chapter 4 presents the results of the research. Chapter 5 provides the researcher's conclusions and recommendations for additional research and study. A summary is included at the end of each chapter.

Summary

This study was designed to collect data which was not formerly available to the school division and the career center that is the focus of the study. The career center has a history of traditional enrollment in the CTE courses that it offers to high school students in the school division, and there has been little change in that enrollment over the years that the center has been in existence. The Virginia Department of Education encourages non-traditional enrollment, and the 2018 Carl D. Perkins Act (Perkins V) collects data from each state through a specific protocol regarding non-traditional enrollment in CTE (VDOE, 2018).

Through a basic qualitative research methodology using individual interviews of participants as key informants, this study collected data from students, parents, teachers, administrators, and counselors to obtain their perspectives regarding non-traditional enrollment in CTE and solicited their opinions and ideas about ways in which non-traditional enrollment can be increased at the career center. Data obtained from the research will be shared with the school division to provide clarification about stakeholders' perspectives as an avenue for professional

development and professional learning for school division employees and for development of CTE informational programs for students and parents.

Chapter 2

Review of Literature

Chapter 2 of this study includes a review of the literature about Social Cognitive Theory (SCT) and Social Cognitive Career Theory (SCCT), which is the theoretical framework for this research, along with information about Carl D. Perkins Acts legislation to support non-traditional enrollment in Career and Technical Education (CTE). The chapter also provides information about trends in non-traditional enrollment in CTE and gender barriers to CTE enrollment, along with literature and data regarding non-traditional career choices, information on current employment statistics for both males and females, and employment forecasts in non-traditional fields of work. The chapter concludes with a summary of the literature presented.

Theoretical Framework for the Study

Janet Lenz, President of the National Career Development Association from 2004 to 2005, described the constructs and concepts of a career theory as a means for clarifying the factors that sensitize an individual's career decision-making and the influences that shape a person's career development (Niles and Harris-Bowlsbey, 2009). That description aligns with the work of Lent, Brown & Hackett (2002) and their development of Social Cognitive Career Theory (SCCT). According to Niles and Harris-Bowlsbey (2009), SCCT provides a conceptual framework related to developing career interests, describes how career choices are made or re-made, and provides clarification about how career success and stability is achievable. It served as the theoretical framework for this study.

Social Cognitive Theory

Social Cognitive Theory, the foundation for Social Cognitive Career Theory, was developed in 1986 by Albert Bandura and took the position that "learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behavior. A

unique feature of SCT is its emphasis on social influence along with emphasis on external and internal social reinforcement” (Bandura, 1986, p.21). Luszczynska and Schwarzer described SCT as “a model of triadic reciprocal causation where people are both actors as well as products of their environment” (Luszczynska & Schwarzer, 2003, p. 128). Figure 1 shows a model of Bandura’s triad, depicting human behavior as a three-way dynamic consisting of personal factors, environmental influences and behavior, all of which continually interact (Bandura, 1986).

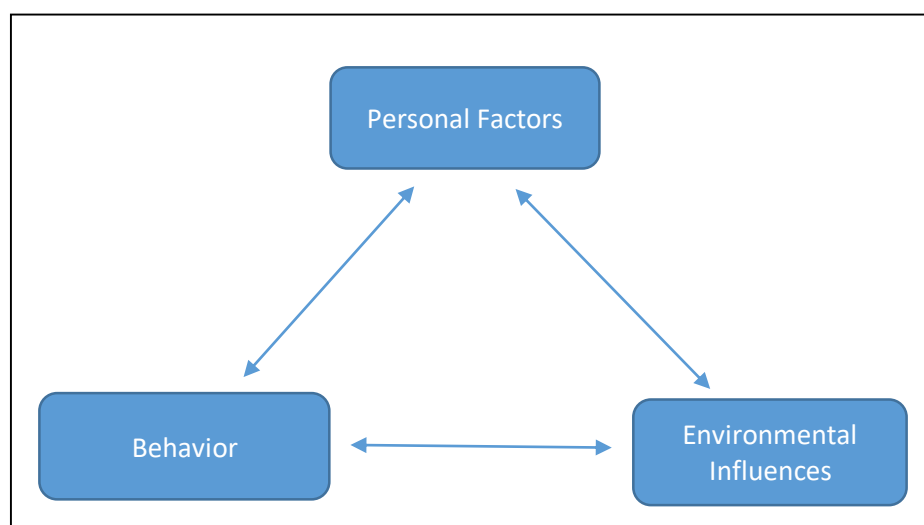


Figure 1. Bandura’s social cognitive theory triad

Source: Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory.

From the Social Cognitive Theory perspective, people are the products of interaction between personal, behavioral and environmental influences with cognition playing a critical role in people’s abilities to “construct reality, self-regulate, encode information, and perform behaviors” (Pajares, 1996, p. 543). Of note is the position Bandura took in stepping away from the theories of others of his time in which he felt that environmental factors were over-

emphasized. While he recognized the existence of environmental influences, Bandura saw people as “self-organizing, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses” (Pajares, 1996, p. 543). According to Bandura and Social Cognitive Theory, factors such as economic conditions, socioeconomic status, and educational and familial structures do not affect human behavior directly. Instead, “these factors affect behavior to the degree that they influence people’s aspirations, self-efficacy beliefs, personal standards, emotional states, and other self-regulatory influences” (Pajares, 1996, p. 543).

Bandura identified the capability of self-reflection to be the most “distinctly human” (Bandura, 1986, p. 21) and consequently the most prominent feature of social cognitive theory (Pajares, 1996). Through self-reflection, people make sense of their experiences, explore their own cognitions and self-beliefs, engage in self-evaluation, and change their thinking and behavior accordingly (Pajares, 1996).

At the core of Social Cognitive Theory and Bandura’s thinking about the factors that affect human functioning are self-efficacy beliefs (Bandura, 1986). Bandura defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). Self-efficacy has the power to result in motivation, well-being and personal accomplishments (Pajares, 1996). Bandura posited that “what people decide to do can often be predicted by what they believe about their capabilities more so than what they are actually capable of accomplishing” (Bandura, 1997, p. 2). Self-efficacy will be identified later in this review as a major component of Social Cognitive Career Theory.

Social Cognitive Career Theory

Social Cognitive Career Theory takes Bandura's Social Cognitive Theory a step further, extending into the area of career choice. Bandura's theory explained the "complex ways in which people, their behavior, and environments mutually influence one another" (Brown & Lent, 2013, p. 117). Social Cognitive Career Theory posits that people have the ability to make their own choices and can successfully address factors such as environmental supports and barriers that have the potential to "strengthen, weaken or even override personal agency" (Brown & Lent, 2013, p. 118). In Virginia, middle and high school students are required to make choices about CTE courses and classes that will prepare them for the work force as part of their educational plan and identification of a career pathway. Those choices may or may not be in accordance with the views of their support group.

Social Cognitive Career Theory shares some of the same characteristics as Krumboltz's learning theory of career counseling (LCCT) (Mitchell & Krumboltz, 1996). It differs in significant ways as well because of SCCT's concern with specific cognitive mediators; which infer that learning experiences guide career behavior and interact with factors such as interests, abilities and values (Niles & Harris-Bowlsbey, 2009). Lent (2005) viewed SCCT as a model that is complementary to both trait-factor and developmental models of career decision-making.

Social Cognitive Career Theory's foundation is based on the SCT (1986) reciprocal model of causality; which assumes that "personal attributes, the environment and overt behaviors operate as interlocking mechanisms that affect one another bi-directionally" (Lent et al., 1996, p. 379). The SCCT model shown in Figure 2 incorporates influences from the SCT model, highlighting self-efficacy beliefs, outcome expectations, and personal goals while incorporating

research and the application of the self-efficacy theory to the career domain (Hackett & Betz, 1981; Lent & Brown, 2002; Lent & Hackett, 1986)

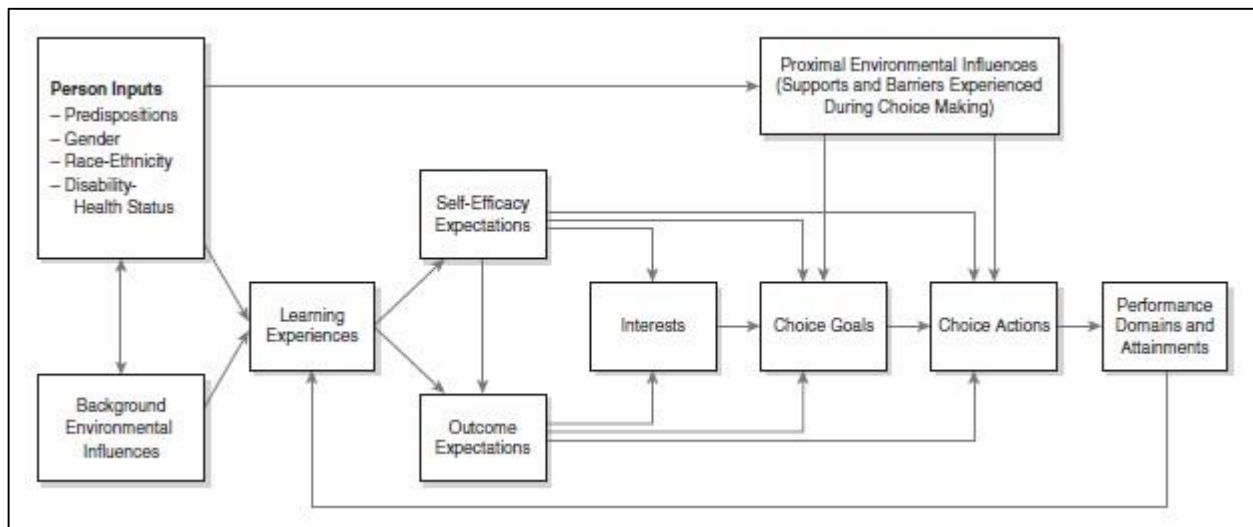


Figure 2. A simplified view of how career-related interests and choices develop over time, according to social cognitive career theory

Source: Adapted from R. W. Lent, S. D. Brown, and G. Hackett (1994). "Toward a Unifying Social Cognitive Theory of Career and Academic Interest, Choice, and Performance (Monograph). *Journal of Vocational Behavior*. 45: 79-122. Reprinted with permission.

Self-efficacy, a vital component of SCCT, is the belief that people have about their abilities to perform certain activities or actions (Bandura, 1986). Individuals tend to move toward careers in which they anticipate success and move away from those where they think they do not have the necessary capabilities (Niles & Harris-Bowlesby, 2013). Four sources that shape self-efficacy beliefs include: (a) personal performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) physiological states and reactions (Bandura, 1986). The most influential of these beliefs is personal performance accomplishments because when individuals achieve successful results in their endeavors, they experience positive or strong domain-specific self-efficacy beliefs (Bandura, 1986; Lent et al, 1994). Failures are associated with negative or weaker domain-specific beliefs (Bandura, 1986). The foundation of research begun by Bandura influenced SCCT in the areas of performance attainment and persistence in overcoming obstacles

(Niles & Harris-Bowlsbey, 2013). “Performance is influenced by ability, self-efficacy, outcome expectations and goals” (Niles & Harris-Bowlsbey, 2013, p. 92). According to Lent and Brown, problems arise in career development when individuals experience inaccurate perceptions of self-efficacy and barriers and then remove themselves from potential career opportunities (Brown & Lent, 1996).

Further discussion of SCCT model. The discussion that follows to further explain the Social Cognitive Career Theory is based on the evolution of SCCT from 1994 to 2013 and may or may not use the exact terms provided in the original model included in Figure 2.

Self-efficacy. Self-efficacy is the conviction that individuals have about their ability to be successful, but it is not a universal trait. Instead, it is defined in SCCT as “a dynamic set of self-beliefs that are linked to particular performance domains and activities” (Brown & Lent, 2013, p. 118). Brown and Lent cited the example of an individual who might have strong self-efficacy beliefs about his or her ability to play piano or basketball but feel much less competent at social or mechanical tasks (Brown & Lent, 2013). Feelings are subject to change, based on experiences and responses to environmental conditions. Brown & Lent (2013) reiterated the four types of learning experiences identified by Bandura that have the potential to modify one’s self-efficacy and noted their potentially strengthening and weakening effects on beliefs. Middle and high school students who are beginning to develop career interests and embarking on paths to prepare them for jobs related to those interests have had limited opportunities to develop high levels of self-efficacy that would assist them in making choices related to CTE courses and/or programs. That lack of self-efficacy, which is critical to success in any program of study, has the potential to deter individuals from pursuing careers that may be inviting but at the same time intimidating because of the skill level required.

Outcome expectations. Outcome expectations are individuals' beliefs about consequences or outcomes that could result from particular actions (Brown & Lent, 2013). The development of academic and career paths is influenced by perceptions as people relate outcomes from previous experiences and collect information from second-hand sources about career fields. Those influences come from a variety of sources including family, friends, community members, and media perspectives about specific careers. When people feel competent and experience success, according to Brown & Lent (2013), they expect praise and reinforcement. Brown & Lent cited an aspect of outcome expectations that has the potential to negatively impact students. For example, a young girl who has high self-efficacy because of her competence in mathematics may decide not to pursue mathematics because of anticipated negative reactions from her friends (Brown & Lent, 2013).

Personal goals. "Social Cognitive Career Theory distinguishes between *choice-content goals* (the type of activity or career that one wishes to pursue), and *performance goals* (the level of quality of performance that one plans to achieve within a given task or domain)" (Brown & Lent, 2013, p. 119). The question lies in how much or how well the individual wants to do the task (Brown & Lent, 2013). Perception of progress influences affective consequences (feelings of satisfaction or dissatisfaction) which in turn shape or reshape future career choices (Brown & Lent, 2013). SCCT maintains that self-efficacy and outcome expectations affect individual's choice and performance goals. Success fosters success. As individuals experience a sequence of successes, a positive cycle is created; and the individuals are motivated to devote additional time and energy in the pursuit of more challenging pursuits (Brown & Lent, 2013).

Interest, choice, performance and satisfaction. According to Brown and Lent, Social Cognitive Career Theory consists of "four conceptually and distinct yet overlapping models that

focus on (1) the development of interests, (2) the making of choices, (3) the influences on and results of performance, and (4) the experience of satisfaction, or well-being, in educational and occupational spheres” (Brown & Lent, 2013, p. 120). Interacting with each of these models are the basic cognitive-person elements of self-efficacy, outcome expectations, and goals, which are working in concert with gender, race/ethnicity, the environment, and the individual’s learning experiences to influence career and academic choices (Brown & Lent, 2013).

Interest. In the SCCT interest model, home, education, and community environments influence students and adolescents through a variety of activities, including but not limited to; crafts, sports, math, socializing, and computing, and create a foundation for future choices about careers (Brown & Lent, 2013). In addition, research shows that young people may be selectively influenced by their parents, teachers, peers and others regarding career choices. Those choices may include the selection of programs and courses that are not in alignment with the expectations of family and friends. Student self-efficacy and outcome expectations may also be impacted by negative and positive feedback. The SCCT interest model in Figure 2 illustrates that self-efficacy and outcome expectations influence career interests and decisions.

Choice. Lent and Brown noted that choosing a career is not a static event but is part of a larger set of dynamic processes (Lent & Brown, 2013). Figure 1 shows that career choice is preceded by development of self-efficacy, outcome expectations, interests, and skills in different performance domains (Lent & Brown, 2013). Choices may change over a period of time, and what was once appealing becomes less so while another choice becomes more viable. In addition, as Lent and Brown explained, choices are subject to revision because individuals and their environments change, unforeseen and unanticipated circumstances and events enter individual’s lives, and new paths and possibilities emerge. Brown & Lent advised that career

selection is “an unfolding process with multiple influences and choice points” (Lent & Brown, 2013, p. 123).

Career choice according to SCCT has three components: (1) the expression of a primary choice or goal to enter a particular field, (2) taking actions designed to implement one’s goal such as enrolling in a particular training program or academic major, and (3) subsequent performance experiences such as successes or failures that form a feedback loop causing the individual to re-evaluate either the current choice or future choices (Lent & Brown, 2013).

Important to note is that the choice model is not a one-way street. As Lent and Brown noted, individuals do not choose careers unilaterally; environments have a major impact on choices.

The result is that “environmental agents play a potent role in helping to determine who gets to do what and where, for how long, and with what sorts of reward” (Lent & Sheu, 2010, p. 692).

Performance. The performance model in SCCT overlaps with the choice model because both models focus on persistence (Brown & Lent, 2013). Persistence, however, can be viewed in alternate ways: as choice stability or performance adequacy. For example, choice stability may well be the individual’s decision to stay in a particular field or activity, achieving success both because the individual chooses to be in a certain kind of work or is allowed to remain in a particular job. However, as Brown and Lent noted, persistence is not necessarily an indicator of performance adequacy because the reasons that individuals change their plans can vary and not be a reflection of inadequate performance (Brown & Lent, 2013). Examples include students leaving college because they no longer have the funds to be there, a worker who is laid off from his or her job because a company downsizes, or a more attractive job opportunity may come along with better hours, more benefits and opportunities for advancement (Brown & Lent, 2013).

Satisfaction. Satisfaction is the “degree to which one likes or is happy with one’s school or work environment” (Lent & Brown, 2013, p. 128) and is influenced by several variables. Those variables include perceived value attached to school or work choices, perception of progress in attaining one’s goals, belief in one’s ability to be successful in performing the selected work, and access to resources within the environment that promote self-efficacy and facilitate goal pursuit (Lent & Brown, 2013).

Individual personality traits affect job satisfaction, specifically positive and negative effects, as well as work conditions. If the work site provides a positive and supportive environment, includes adequate resources and supplies, and offers opportunities for advancement, satisfaction will be positively affected (Lent & Brown, 2013).

Research on and Applications of Social Cognitive Career Theory

Social Cognitive Career Theory shares some of the same characteristics as Krumboltz’s Learning Theory of Career Counseling (LCCT) (Mitchell & Krumboltz, 1996). It differs in significant ways as well because of SCCT’s concern with specific cognitive mediators which infer that learning experiences guide career behavior and interact with factors such as interests, abilities and values (Niles & Harris-Bowlsbey, 2009).

Lent (2005) viewed SCCT as a model that is complementary to both trait-factor and developmental models of career decision-making. Since the creation of SCCT by Lent, Brown and Hackett in 1994 with its four models and underlying set of predictions about career choice, the theory has attracted attention; and research has continued. The next sections of this review regarding SCCT provide information about the theory’s empirical status, along with “selected applications of SCCT to the career behavior of diverse populations” (Lent and Brown, 2013, p. 129).

General trends and findings. Both quantitative and qualitative reviews of SCCT have been conducted to produce a substantial body of findings. Self-efficacy has received the most attention of the basic cognitive-person elements of SCCT (Multon, Brown & Lent, 1991; Sadri & Robertson, 1993, Stajkovic & Luthaus, 1998). Traditional qualitative research reviews concluded the following:

(a) Domain-specific measures of self-efficacy are predictive of career-related interests, choice, achievement, persistence, indecision, and exploratory behavior; (b) intervention, experimental, and path analytic studies support certain hypothesized causal relations between measures of self-efficacy, performance, and interests; and (c) gender differences in self-efficacy help to explain male-female differences in occupational consideration (e.g., Bandura, 1997; Betz, 2008; Hackett & Lent, 1992; Swanson & Gore, 2000).

Quantitative research reviews have produced findings from a large number of independent studies, “allowing conclusions about the strength of relationships across all studies that have addressed particular hypotheses” (Brown & Lent, 2013, p. 130). An example includes a meta-analysis of the interest model which supported that self-efficacy and outcome expectations are good predictors of occupational interests and that self-efficacy mediates the relationship between ability and interests (Lent et al., 1994). “A meta-analysis of 53 samples, including over 37,000 research participants, reported a strong overall relationship between self-efficacy and career interests” (Rottinghaus, Larson & Borgen, 2003) (Lent & Brown, 2013, p. 130).

Meta-analyses have been conducted as well for the interest, choice and performance models. Tests for the new SCCT model of satisfaction, however, are more limited in number

and need additional studies in order to accrue data to support potential utility (Sheu & Lent, 2009; Lent & Brown, 2013). The value of information regarding the four SCCT models lies heavily in the implications for designing interventions that will support self-efficacy, outcome expectations, and career outcomes (Schaub & Tokar, 2005; Williams & Subich, 2006; Lent et al., 1994; Sheu et al., 2010).

Lent and Brown (2013) noted that collectively the meta-analyses conducted for the four SCCT models are consistent with theoretical assumptions that

- (a) Self-efficacy and outcome expectations are good predictors of interests; (b) one's ability or performance accomplishments are likely to lead to interests in a particular domain to the extent that they foster a growing sense of self-efficacy in that domain; (c) self-efficacy and outcome expectations predict career-related choices both directly and indirectly through their linkage to interests; and (d) performance success is enabled both by abilities and self-efficacy, which can aid people to organize their skills and persist despite setbacks (Lent & Brown, 2013 p. 131).

Applying social cognitive career theory to practice. Lent and Brown suggested avenues for applying SCCT to practice for addressing development of academic and career interests and competencies, for preventing career-related difficulties, and for helping individuals solve existing problems in the selection of careers and making adjustments to work (Lent & Brown, 2013). The SCCT model also has potential for application to childhood and adolescence as students are exposed to a wide range of career possibilities and are developing their own ideas about jobs. Finally, SCCT has application to the field of counseling as guidance is provided to students who are in the process of making career plans.

Applications to diverse populations. Lent and Brown described SCCT as an aid to understanding the career development of a diverse array of students and workers, taking into account factors such as race/ethnicity, culture, gender, socioeconomic status, age, and disability status (Lent and Brown, 2013). Significant to this research are the findings of Williams and Subich (2006) whose studies on gender showed that women and men reported receiving “differential exposure to efficacy sources in specific gender-typed domains with women reporting more Social-type and men more Investigative-type learning experiences” (Brown & Lent, 2013, p. 132). Those findings suggest that men and women are exposed to socialization and learning experiences that are gender-based and lead to self-efficacy and outcome expectations which in turn lead to interests and choices that are gender-based. An exception to these results was found in studies of men and women who have had a balance of efficacy-building experiences, in particular gender-typed domains. An example is engineering majors, which suggests that career pursuits can be “constricted or expanded by environmentally guided and self-sought learning experiences and especially by the types of self-efficacy beliefs and outcome expectations that such experience enables “(Brown & Lent, 2013, p. 132).

The utility of SCCT has been extended to a diverse range of populations beyond the parameters of gender. It has applications to, among others, Hispanics, African Americans, Asian Americans, individuals with disabilities, patients with psychiatric disabilities, and gay and lesbian workers where the SCCT models have found support (Fabian & Pebdani, 2013; Fouad & Kantamneni, 2014). Social Cognitive Career Theory has the potential to enhance understanding about career development and facilitate programs to benefit individuals across diverse populations. Nevertheless, Gainor cautioned that additional research is needed to support the efficacy of SCCT-based interventions (Gainor, 2006).

Promoting aspirations and interests in young people. Lent and Brown (2013) observed that Social Cognitive Career Theory has been used for the purpose of conceptualizing (Prideaux, Patton, & Creed, 2002) and evaluating (McWhirter, Rasheed, & Crothers, 2000) career education programs. Gottfredson (2005) noted that career options tend to narrow over time, and school-based applications of SCCT may serve to protect a wide range of occupational alternatives (Brown & Lent, 2013). With the wide range of significant processes that occur over childhood and adolescence that have the potential to affect career choices, identification of strategies to support self-efficacy and outcome expectations are critical components of a successful counseling program (Lent, Hackett & Brown, 1999). This has particular import during the impressionable elementary and middle school years when students are formulating ideas about careers, developing interests that are job related and articulating aspirations for future employment.

Lent and Brown (2013) emphasized the importance of using psychoeducational interventions during the elementary and middle school years. Interventions include incorporating sources of efficacy information and focusing on strategies to bolster personal performance, modeling to expose students to academic and career domains that are unfamiliar to them, use of age-appropriate interventions to help students explore emerging interests and occupational interests, and fostering skills in decision-making and goal-setting (Lent & Brown, 2013). The formative years of elementary and middle school present opportunities to expose students to career options through presentation of accurate information and activities that bolster self-efficacy.

Facilitating career choice-making and implementation. Social Cognitive Career Theory provides school counselors and teachers with strategies and interventions to assist students in

navigating the impasses that they might encounter in choice-making about career options. Lent and Brown listed the ideal scenario of personal and environmental skills that individuals could potentially bring to late adolescence or early adulthood but noted that achieving that combination is unique and rare (Lent & Brown, 2013). By implementing SCCT, well-prepared career counselors can guide individuals to develop an appreciation of their own interests, values and talents; understand how self-attributes correspond with potential vocational options; identify clear goals or choices that link self-attributes to suitable occupational paths that engage interests, values and talents; support decision-making skills, goal-setting and management of goal pursuit; promote an environment that provides support for goals; and encourage personality traits that aid in making and implementing important life decisions (Lent & Brown, 2013).

Expanding choice options. Part of facilitating career choice-making implementation is expansion of choice options. This is accomplished in SCCT by using one or both of two methods: standardized measures of interests, values/needs, and aptitudes, and the use of a modified vocational card sort procedure. With standardized measurement tools, the focus is on identifying discrepancies between aptitude-interest and value-interest, which can relate to low self-efficacy or inaccurate career information or bias, which in turn leads to inaccurate or negative outcome expectations. Interventions focus on bolstering self-efficacy or clarifying accurate outcome expectations (Lent & Brown, 2013).

A modified vocational card sort used in SCCT asks individuals to sort a list of occupations into (1) might choose, (2) would not choose, and (3) in question. The card sort encourages specificity as individuals are questioned in-depth about their choices for the purpose of identifying inaccurate information about careers and also to determine self-efficacy beliefs and outcome expectations. Additional sorting of the vocational cards and in-depth discussion

and questioning are designed to reveal faulty assumptions about self or career and to “maximize the range of possible choice options” (Lent & Brown, 2013, p. 138).

Coping with barriers and building supports. Social Cognitive Career Theory recognizes that individuals tend to make career choices based on the perception that there will be few if any barriers to achieving success in a chosen career. In addition, individuals anticipate that they will receive ample support. Based on these assumptions, SCCT includes a strategy in the choice model that incorporates the following steps designed to assist individuals in the career counseling process: (1) anticipate possible barriers to implementing choices; (2) analyze the likelihood of encountering those barriers; (3) prepare barrier-coping strategies such as devising methods for preventing or managing likely barriers; and (4) build supports for the goals within family, peer and other social networks (Lent & Brown, 2013). Individuals’ families are frequently central to career choice and offer either barriers or support, particularly in collectivist cultures (Lent & Brown, 2013). For that reason, SCCT includes barrier-coping and support-building strategies for the purpose of negotiating conflicts between individual interest and family or other’s interest. (Lent & Brown, 2013).

Goal-setting and self-regulation. Goal-setting and self-regulation are part of the Choice Model of SCCT and are critical factors in whether or not an individual achieves projected goals. Lent & Brown (2013) described the manner in which individuals frame their goals. If the goals are framed clearly and specifically and are divided into manageable sub-goals such as taking preparatory courses, set within a reasonable timeframe, stated publicly, and held with strong commitment (Bandura, 1986), the individual is more inclined to be successful in meeting the goals (Lent & Brown, 2013). SCCT encourages clients to “frame their goals in facilitative (e.g. clear, specific, proximal) terms and to consider specific steps and resources needed to implement

their goals” (Lent & Brown, 2013, p. 140). Since individuals cannot anticipate all barriers to choice implementation, SCCT encourages flexibility and adaptability when making career choice decisions (Lent & Brown, 2013).

Facilitating work performance. “The basic hypotheses of SCCT’s performance model suggest that self-efficacy beliefs can facilitate attainment in a given academic or career domain as long as an individual possesses at least minimally adequate levels of the skills required in that domain” (Lent & Brown, 2013, p. 140). Self-efficacy or self-confidence alone will not enable an individual to reach his or her goals. Self-efficacy, according to SCCT, is but one of the basic cognitive-person elements and must be balanced with skills. “A basic strategy for improving performance begins with examining possible discrepancies between self-efficacy estimates and data on objectively assessed skills or past performance” (Lent & Brown, 2013, p. 140). SCCT recommends a combination of focus on mastery experiences and counseling activities that strengthen self-efficacy. In addition, SCCT posits that outcome expectations, performance goals and self-efficacy are the key motivators of performance (Lent & Brown, 2013).

Promoting work satisfaction. Social Cognitive Career Theory recognizes the complexity of achieving a fit between a selected career, the skills brought to the work site, and the individual’s self-efficacy. In order to achieve work satisfaction, SCCT recommends a list of potential strategies which includes the following: helping individuals access desired work conditions, activities or reinforcers; setting and making progress toward valued goals by framing clear, proximal, intrinsic, and challenging yet attainable goals; marshalling needed supports and resources for goal pursuit and other aspects of career development; enhancing tasks and goal-related self-efficacy; refining skills required for work success and the rewards it can bring; coping with negative aspects of one’s job; engaging in self-advocacy; and managing the

cognitive and behavioral aspects of affective traits that may predispose one toward work dissatisfaction (Lent & Brown, 2013).

While Lent & Brown (2013) acknowledge SCCT's focus on "potentially modifiable aspects of work satisfaction" (Lent & Brown, 2013, p. 142), they also acknowledge factors that can limit work satisfaction, including person and context factors. Examples include non-supportive organizational leadership or policies. When work satisfaction cannot be achieved and career counseling does not yield a positive result, SCCT recommends that individuals revise their career goals. If that is not possible, the SCCT recommendation is that individuals pursue goal-directed activities in other life domains including leisure, family and community that offer alternative outlets for satisfaction (Lent & Brown, 2013).

Implications of Social Cognitive Career Theory

Lent & Brown acknowledge the evolving framework of SCCT and its emphasis on self-efficacy. SCCT assumes that individuals have some degree of control over their career development while recognizing that conditions exist to limit or strengthen people's ability to influence their school and work lives (Lent & Brown, 2013). Consequently, the researchers have provided some "practical messages" regarding implementation of SCCT as a strategy for guiding career choices (Lent & Brown, 2013, p. 143). Those messages contribute to an understanding of SCCT and are included to add clarification.

- Interests are generally reliable predictors of education and career choices, but they are not the only predictors. Other considerations and interests are factored into a career decision, including family and financial conditions. Promote self-efficacy beliefs and outcome expectations that are positive yet realistic.

- Use the four primary sources of efficacy information to structure interventions to aid in the development of interests and skills.
- Use incrementally graded success experiences along with efforts to ensure favorable interpretation of those experiences to bolster self-efficacy.
- Support outcome expectations by exposure to accurate sources of educational and occupational information so that individuals learn about career choices that align with their values.
- Encourage individuals to set and pursue clear, specific and proximal sub-goals based on achievable goals that they have identified.
- Facilitate career development by exposing individuals, including children and adolescents, to diverse conditions that model coping and offset negative conditions such as gender discrimination.
- Add support-building and barrier-coping methods to educational and career choice counseling to foster persistence in achieving goals.
- Provide adjustment to work interventions that focus on building self-efficacy, outcome expectations, goals and behaviors, along with supportive work conditions (Lent & Brown, 2013).

Carl D. Perkins Acts Legislation

The Carl D. Perkins Vocational and Technical Education Act was first authorized by the federal government in 1984 and reauthorized in 1998 and 2006 (Wang, 2011). The original intent of the act was to increase the quality of technical education. In 2006 when the act was reauthorized and signed into law by President George W. Bush, it was passed almost unanimously by Congress (Wang, 2011). The reauthorized version included specific criteria that

Career and Technical Education (CTE) programs must meet in order to receive federal funds. Those criteria stipulated the inclusion of a minimum of one individualized student Program of Study (POS) beginning in the eighth grade, plus the following:

Coherent and rigorous content aligned with challenging academic standards and relevant CTE content. This content must be delivered in a coordinated, non-duplicative progression of courses that align secondary education with post-secondary education and lead to an industry-recognized credential or certificate at the postsecondary level or an associate or B.S. degree. Programs must include opportunities for postsecondary credit through dual or concurrent enrollment (Lewis & Kosine, 2008, p. vi).

As a result of the Perkins Acts and initiatives that evolved from the legislation, several programs were developed and funded, including Tech Prep, Career Clusters, and Dual Enrollment (Wang, 2011). Tech Prep involved an articulation agreement between secondary and post-secondary institutions for the purpose of providing a conduit through which students could transition from their CTE programs at the secondary level into a CTE program at the post-secondary level. (Wang, 2011). On July 31, 2018, President Donald Trump signed legislation to fund the current Perkins Act, “Strengthening Career and Technical Education for the 21st Century Act,” also known as Perkins V. Through this legislation, funding for the Tech Prep program was eliminated (ACTE, 2018).

“Career Clusters were released by the Office of Vocational Adult Education in 1999” (Wang, 2011, p. 2000) and consisted of 16 career clusters and occupational areas with “industry-validated knowledge and skills statements that identify what students need to know and be able to do in order to be successful in a particular field” (Wang, 2011, p. 2000). Each career cluster

consists of pathways which are a sequence of courses that may begin as early as ninth grade and progress into post-secondary education (Wang, 2011). The 16 career clusters are shown in Table 4.

Table 4.
The 16 Career Clusters

Agriculture, Food and Natural Resources	Architecture and Construction	Arts, AV and Communications	Business, Management and Administration
Education and Training	Finance	Government and Public Administration	Health Science
Hospitality and Tourism	Human Services	Information Technology	Law, Public Safety, Corrections and Security
Manufacturing	Marketing, Sales and Service	Science, Technology, Engineering and Mathematics	Transportation, Distribution and Logistics

Source: U.S. Department of Education, Office of Vocational and Adult Education, 1999.

Advance CTE (2016) cited the National Career Clusters Framework as a vital structure for organizing and delivering quality CTE programs through learning and comprehensive programs of study. The 16 Career Clusters in the National Career Clusters Framework represent more than 79 Career Pathways to help students navigate their way to greater success in college and career. As an organizing tool for curriculum design and instruction, Career Clusters provide the essential knowledge and skills for the 16 Career Clusters and their Career Pathways. It also functions as a useful guide in developing programs of study bridging secondary and postsecondary curriculum and for creating individual student plans of study for a complete range of career options. As such, it helps students discover their interests and their passions, and empowers them to choose the educational pathway that can lead to success in high school, college and career.

Dual Enrollment, another of the Perkins Act initiatives, provided opportunities for students to earn both high school and college credit at the same time for CTE courses that are

taught by a teacher who meets the requirements to teach dual enrollment courses. Courses may be taught at the student's high school by a teacher who is qualified to teach college courses, at a college where a college instructor teaches the courses, or a college instructor may come to the high school and teach the CTE course there.

Innovative and creative programs developed through Perkins funding provide avenues for meeting the needs of the future. As Harkins stated, "It does not require much imagination or insight to read the handwriting on the wall for education. Support the emerging knowledge economy by adding to or re-engineering your services or face the threat of obsolescence" (Harkins, 2002, p. 13). Collaboration between secondary and post-secondary educational programs in CTE will depend upon a continuum that enables students to transition from high school to college. That continuum, however, will depend upon a complete program of career awareness that begins in elementary school, provides exploration of careers in middle school, development at the high school level of workplace skills, credentialing at the post-secondary level, and opportunities for life-long learning (Stone, 2008).

On June 15, 2016, U.S. Secretary of Education John B King issued a "Dear Colleague Letter" in which he addressed the subject of guidance on gender equity in Career and Technical Education. The letter stated that all students, regardless of their sex, must have access to the full range of career and technical programs offered (U.S. Department of Education, 2016). Secretary King specifically cited the Carl D. Perkins Career and Technical Education Act which requires states to meet negotiated targets for participation and completion rates of males and females in programs that are nontraditional for their sex. The Secretary noted that despite efforts to increase enrollment of male and female students in fields that are non-traditional for their gender, disparities persist in certain fields (U.S. Department of Education, 2016). The Carl D. Perkins

Act of 1998 specifically identified legislative support for individuals preparing for non-traditional training and employment as did the 2006 Act. In both acts, those individuals preparing for non-traditional training and employment as defined by the legislation were grouped in the category of Special Populations (U.S. Department of Education, 1998; 2006). Ensuring that all students have access to high-quality secondary and postsecondary CTE programs is central to achieving equity required in law (U.S. Department of Education, 2016).

Nontraditional Enrollment in CTE

In May 2013 the Association for Career and Technical Education (ACTE) published several articles about students in career and technical centers across the United States who were enrolled in CTE programs that are non-traditional for their gender (ACTE Techniques, 2013). The articles were entitled “Breaking Barriers” and described the experiences of high school students and others who had chosen non-traditional career paths. In one example, Joan Olson, a certified career coach, described an aircraft maintenance technician who was let go from his job because of company downsizing. After completing a two-year program in surgical technology at a local community college and becoming employed again, the technician who had formerly worked only with men, found himself working only with women. He compared his former job to his current job, citing that he was working with similar instruments, including drills, hardware and fasteners, and that his new job required that he work with other people daily, something that his previous job had required as well. His new career choice, however, was non-traditional for his gender, and the skills that he had acquired from his previous employment combined with the completion of a two-year surgical technology program enabled him to transition from a job that was traditional for his gender to one that for him was non-traditional. Olson cited several ways that CTE can support increased enrollment in CTE classes and programs that are non-traditional.

Strategies include self-assessment by teachers and counselors with careful attention to their personal reactions to students' statements about career choices that are non-traditional, identification of pre-conceived ideas about men's work and women's work, examination of one's own beliefs about career choices for each gender, involving parents in informational programs about CTE careers, and providing information to students and parents about scholarship funding for careers that are non-traditional by gender (Olson, 2013).

Gender Barriers in CTE

Kaplan & Lee (2013) wrote that Title IX of the Educational Amendments of 1972 specifically states that “no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance” (Kaplan & Lee, 2006, p. 1462). Almost 35 years after that legislation was enacted by Congress, the gender divide in CTE still existed and had narrowed “barely at all” (Toglia, 2013, p. 14). While much of the data referenced inequities in CTE enrollment for females, males confront a similar problem. Olsen (2013) contends that socialization contributes to the continuation of barriers to enrollment in CTE courses that are non-traditional by gender. At any early age, girls and boys are assigned or relegated activities that are gender-specific such as playing with dolls, washing dishes and doing laundry, while boys are given trucks to play with and assigned tasks such as mowing the lawn and taking out the trash (Olsen, 2013). Without targeted and specific interventions, the socialization phenomenon continues through childhood and into school experiences, leading to gender stereotypes which impact career decisions that are traditional. In her role as a certified career coach, Olsen identified ways in which CTE can help break down gender barriers, including the following:

1. Self-assessment by educators and counselors to gain insight into their own values and beliefs regarding career choices for each gender. Identification of pre-conceived ideas and potential biases about women's work and men's work and how those beliefs are influencing guidance and information-sharing about career choices for all students.
2. Parental involvement in programs and information sessions that provide non-traditional career information, with descriptions of particular careers, career path information, salaries and scholarship information. As Olsen noted, "money talks" (Olsen, 2013, p. 18). Examples of sources about scholarship information for nontraditional careers include MenTeach (www.menteach.org), American Assembly for Men in Nursing (www.aamn.org), National Science Foundation (www.nsf.gov) for information about science, technology, engineering and mathematics (STEM) careers, and the American Association of University Women (www.aauw.org).
3. Print and provide online information about role models, which are the number one recruitment strategy for increasing non-traditional enrollment (Olsen, 2013). Data from the Bureau of Labor Statistics regarding earnings in traditional versus non-traditional employment cited the example of a childcare worker whose salary in 2010 was \$19,300 compared to the median salary for a construction manager with a yearly salary of \$83,860 (Bureau of Labor Statistics, 2010). While childcare is non-traditional for males and construction management is non-traditional for females, information about salaries has the power to significantly impact parental support for non-traditional career choices and break through gender barriers (Olsen, 2013).

Non-traditional Career Choices

When making career choices that are non-traditional for their gender, males and females confront a variety of contentious issues. An example is found in the nursing profession. Zamanzadeh et al's 2013 research regarding men in the nursing profession, a profession which is non-traditional for males, indicated that while there has been an increase in the number of males entering the profession, the increase, which is only five percent, has not been significant (Zamanzadeh et al, 2013). Reasons for this phenomenon fit with the perception of a non-traditional career choice. Males who became nurses indicated that they experienced ignorance from outside the profession and prejudice inside it, along with feelings of isolation, enmity from female colleagues and a need to understate their masculinity (Zamanzadeh et al, 2013). This isolation has evolved, ironically, into an advantage because most of the prestigious or leadership positions in nursing, according to Zamanzadeh's research, are filled by males (Zamanzadeh et al, 2013). O'Lynn's research supported the contention that nursing can no longer rely on females to fill the profession and that supporting males in the nursing profession will help relieve a universal shortage (O'Lynn, 2004). O'Lynn noted that nursing recruitment of males will alleviate a nursing shortage by introducing nursing to that part of the population who view nursing as a feminine profession, and the inclusion of more males in the nursing profession may support development of professional value within other health professions (O'Lynn, 2004). Removal of the lopsided parameters associated with traditional and non-traditional career choices can bring balance to professional populations and remove stereotypical identifications (Varaei et al, 2012).

Continuing the "Breaking Barriers" focus in Techniques (2013), the ACTE journal described the experience of a seventeen-year-old high school female enrolled in a CTE program

that is non-traditional for her gender. Samantha Reaves is enrolled in diesel engine and heavy equipment repair, a CTE program that is non-traditional for females. Reaves described the training program as an opportunity for her to make twice as much money as many other women earn and the assurance that she will be able to take care of herself (Techniques, 2013). Reaves stated that the biggest thing girls need when embarking on a non-traditional career path is a role model in the industry who will step forward and be a mentor (Techniques, 2013).

Employment Statistics for Males and Females in Non-traditional Occupations

The U.S. Department of Labor’s Bureau of Labor Statistics provides a list of non-traditional occupations based on 2014 annual averages. Data from that compilation are included in Table 5.

Table 5.
Non-traditional Occupations (male-dominated) Detailed by Women’s Share of Employment and Median Weekly Earnings (U.S. Department of Labor, 2014)

Occupations	Total number of workers (in thousands)	Women as a percentage of total employed in the occupation	Women’s median weekly earnings	Men’s median weekly earnings	Women’s earnings as a percentage of men’s
Total workers, all occupations	146,305	46.9%	\$719	\$871	82.5%
Cement masons, concrete finishers, and terrazzo workers	58	0.0%	-	-	-
Derrick, rotary drill, and service unit operators, oil, gas, and mining	54	0.0%	-	\$1,187	-
Crane and tower operators	74	0.2%	-	\$959	-
Bus and truck mechanics and diesel engine specialists	323	0.3%	-	\$811	-
Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	93	0.3%	-	\$559	-
Roofers	206	0.5%	-	\$620	-
Heavy vehicle and mobile equipment service technicians and mechanics	211	0.5%	=	\$886	-
Brick masons, block masons, and stone masons	142	0.7%	-	\$656	-
Heating, air conditioning, and refrigeration mechanics and installers	378	1.2%	-	\$773	-
Tool and die makers	67	1.3%	-	\$1,025	-
Automotive service technicians and mechanics	883	1.4%	-	\$737	-
Locomotive engineers and operators	55	1.4%	-	1,197	-
Highway maintenance workers	123	1.5%	-	\$794	-

Table 5.

Non-traditional Occupations (male-dominated) Detailed by Women's Share of Employment and Median Weekly Earnings (U.S. Department of Labor, 2014) (Continued)

Occupations	Total number of workers (in thousands)	Women as a percentage of total employed in the occupation	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a percentage of men's
Mining machine operators	68	1.5%	-	\$1,047	-
Other extraction workers	92	1.5%	-	\$1,126	-
Pipe layers, plumbers, pipefitters, and steamfitters	564	1.6%	-	\$916	-
Automotive body and related repairers	133	1.6%	-	\$668	-
Carpenters	1,282	1.7%	-	\$699	-
Operating engineers and other construction equipment operators	336	1.8%	-	\$862	-
Structural iron and steel workers	52	2.0%	-	-	-
Stationary engineers and boiler operators	96	2.0%	-	\$1,051	-
Drywall installers, ceiling tile installers, and tapers	162	2.1%	-	\$595	-
Small engine mechanics	50	2.1%	-	-	-
Carpet, floor, and tile installers and finishers	170	2.3%	-	\$687	-
First-line supervisors of construction trades and extraction workers	696	2.4%	-	\$1,033	-
Electricians	769	2.4%	-	\$884	-
Construction laborers	1,686	2.5%	-	\$605	-
Industrial and refractory machinery mechanics	343	2.8%	-	\$876	-
Electrical power-line installers and repairers	115	3.0%	-	\$1,018	-
Maintenance and repair workers, general	471	3.2%	-	\$1,062	-
Pest control workers	80	3.7%	-	\$653	-
Telecommunications line installers and repairers	184	4.4%	-	\$770	-
Water and wastewater treatment plant and system operators	72	4.5%	-	\$835	-
Helpers, construction trades	57	4.7%	-	-	-
First-line supervisors of landscaping, lawn service, and grounds-keeping workers	210	4.8%	-	\$716	-
First-line supervisors of mechanics, installers, and repairers	284	4.8%	-	\$1,040	-
Sheet metal workers	110	5.2%	-	\$857	-
Other installation, maintenance, and repair workers	224	5.2%	-	\$811	-
Logging workers	71	5.4%	-	-	-
Home appliance repairers	51	5.6%	-	-	-
Firefighters	300	5.7%	-	\$1,142	-
Chemical processing machine setters, operators, and tenders	63	5.8%	-	\$831	-
Driver/sales workers and truck drivers	3,406	5.8%	\$545	\$739	73.7%
Painters, construction and maintenance	561	6.0%	-	\$562	-
Grounds, maintenance workers	1,389	6.3%	-	\$454	-
Aircraft pilots and flight engineers	133	7.2%	-	\$1,446	-

Table 5.

Non-traditional Occupations (male-dominated) Detailed by Women's Share of Employment and Median Weekly Earnings (U.S. Department of Labor, 2014) (Continued)

Occupations	Total number of workers (in thousands)	Women as a percentage of total employed in the occupation	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a percentage of men's
Construction managers	711	7.4%	-	\$1,332	-
Radio and telecommunications equipment installers and repairers	134	7.4%	-	\$846	-
Industrial truck and tractor operators	564	7.4%	-	\$595	-
Security and fire alarm systems installers	58	7.5%	-	-	-
Automotive and watercraft service attendances	97	7.5%	-	\$518	-
Architectural and engineering managers	122	7.6%	-	\$1,975	-
First-line supervisors of firefighting and prevention workers	58	7.8%	-	\$1,448	-
Computer control programmers and operators	71	8.1%	-	\$790	-
Refuse and recyclable material collectors	84	8.6%	-	-	-
Surveying and mapping technicians	77	9.7%	-	\$882	-
Cabinetmakers and bench carpenters	51	9.9%	-	-	-
Parking lot attendants	78	10.5%	-	\$441	-
Engineers, all others	406	11.7%	-	\$694	-
Crushing, grinding, polishing, mixing, and blending workers	69	11.7%	-	\$694	-
Construction and building inspectors	78	12.2%	-	\$1,028	-
Electrical and electronics engineers	271	12.3	-	\$1,568	-
Computer network architects	123	12.4%	-	\$1,650	-
Police and sheriff's patrol officers	680	12.4%	-	\$1,650	-
Police and sheriff's patrol officers	680	12.4%	\$743	\$1,043	71.2%
Cleaners of vehicles and equipment	375	12.4%	-	\$480	-
Painting workers	156	12.7%	-	\$703	-
Taxi drivers and chauffeurs	383	12.7%	-	\$609	-
Chemical engineers	79	13.0%	-	\$1,580	-
Broadcast and sound engineering technicians and radio operators	108	13.0%	-	\$958	-
Computer, automated teller, and office machine repairers	265	13.3%	-	\$889	-
Cost estimators	105	13.7%	-	\$1,074	-
Precision instrument and equipment repairers	85	14.2%	-	\$836	-
Computer hardware engineers	84	15.3%	-	\$1,795	-
Parts salespersons	93	15.3%	-	\$643	-
Aerospace engineers	93	15.3%	-	\$1,727	-
First-line supervisors of police and detectives	126	15.9%	-	\$1,464	-
Industrial engineers, including health and safety	194	16.0%	-	\$1,464	-
Couriers and messengers	233	16.0%	-	\$737	-
Civil engineers	349	16.5%	\$1,275	\$1,406	90.7%
Barbers	11-	16.8%	-	-	-
Industrial production managers	273	17.8%	-	\$1,383	-

Table 5.

Non-traditional Occupations (male-dominated) Detailed by Women's Share of Employment and Median Weekly Earnings (U.S. Department of Labor, 2014) (Continued)

Occupations	Total number of workers (in thousands)	Women as a percentage of total employed in the occupation	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a percentage of men's
Information security analysts	68	18.1%	-	-	-
Drafters	138	18.1%	-	\$986	-
Television, video, and motion picture camera operators and editors	72	18.1	5	-	-
Supervisors of transportation and material moving workers	199	18.3%	-	\$925	-
Laborers and freight, stock and material movers	1867	18.3%	\$476	\$546	87.2%
Clergy	433	18.6%	\$763	\$1,007	75.8%
First-line supervisors of production and operating workers	789	18.6%	\$659	\$942	70.0%
Network and computer systems administrators	205	19.1%	-	\$1,286	-
Printing press operators	187	19.6%	-	\$686	-
Software developers, applications and systems software	1,235	19.8%	\$1,457	\$1,736	83.9%
Baggage porters, bellhops, and concierges	85	20.2%	-	\$664	-
Miscellaneous agricultural workers	739	20.2%	\$369	\$437	84.4%
Metal workers and plastic workers, all other	342	20.4%	\$511	\$647	79.0%
Engineering technicians, except drafters	369	20.5%	\$785	\$1,066	73.6%
First-line supervisors of protective service workers, all other	91	20.9%	-	\$1,004	-
Detectives and criminal investigators	164	21.0%	-	\$1,183	-
Computer programmers	509	21.4%	\$1,253	\$1,447	86.6%
Chefs and head cooks	430	21.4%	\$531	\$601	88.4%
Transportation, storage, and distribution managers	260	21.6%	\$836	\$1,014	82.4%
Cutting workers	60	21.9%	-	-	-
Chiropractors	66	22.4%	-	-	-
Security guards and gaming surveillance officers	899	22.6%	\$514	\$589	87.3%
Butchers and other meat, poultry, and fish processing workers	331	23.5%	\$457	\$537	85.1%
Farmers, ranchers and other agricultural managers	941	23.8%	-	\$818	-
Cutting, punching, and press machine sellers, operators, and tenders, metal and plastic	85	24.2%	-	\$663	-
Environmental scientists and geoscientists	91	24.5%	-	\$1,388	-
Production workers, all other	947	24.7%	\$492	\$676	72.8%
Helpers – production workers	54	25.1%	-	-	-
Architects, except naval	178	25.3%	-	\$1,391	-

Notes:

- Non-traditional or male-dominated occupations are those in which women represent 25 percent or less of total employed. Occupations include those with a sample size of at least 50,000 people employed.

- Total number of workers and women as a percentage of total employed are 2014 annual averages for all people employed, including part-time and self-employed.
<http://www.bls.gov/cps/cpsaat11.htm>
- Median weekly earnings are 2014 annual averages based on full-time wage and salary workers only.
<http://www.bls.gov/cps/cpsaa539.htm>
- Dashes indicate no data or base is less than 50,000.

Source: Bureau of Labor Statistics, Current Population Survey, U.S. Department of Labor, 2014.

Table 5 provides evidence that women have chosen and are employed in non-traditional jobs, along with highlighting the wide range of careers for which women apparently qualify. In addition, the data note that males and females are not paid equally for the same work.

Employment in jobs that are non-traditional for the gender of the employee continues to be a research focus for Lent and Brown (2013) as they explore employees' reactions to working in environments that present barriers to acceptance and career advancement.

For comparison, Table 6 presents data for traditional (female-dominated) occupations, which were selected based on women as a percent of total employed, including full-time, part-time and self-employed. Traditional or female-dominated occupations are those in which women represent 75 percent or more of the total employed.

Table 6.
Traditional Female-dominated Detailed Occupations by Women's Share of Employment and Median Weekly Earnings Showing 2014 Annual Averages

Occupations	Total # workers (in thousands)	Women as % of total employed	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a % of men's
Total workers, all occupations	146,305	46.90	\$719	\$871	82.5%
Speech pathologists	137	98.40	\$1,089	-	-
Preschool/kindergarten teachers	664	97.20	\$625	-	-
Dental hygienists	175	97.10	\$951	-	-
Medical Transcriptionists	58	97.10	-	-	-
Dental assistants	273	96.60	\$535	-	-
Childcare workers	1,218	95.50	\$444	-	-
Hairdressers, hairstylists, and cosmetologists	760	94.60	\$476	-	-
Secretaries and administrative assistants	2,995	94.20	\$685	\$811	84.5
Medical assistants	508	92.80	\$539	-	-
Dietitians and nutritionists	123	92.40	\$875	-	-
Occupational therapists	111	92.40	\$1,139	-	-

Table 6.

Traditional Female-dominated Detailed Occupations by Women's Share of Employment and Median Weekly Earnings Showing 2014 Annual Averages (Continued)

Occupations	Total # workers (in thousands)	Women as % of total employed	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a % of men's
Nurse practitioners	128	91.50	\$1,682	-	-
Receptionists and information clerks	2,301	91.30	\$532	\$616	86.4
Billing and posting clerks	507	91.20	\$640	-	-
Teaching assistants	904	90.30	\$494	\$580	85.2
Medical records and health information technicians	138	90.20	\$796	-	-
Bookkeeping, accounting, and auditing clerks	1,231	90.20	\$660	\$732	90.2
Registered nurses	2,888	90	\$1,076	\$1,190	90.4
Payroll and timekeeping clerks	146	89.40	\$762	-	-
Licensed practical and licensed vocational nurses	641	89	\$737	\$868	84.9
Miscellaneous personal appearance workers	296	88.90	\$422	-	-
Maids and housekeeping cleaners	1,514	88.60	\$400	\$404	99.0
Nursing, psychiatric, and home health aides	1,980	88.50	\$477	\$528	88.3
Word processors and typists	101	88.40	\$629	-	-
Human resources assistants, except payroll and timekeeping	101	87.60	\$711	-	-
Paralegals and legal assistants	417	87.30	\$840	-	-
Hosts and hostesses, restaurant, lounge and coffee shop	297	85.20	\$418	-	-
Librarians	198	84.80	\$849	-	-
Office clerks, general	1,230	84.60	\$628	\$662	94.6
Library assistants, clerical	98	84	-	-	-
Personal care aides	1,254	83.90	\$425	\$265	91.4
Special education teachers	336	83.70	\$987	\$1,078	91.6
Phlebotomists	118	83.40	\$526	-	-
Insurance claims and policy processing clerks	288	84.80	\$632	\$709	89.1
Massage therapists	172	82.70	-	-	-
Eligibility interviewers, government programs	70	82.10	\$766	-	-
Social workers	799	81.90	\$839	\$892	94.1
Sewing machine operators	158	81.90	\$432	-	-
Tellers	361	81.60	\$507	\$544	93.2
File clerks	226	81.60	\$613	-	-
Information and record clerks, all other	95	81.60	\$658	-	-
Health practitioner support technologists and technicians	583	81.40	\$618	\$618	100

Table 6.

Traditional Female-dominated Detailed Occupations by Women's Share of Employment and Median Weekly Earnings Showing 2014 Annual Averages (Continued)

Occupations	Total # workers (in thousands)	Women as % of total employed	Women's median weekly earnings	Men's median weekly earnings	Women's earnings as a % of men's
Travel agents	82	81.40	-	-	-
Elementary and middle school teachers	3,102	80.90	\$956	\$1,096	87.2
Tailors, dressmakers and sewers	92	80.60	-	-	-
Interviewers, except eligibility and loan	160	80.50	\$620	-	-
Therapists, all other	186	79.90	\$863	-	-
Meeting, convention and event planners	156	79.20	\$981	-	-
Data entry keyers	292	78.70	\$618	\$763	91.8
Loan interviewers and clerks	143	78.10	\$692	-	-
Social and human service assistants	180	77.90	\$673	-	-
Court, municipal and license clerks	69	77.40	-	-	-
Compensation, benefits, and job analysis specialists	71	77.30	-	-	-
Miscellaneous legal support workers	200	75.80	\$817	-	-
Flight attendants	92	75.80	-	-	-
Physician assistants	84	74.50	-	-	-

Source: Bureau of Labor Statistics, Current Population Survey, 2014.

Career Forecasts in Non-traditional Fields of Work

In January 2016 the World Economic Forum issued an extensive report entitled “The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Generation.” While the report included international profiles and job projections, this dissertation research focuses on data that is specific to the United States. The reader is invited to explore the entire report for clarification about the international perspective.

Significant to career forecasts for the upcoming years is the identification of categories of work or job families and predictions about the areas of anticipated growth. That data is important to this research because it focuses on employment that is non-traditional by gender as both males and females prepare for a workforce that requires that both genders prepare for and

have equal access to predicted job increases (World Economic Forum, 2016). The report cites the importance of a stronger role for women in the workforce, a role which will be achievable through the increased use of automation and technology in the home. The report states that automation and technology will take care of a large portion of home and family care that is currently assumed by females and enable them to direct their skills and education on their careers (World Economic Forum, 2016).

Job families included in the report, along with projections about the employment outlook through the year 2020, are listed in Table 7. Job families were identified and grouped by the World Economic Forum.

Table 7.
Employment Outlook by Main Job Families

Job Family	Employment Outlook through 2020
Office and administration	Declining
Sales and related	Growing
Transportation and logistics	Growing
Manufacturing and production	Declining
Education and training	Growing
Management	Stable
Business, legal and financial	Growing
Construction and extraction	Stable
Installation and maintenance	Growing
Computer, mathematical and science	Growing
Arts, design, entertainment, sports and media	Declining
Architecture and engineering	Growing
Farming, fishing and forestry	Stable

The information in Table 7 is a data-supported overview about job growth in the United States, and it provides a construct for career preparation as students in middle and high school identify career choices and career pathways.

Summary

Chapter 2 provided a review of the literature about Social Cognitive Career Theory (SCCT), which is the theoretical framework for this dissertation research. Included in the

review of SCCT are the models of interest, choice, performance and satisfaction developed by Lent, Brown and Hackett, along with reference to the foundations of SCCT which are based on Social Cognitive Theory developed by Bandura. Lent et al extended Bandura's research to include a specific emphasis on career choices and barriers. Also included in this chapter is additional information about SCCT which focuses on its application to practice. The Carl D. Perkins Act legislation is defined along with CTE programs that have developed because of the legislation, including 16 career pathways that are part of CTE programs throughout the United States. Chapter 2 concludes with a review of non-traditional enrollment in CTE, identifies gender barriers to enrollment in CTE courses that are non-traditional by gender, and reviews data about non-traditional career choices along with job projections through the year 2020 based on a report from the World Economic Forum calling for stronger female inclusion in the workforce in both the United States and internationally.

Chapter 3

Methodology

Chapter three describes the qualitative research methodology used to address the research problem and explains the research design for a study about enrollment of students in non-traditional CTE courses at a career center in southwest Virginia. In addition, the chapter includes the purpose of the study and describes the research questions, selection of participants, data collection procedure, and the process of data analysis. Finally, the chapter includes a description of the pilot study used in the research and strategies to ensure trustworthiness.

Statement of the Problem

Since the beginning of Coalfield County Career Center, male and female students have continued to enroll in CTE classes and programs traditional for their gender. Consequently, female students rarely enroll in traditionally male-dominated classes such as Welding and Building Construction and male enrollment in traditionally female-dominated classes such as Nursing and Cosmetology has also been low (VDOE, 2014). Low non-traditional enrollments in these programs have continued throughout the years at the career center, even though the Commonwealth of Virginia has consistently encouraged school divisions to increase non-traditional enrollments and the 2006 Carl D. Perkins Act prescribes increased non-traditional enrollment. This study is being conducted to determine the barriers to increasing non-traditional enrollment in CTE courses offered at Coalfield County Career Center and to identify strategies for overcoming those barriers.

Purpose of the Study

The purpose of this study is to collect data regarding barriers that prevent students from taking non-traditional CTE courses and programs as well as to identify strategies for overcoming

those barriers. To collect the data, the researcher will personally and individually interview several groups of participants. Coalfield County Career Center students, teachers, and parents will be interviewed. Principals and guidance counselors from the career center and the three county high schools will also be interviewed. And finally, the Coalfield County Schools CTE director will be interviewed.

An analysis of the data will clarify the parameters that contribute to student enrollment at the career center and potentially provide avenues for students to enroll in programs that are non-traditional for their gender. The data will also provide information that can contribute to planning efforts for the career center in the form of program awareness initiatives for students, parents, teachers, counselors and administrators.

Research Questions

The main question to be answered by this research study is: What are the reasons male and female students rarely enroll in CTE non-traditional classes and programs in the school division's career center? The research will incorporate the follow sub-questions.

Question #1: What are the perceptions of selected stakeholders regarding why male and female students rarely enroll in CTE classes and programs that are non-traditional by gender in Coalfield County Career Center?

Sub-question: What barriers do students, parents, teachers, administrators and counselors think exist that prevent a majority of students at the career center from enrolling in non-traditional courses for their gender?

Question #2: What are the perceptions of selected stakeholders regarding how enrollments can be improved by gender in non-traditional CTE classes and programs at Coalfield County Career Center?

Sub-question: What strategies do students, parents, teachers, administrators and counselors recommend for overcoming the barriers that cause low enrollment?

Research Design

This study will be conducted using a basic qualitative research methodology consisting of semi-structured individual interviews, review of school division CTE documents and reports, and journaling of field notes along with memo writing. The researcher will be the primary instrument of data collection and analysis.

The underlying philosophy of this study is the assumption put forward by interpretive research, which is the most common type of qualitative research, that reality is socially constructed and there is no single observable reality (Merriam & Tisdell, 2016). A single event or situation can be interpreted in a variety of ways. Because qualitative research constructs knowledge, the term constructivism is often used interchangeably with interpretivism. Creswell (2013) explained that individuals seek understanding of their world and that they interpret their own experiences. This interpretation causes the researcher to be faced with a complexity of views which are subjective and may be the result of social negotiation (Creswell, 2013).

This study is based on the theoretical framework of Social Cognitive Career Theory (SCCT), which Lent described as “a relatively recent approach to understanding educational and occupational behavior” (Lent, 2013, p. 115). A combination of elements from the theories of Super, Holland, Krumboltz, and Lofquist and Dawis, SCCT created a “unifying framework for explaining how people (a) develop vocational interests, (b) make occupational choices, (c) achieve varying levels of career success and stability, and (d) experience satisfaction or well-

being in the work environment” (Lent, 2013, p. 115). The design of this study delves into that framework and can best be determined through the use of a qualitative methodology.

Three key elements define a qualitative research study and are pertinent to this study, including the following:

- Qualitative research design is naturalistic and refers to real-world situations as they unfold naturally, and the researcher is open to whatever emerges (Berg, 2012).
- Qualitative design is emergent, and the researcher avoids rigid designs that eliminate responding to opportunities to pursue new paths of discovery as they emerge (Berg, 2012).
- Cases for study, including people, organizations, communities, cultures, events and critical incidences, are selected because they are “information rich” and illuminative, and sampling is aimed at insight about the phenomenon, not empirical generalization (Berg, 2012).

In addition, qualitative methodology is inductive. In this study the researcher will build theory from interviews, examination of documents and reports, and review of field notes and memos and combine and order them into larger themes as the work moves from the particular to the general (Merriam & Tisdell, 2016).

Qualitative design was selected for this research because the data collected from this study will enable the researcher to understand how people make sense of their lives, how they interpret what they have experienced, and why they have made certain choices. Participants in the study will share their perspectives. As Patton (1985) noted, the key concern is understanding the phenomenon of interest from the participant’s perspective, not the researcher’s. This is

sometimes referred to as the *emic* or insider's view, versus the *etic*, or outsider's view (Merriam & Tisdell, 2016).

The research design for the study included interviews conducted with key informants from the CTE community in the school division. Participants were selected from each of the following populations: students, parents, teachers, counselors and administrators. Each student, parent, and teacher were associated with the career center. Administrators included the principals of the three high schools in the school division, the principal of the career center and the school division CTE director. Finally, the counselors were from each of the county's three high schools and the career center's job placement director who also serves in a counseling capacity. The interview format was based on a structure developed by Rubin and Rubin (2012) whose research supported the exploration of a topic with a small number of people who have relevant experiences. In this study, that relevant experience was each participant's relationship to CTE and the career center. The advantage of this form of research was the focus on personal input from each participant. Additional advantages include descriptions of specific situations that are revealing (Rubin & Rubin, 2012), clarification regarding the lived experiences of the participants and the meaning that they make of those experiences (Seidman, 2013), and the use of a systematic and structured research tool (Seidmann, 2013; Rubin & Rubin, 2012). As recommended by Patton (2002), all interviews were audio-recorded with permission from each participant.

Selection of Participants

This study used purposeful sampling, sometimes called criterion sampling, which included participants who assisted the researcher in discovering, understanding and gaining insight into the stated purpose of the study (Merriam & Tisdell, 2016). Patton (2015) noted that

the logic and power of qualitative purposeful sampling derives from the emphasis on in-depth understanding of information-rich cases (Merriam & Tisdell, 2016). Information-rich cases provide an opportunity to learn a great deal about the issue of central importance to the research (Merriam & Tisdell, 2016).

The purposeful sampling for this study was a typical sample because “it reflects the average person, situation or instance of the phenomenon of interest” (Merriam & Tisdell, 2016, p. 97). When using a typical purposeful sampling strategy, the researcher wants to “highlight what is typical, normal and average” (Patton, 2015, p. 268). The site selected for this study was the career center, and it too was typical “because it is not in any major way atypical, extreme, deviant, or intensely unusual” (Patton, 2015, p. 284). Likewise, the participants themselves were typical because they reflected the same characteristics of being average and normal (Patton, 2015).

Participants

Table 8 and the paragraph below it provides an overview and description of criteria for participants in this study.

Table 8.
Criteria for Participant Selection

Participant	Criterion
Four students	A student currently enrolled in CTE at the career center
Four teachers	Teacher currently teaching CTE courses and programs at the career center
Two parents	Parent of a student currently enrolled in the career center
Principal #1	Principal of HS #1 with students currently enrolled in classes at the career center
Principal #2	Principal of HS #2 with students currently enrolled in classes at the career center
Principal #3	Principal of HS #3 with students currently enrolled in classes at the career center
Principal #4	Current principal of the career center

Table 8.

Criteria for Participant Selection (Continued)

Participant	Criterion
Counselor #1	Counsels students at High School #1 about CTE courses and programs at the career center
Counselor #2	Counsels students at High School #2 about CTE courses and programs at the career center
Counselor #3	Counsels students at High School #3 about CTE courses and programs at the career center
Job Placement Director/Counselor at the career center	Counsels students at the career center and provides job placement guidance
Coalfield County School Division CTE Director	Currently supervises school division CTE programs at high schools and career center

In addition, each participant was identified by the following:

1. Was a “good informant” as defined by Morse (p. 73, 1998).
2. Provided stories about their lived experiences as they relate to CTE and the career center.
3. Informed an understanding of the career center through stakeholder narratives (Creswell & Poth, 2018).
4. Had experience regarding the phenomenon being studied: the career center.
5. “Purposefully informed an understanding of the research problem and central phenomenon in the study” (Creswell & Poth, p. 158, 2018).
6. Provided details and descriptions that contribute to the development of a well-saturated theory (Creswell & Poth, 2018).

Participant Recruitment

The principal of the career center knew the students, teachers and parents, and the researcher consulted with the principal regarding the selection of participants who could effectively respond to the interview questions and who would be reliable sources of information.

Following approval by the Institutional Review Board, potential participants were sent a letter by email (Appendix B) which described the study and solicited participation in the research study. A follow-up letter or telephone call was used to ensure participation in the research study. Initial contact with potential participants included the following information recommended by Taylor and Bogdan (1984): 1) assurance that all participants in the study would be protected via

a pseudonym to ensure confidentiality and anonymity; 2) assurance that participants would be given final say over information that they contributed to the study; 3) payment would be provided to each participant in the form of a \$25.00 honorarium; and 4) logistical details concerning time, place and number of interviews would be clearly stated.

The researcher anticipated that interviews of twenty-one participants will provide a rich source of information for this research and that saturation and redundancy will be reached by the completion of the interviews. The twenty-one participants will include four representatives from each of the following groups: students enrolled at the career center, parents of students enrolled at the career center, CTE teachers at the career center, principals of the three high schools and the principal of the career center, and the CTE director for the school division.

Data Collection Procedures

Interview Procedures

Interviews were described by Dexter as “conversations with a purpose” (Dexter, 1970, p. 136). “The purpose of an interview is to obtain a special kind of information” (Merriam & Tisdell, 2016, p. 108). In this research study, both the conversations and the special kind of information were focused on collecting data about the study’s main research question concerning enrollment of students in non-traditional CTE courses. Patton described the purpose of interviewing as a way for us to enter into the other person’s perspective (Patton, 2015).

In this study, semi-structured interviews were conducted with 19 participants who had a relationship with the CTE program in a rural school division career center. A semi-structured interview format was selected because the questions were flexibly worded and contained a mix of more or less structured questions (Merriam & Tisdell, 2016). The interview began with a structured section of questions which were asked of all participants and then moved to a list of

questions and issues to be explored, but the exact wording and the order of the questions was not determined ahead of time (Merriam & Tisdell, 2016). This format allowed the researcher to respond to the situation at hand and make mid-course adjustments in the interview as needed (Merriam & Tisdell, 2016).

Interview data were focused on the experiences and perspectives of the participants regarding enrollment in non-traditional CTE courses at the school division's career center. Data collected from the interviews was analyzed immediately after each interview was transcribed.

Interviews with students, parents, teachers, career center principal and job placement director/counselor were conducted in a quiet setting at the career center. High school principals and counselors were interviewed in their offices as well as the CTE director for the school division. Interviews were approximately 45-60 minutes long or until the researcher determined that the interview questions had been adequately answered.

At the beginning of each interview the researcher presented a consent form to each participant and described it in detail. In addition, the researcher obtained permission from each participant to audio record the interview using a digital recorder. Once the informed consent form was signed, the interview began. Interview guides for the semi-structured interviews are located in Appendix C for parents, teachers, administrators and counselors and Appendix D for students. During the interviews, participants were asked to describe their experiences at the career center along with their perspectives regarding enrollment in non-traditional CTE courses. The interview format included questions about any barriers that each participant had identified to enrollment in non-traditional CTE courses. In addition, participants were asked for their suggestions regarding strategies for increasing enrollment in non-traditional CTE courses. The

researcher personally transcribed each interview. Interviews were transcribed immediately following each interview, and data analysis of each transcript was a continuous process as data were collected.

Document Review

In addition to interviews, “documents and artifacts that are part of the research setting are also sources of data in qualitative research” (Merriam & Tisdell, 2016, p. 162). “Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem” (Merriam & Tisdell, 2016, p. 189). The school division generated a number of CTE reports and documents, which were submitted to the Virginia Department of Education. The researcher reviewed a variety of documents and reports for the purpose of gathering information about the career center. Information from those reports was included in the interview guides.

Documents and reports were obtained from the school division’s CTE director, the career center principal and the job placement director. In addition, the researcher accessed documents from the Virginia Department of Education’s website, including but not limited to the school division’s annual report card and career center reports of male and female non-traditional enrollment along with reports about CTE completers at the career center. The researcher also examined artifacts produced at the career center “that represent some form of communication that is meaningful to the participants and/or the setting” (Merriam & Tisdell, 2016, p. 162).

Field Notes

The researcher maintained a notebook for documenting notes, key phrases and major points expressed by participants during each interview. As the researcher transcribed the interviews while listening to the recordings, additional notes were included. Patton identified

field notes as a source for creating new questions during the interview process and also as a support for data analysis (Patton, 2002). The researcher used the field note format for recording observations about participants during interviews, including participants' reactions to questions, body language, signs of reticence or enthusiasm in response to questions and any other manifestations on the part of the participants.

Memo Writing

Memo writing was ongoing activity throughout the research study to enable the researcher to document thoughts about data collection as they occur. Memo writing, which is a concept originally referenced by Strauss (1987), involves documenting by recording or writing notes that are of interest. Memos trigger thinking and are the written or recorded version of an internal dialogue going on during the research (Strauss, 1987). The researcher recorded what was happening during the research for the purpose of capturing new ideas as they emerged and to inform the coding scheme development (Strauss, 1987). Memo writing helps to guide and clarify the researcher's thinking and can also be used as part of the audit trail which is necessary for establishing the study's validity (Bloomberg and Volpe, 2008).

Pilot Study

A pilot study was conducted with three participants who have the same history with the career center as the research participants. Pilot study participants included a student, a teacher, and an administrator. Individual interviews were conducted with these key informants, and data from the interviews was transcribed and analyzed using the same procedures as those used in the main study.

Participants in the pilot study had a background in CTE so that they had the potential to bring to the data collection process the same level of lived experiences as those who participated

in the categorical interview process. The pilot study provided an opportunity to refine the interview protocol if needed.

Data Analysis Procedures

Merriam & Tisdell (2016) described data analysis as the process of making sense out of the data through “consolidating, reducing, and interpreting what people have said and what the researcher has seen and read – it is the process of making meaning” (Merriam & Tisdell, 2016, p. 202). They further described the data analysis process as “moving back and forth between the bits of data and abstract concepts for the purpose of making sense of the data with the goal of answering the research question(s)” (Merriam & Tisdell, 2016, p. 202).

The researcher personally transcribed each of the interviews using Microsoft Word to develop transcripts of the data. Microsoft Word was used to construct a table of codes, categories and themes according to the levels identified by Hahn (2008). “Making coding and retrieval less tedious provides new avenues for analysis” (Merriam & Tisdell, 2016, p. 223). Data analysis was conducted in conjunction with data collection.

Coding, Categories and Themes

Coding was the data disaggregation process that began immediately after each interview was transcribed so that the researcher could begin developing a concept of the direction of participation responses. During this process, notations, comments, observations and queries were documented in the margins of each transcript to identify data that appeared important or relevant to the study (Merriam & Tisdell, 2016). Lofland & Lofland (1995), Miles & Huberman (1994), and Strauss (1987) describe coding as a procedure for breaking down the data into manageable parts for the purpose of identifying and naming segments of the data and categorizing those parts. The researcher coded the data for the purpose of generating theories

and concepts to address the study's research questions. Categories identified during coding became the findings of the study (Merriam & Tisdell, 2016). In this study the researcher used Microsoft Word to organize each of the steps of coding.

Coding, or category development, began with careful reading of a transcript and noting in the margins of the transcript any data that was potentially relevant or important to the study. This is called open coding, meaning it is open to anything (Merriam & Tisdell).

The next step in coding included grouping of marginal notes and comments (open codes) into axial codes (Charmaz, 2014; Corbin & Strauss, 2015). This is "coding that comes from interpretation and reflection on meaning: (Richards, 2015, p. 135). During this stage the researcher made a running list of the groupings.

Next was the identification of regularities or patterns in the data into categories. Coding at this stage was inductive and evolved over the course of the coding process into deductive. "Emergent categories usually prove to be the most relevant and the best fitted to the data" (Glaser & Strauss, 1967, p. 37).

The Hahn process of using Microsoft Word identified the following levels which were included in a Word document:

1. **Level 1 Coding**, also known as initial coding or open coding. During this phase of coding, large quantities of raw qualitative data will be identified and labeled (Hahn, 2008). "The purpose of this phase will be to significantly reduce the qualitative data to allow a more manageable focus" (Hahn, 2008, p. 6).
2. **Level 2 Coding**. In this phase of data analysis, "the data will be further refined to focus on information which helps to answer the research questions." This level of coding is called category development (Hahn, 2008, p. 7).

3. **Level 3 Coding.** “This level of coding will serve to further refine and converge the ideas identified in Level 2. At this stage themes will be identified.” This level of coding is also called axial coding or thematic coding (Hahn, 2008, p. 7).
4. **Level 4 Coding.** “This is the final level of coding and will be used to ground qualitative theories in data that was previously unconsolidated” (Hahn, 2008, p. 7).

Trustworthiness

“Ensuring validity and reliability in qualitative research involves conducting the investigation in an ethical manner” (Merriam & Tisdell, 2016, p. 237). To ensure trustworthiness, this study employed triangulation to “increase credibility and quality for the purpose of countering any concern that this study’s findings are simply an artifact of a single method, single source or a single investigator’s blinders” (Patton, 2015, p. 674). Data came from multiple sources including interviews, review of school division CTE documents and reports, and referral to field notes recorded during the interviews and documented memos of the researcher’s thoughts and reactions. Trustworthiness was further supported through the use of member checks or respondent validation as previously mentioned when key informants validated interview transcriptions (Maxwell, 2013). In addition, the researcher’s position, or reflexivity, explained how the researcher affects and is affected by the research process (Probst & Berenson, 2014). This process focused on the researcher’s articulation of any biases, dispositions, and assumptions regarding the research (Merriam & Tisdell, 2016). Finally, “peer review or peer examination were implemented as colleagues who are familiar with the research scan the data and assess whether the findings are plausible, based on the data” (Merriam & Tisdell, 2016, p. 250).

Lincoln and Guba described four criteria for evaluating the trustworthiness of qualitative research. The criteria include 1) credibility, 2) confirmability, 3) transferability, and 4) dependability.

Credibility

The researcher used a variety of strategies to ensure the credibility or internal validity of the research. Probably the best-known strategy to support internal validity of a study is the use of triangulation (Merriam & Tisdell, 2016). From an interpretive-constructivist perspective, triangulation remains a principal strategy to ensure credibility (Merriam & Tisdell, 2016). Triangulation was achieved in this research study through the use of data collection from a variety of sources including interviews, examination of documents and artifacts, and review of field notes and memos.

A second strategy to ensure credibility was the use of adequate engagement in data collection or interviewing enough participants to achieve saturation or redundancy. According to Patton, the researcher is looking for the best fit, the preponderance of evidence (Patton, 2015). The best rule of thumb is that the data or emerging findings must feel saturated; that is, the researcher will begin to see and hear things over and over again, and no new information will surface as additional data are collected (Merriam & Tisdell, 2016). The researcher interviewed 19 participants with the goal of reaching saturation.

A third strategy to ensure credibility is reflexivity, which examines how the researcher affects and is affected by the research process (Probst & Berenson, 2014). The researcher will “articulate any biases, assumptions and dispositions regarding the research” (Merriam & Tisdell, 2016, p. 249). “Qualitative research is concerned with understanding how a particular researcher’s values and expectations influenced the conduct and conclusions of the study”

(Maxwell, 2013, p. 124). The researcher will describe any relationship with the career center and articulate any preconceptions, perceptions or attitudes maintained about the career center and the research.

Finally, the researcher used peer review. This was accomplished by asking a colleague to “scan some of the raw data and assess whether the findings are plausible, based on the data” (Merriam & Tisdell, 2016, pp. 249-250). Because of the researcher’s proximity to the data, a colleague who was completely detached from the data collection was able to share an unbiased perspective regarding the research. The colleague was well-versed in qualitative methodology and had experience in data collection and data analysis.

Confirmability

Schwandt (2001) defined confirmability as one of the criteria for trustworthiness and paralleled it to objectivity. The role of confirmability is to assure that data and interpretations of the research are real and not figments of the researcher’s imagination. To accomplish this, Lincoln and Guba (1985) prescribed the use of auditing for establishing confirmability. This will be accomplished by asking the previously cited colleague to review procedures and documentations maintained by the researcher to determine if the organized collection of materials leads the reviewer to the same conclusions as those of the researcher. This was facilitated by the researcher’s maintenance of a detailed journal or records memo which described the process of conducting the research as it was being conducted including how data were collected, how categories were derived, and how decisions were made throughout the study (Merriam & Tisdell, 2016).

Transferability

Merriam and Tisdell (2016) described this criterion for establishing trustworthiness as the extent to which findings of the study can be applied to other situations. Lincoln and Guba (1985) advised that sufficient data be included in order to make transferability possible. Patton (2015) clarified transferability as the likely applicability of the research findings to other situations under similar but not identical conditions. To accomplish transferability, the researcher included rich, thick descriptions along with careful and purposeful selection of the study sample along with maximum variation in the sample (Merriam & Tisdell, 2016). While the results of this study may not have transferability, readers of the research can determine on their own if the findings relate to their own settings.

Dependability

The criteria of trustworthiness parallels reliability. According to Merriam & Tisdell (2016), “the question then is not whether findings will be found again but whether the results are consistent with the data collected” (Merriam & Tisdell, 2016, p. 251). A repeat of the study may not yield the same results because human behavior is not static. Therefore, dependability focuses on the processes involved in the study and the responsibility of the researcher for ensuring that the process is logical, traceable and documented (Schwandt, 2001). These criteria were ensured through the use of the previously cited audit trail, which supports both dependability and confirmability.

Summary

This chapter provides a description of the basic qualitative methodology used to collect and analyze data for the purpose of answering the study’s research questions about barriers to non-traditional male and female enrollment in CTE classes in a rural school division’s career

center. It provides information about the selection of participants for the study, the value and process of a pilot study, and the inclusion of trustworthiness and how it was achieved. In addition, the semi-structured interview process used in this research study was described along with collection of data through review of school division CTE reports and documents and use of field notes and memos to achieve triangulation. Triangulation was further enhanced through member checks, reflexivity and peer review. Chapter 4 presents the findings of the research study.

Chapter Four

Findings

“Well, it goes back to what you’re used to doing. If you were brought up to help your mother cook and clean, you’ll take Culinary Arts. But if you were an outside kind of person helping your dad and things like that, then you’re going to take a hands-on class.” (Marcus, Welding student, Line #213).

Chapter Four presents the research findings from this study. The chapter revisits the purpose of the study along with a restatement of the research questions and includes a description of each of the participants. The chapter also includes findings from each research question as participants reflected on their perceptions about student enrollment in career and technical education (CTE) courses that are non-traditional by gender at Coalfield County School Division’s career and technology center. Also included is a description of the impact of a pilot study conducted to determine the effectiveness of the interview tool. The chapter concludes with a summary.

Purpose of Study

The purpose of the study was to analyze the perceptions of nineteen participants from Coalfield County School Division who were directly connected to the school division’s career and technology center as either students, teachers, parents, counselors or administrators; to identify barriers to non-traditional CTE enrollment; and to identify strategies for removing the barriers in order to improve non-traditional enrollment. Students in this study were enrolled at the career center, and each had completed a two-year CTE program; teachers were currently teaching CTE courses and programs at the center; parents had children who were enrolled in CTE programs at the center; counselors included the counselor/job placement director at the

career center and a counselor from each of the three high schools; and administrators included the school division's CTE director, the principal of the career center, and principals of each of the three high schools in the school division. The division has three high schools, which send students daily to the career center, either by school bus or students drive their own vehicles.

Research Questions

The researcher analyzed participant responses to the following research questions and sub-questions:

Question #1: What are the perceptions of selected stakeholders regarding why male and female students rarely enroll in CTE classes and programs that are non-traditional by gender in Coalfield County Career Center?

Sub-question: What barriers do students, parents, teachers, administrators and counselors think exist that prevent a majority of students at the career center from enrolling in non-traditional courses for their gender?

Question #2: What are the perceptions of selected stakeholders regarding how enrollments can be improved by gender in non-traditional CTE classes and programs at Coalfield County Career Center?

Sub-question: What strategies do students, parents, teachers, administrators and counselors recommend for overcoming the barriers that cause low enrollment?

Methodology

The researcher used a basic qualitative methodology for this study. Interview questions were semi-structured and comprised the major source of data collection. Prior to each interview, participants completed a Demographic Information Form, which was created by the researcher.

The purpose of the form was to provide contextual information about each participant and potential clarification regarding CTE experiences and backgrounds that may have influenced participant responses during the interview process.

Demographic Information

The Demographic Information Form requested the following information, and each participant completed the form: occupation, location of home, primary ethnicity, length of time participant had lived in the county, length of time the participants' families had lived in the county, whether or not the participant attended school in the county, number of years of school attendance in the county (students only), number of years of school attendance in the county (adults only), number of years parents attended school in school division, number of years grandparents attended school in school division, high school graduate (mark yes or no), attended career center (mark yes or no), list of career center classes attended, names of CTE programs completed, CTE skills currently being used, current employment, and marital status.

A copy of the Demographic Information Form is included in the Appendix. Data collected from the forms is included in Tables 9 and 10. A synopsis is also provided along with a description of each participant.

Synopsis of Demographic Information Form

Four of the participants were students, all were white, and each was under the age of 18 and consequently considered minors. Two students were male, and two were female. Each of the students completed a CTE program that was traditional for their gender and were interviewed during the semester that they completed their CTE program.

The remaining participants were adults and white. One adult, a parent, was female, a homemaker and had not attended school in Coalfield County School Division. The other parent

was also female, a graduate of a neighboring school division, and had been employed for the past 20 years in a non-traditional field. She works in a management position, supervising 70 other employees, 60 of whom are male.

The remainder of the participants were employed in the school division. The four counselors were females. The school division has no male counselors. Three of the counselors attended school in Coalfield County School Division and graduated from one of the county high schools. The fourth counselor graduated from high school in another county and was previously employed in that same county.

Two of the CTE teachers were female, and two were male. The two female CTE teachers taught CTE programs that are non-traditional for their gender: Criminal Justice and Culinary Arts. The four career center teachers began their careers in business, industry, law enforcement, and military service. Their range of employment with the career center is from two years to 10 years. Each of the CTE teachers was a graduate of one of the Coalfield County high schools.

The remaining five participants were administrators, all were graduates of the school division, and each has a master's degree in administration. Three were males, and two were females. Three of the participants plan to remain with the school division until retirement. The other two were uncertain about their long-range plans with the school division.

Table 9.
Participant Demographic Information (Responses to Questions 1-10)

Name	Position	Town	Race	Student - years in county	Family - years in county	Attended school in county	Student – years of school in county	Adult - years of school in county	Parents attended school in county	Grandparents attended school in county
Terry	Student	Wythe	WNH	16 yrs.	Lifetime	Yes	11	NA	Yes	Yes
Brenda	Student	Hamilton	WNH	Entire life	Lifetime	Yes	12	NA	Yes	Yes
Marcus	Student	Scott	WNH	15 yrs.	42+ yrs.	Yes	11	NA	Yes	Yes
Vickie	Student	Wythe	WNH	16 yrs.	20 yrs.	Yes	12	NA	Yes	Yes
Deborah	Parent	Wythe	WNH	19 yrs.	19 yrs.	No	NA	NA	No	No
Denise	Parent	Jefferson	WNH	43 yrs.	43 yrs.	No	NA	NA	No	No
Mitchell	Admin.	Wythe	WNH	58 yrs.	58 yrs.	Yes	NA	12	No	No
Robert	Admin.	Wythe	WNH	47 yrs.	Lifetime	Yes	NA	13	Yes	Yes
Margaret	Admin.	Wythe	WNH	58 yrs.	Lifetime	Yes	NA	12	Yes	Yes
Wilma	Admin.	Hamilton	WNH	54 yrs.	Lifetime	Yes	NA	12	Father	No
George	Admin.	Tyler	WNH	47 yrs.	100+	Yes	NA	12	Father	Grandfather
Rebecca	Instructor	Hamilton	WNH	43 yrs.	78 yrs.	Yes	NA	13	Yes	Yes
Kimberly	Instructor	Wythe	WNH	46 yrs.	75 yrs.	Yes	NA	12	Yes	Yes
Thomas	Instructor	Wythe	WNH	56 yrs.	56+ yrs.	Yes	NA	12	Yes	Yes
Roger	Instructor	Wythe	WNH	40 yrs.	40+ yrs.	Yes	NA	12	Yes	Yes
Amanda	Counselor	Hamilton	WNH	49 yrs.	100+ yrs.	Yes	NA	13	Yes	Yes
Susan	Counselor	Wythe	WNH	26 yrs.	100+ yrs.	No	NA	NA	No	No
Julie	Counselor	Hamilton	WNH	27 yrs.	60+ yrs.	Yes	NA	12	Yes	Yes
Jennifer	Counselor	Tyler	WNH	56 yrs.	56 yrs.	Yes	NA	12	No	No

Note. WNH = White non-Hispanic.

Table 10.

Participant Demographic Information (Responses to Questions 11-20)

Name	School Division Graduate	Attended Career Center	CTE Classes Taken at Center	CTE Completer	Programs Completed	Years at Center	Currently Using Skills	CTE Skills Currently Being Used	Job Location	Marital Status
Terry	Not yet	Yes	Criminal Justice	Yes	Criminal Justice	2 years	Yes	Understanding and comprehending	NA	Never married
Brenda	Not yet	Yes	Veterinary Assistant	Yes	Veterinary Assistant	2 years	Yes	Care of family pets and home life	NA	Never married
Marcus	Not yet	Yes	Welding	Yes	Welding	2 years	Yes	Welding in family business	NA	Never married
Vickie	Not yet	Yes	Cosmetology	Yes	Cosmetology	2 years	Yes	Hair cutting and styling	NA	Never married
Denise	No	No	NA	No	NA	No	No	NA	Home	Married
Deborah	No	No	NA	No	NA	NA	No	NA	Local steel business	Married
Mitchell	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Robert	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Margaret	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Wilma	Yes	No	NA	No	NA	NA	No	NA	School division	Married
George	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Rebecca	Yes	No	NA	No	NA	NA	No	NA	School division	Married

Table 10. *Continued...*

Participant Demographic Information (Responses to Questions 11-20)

Name	School Division Graduate	Attended Career Center	CTE Classes Taken at Center	CTE Completer	Programs Completed	Years at Center	Currently Using Skills	CTE Skills Currently Being Used	Job Location	Marital Status
Kimberly	Yes	Yes	Certified Nurse Assist.	Yes	Nursing	2 years	Yes	First Aid and CPR	School division	Divorced
Thomas	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Roger	Yes	Yes	Masonry	Yes	Masonry	4 years	Yes	Masonry and Leadership	School division	Married
Amanda	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Susan	No	No	NA	No	NA	NA	No	NA	School division	Married
Julie	Yes	No	NA	No	NA	NA	No	NA	School division	Married
Jennifer	Yes	No	NA	No	NA	NA	No	NA	School division	Married

Note. A copy of the Demographic Information Form is located in the Appendices.

Description of Participants

Following is a description of the nineteen participants who were interviewed in this study. All were assigned a pseudonym to protect their identities and ensure confidentiality.

“Terry” is a male student at the career center where he recently completed a two-year program in Criminal Justice, a program that is traditional for his gender. He attended elementary and middle school in the school division and has lived in the county all his life. He is 16 years old and has begun his junior year at High School #1 in Coalfield County School Division. He plans to remain at the career center for two additional years to complete another CTE program that is traditional for his gender.

“Brenda” is a female student at the career center and completed a two-year program that is traditional for her gender: Veterinary Assistant. She is a student at High School #2 and plans to go to college. She attended elementary, middle and high school in the county and has lived in Coalfield County all her life. She is uncertain if she will remain in the region and is drawn to potential job opportunities in other parts of the state. She explained that family commitments may require her to stay in the county to take care of a family member who requires full-time care.

“Marcus” is a male student at the career center where he completed a two-year program in Welding, which is traditional for his gender. He has lived in Coalfield County all his life. His parents and grandparents have also lived in the county all their lives. He is a student at High School #1. He plans to continue his education after high school graduation to add to his certifications and expects to work in the county or surrounding area in a position related to the program he completed at the career center. His family supports his commitment to hands-on

work. Marcus indicated that his family would support him working in another part of the state if a good job in his chosen field of work became available.

“Vickie” is a female student at the career center where she recently completed a two-year program in Cosmetology, which is traditional for her gender. She is 16 years old. She does not plan to return to the career center to complete another CTE program. Her plan is to remain at High School #2 for her junior and senior years and focus on academics. She is unclear about her specific long-term career goals but plans to use her certification as part of a larger interest in wellness and personal presentation. She indicated that she may start her own business using the skills she acquired at the career center. Vickie noted that if she goes to college, she will use her CTE certification to earn money to cover her expenses.

“Denise” is the parent of a student at the career center. She has lived in Coalfield County for 43 years, but she did not attend school in the school division. She is a high school graduate as a result of a GED program and works in her home as a homemaker. She previously worked as needed as a substitute teacher at the career center but has not done that recently because she takes care of her husband who is disabled. She is highly supportive of the career center and expresses great pride that her child has completed two programs there. Denise completed most of the requirements for an associate degree at the local community college but does not plan to continue her education because of costs and family responsibilities.

“Deborah” is the parent of a student who recently completed a two-year program in Criminal Justice, which is traditional for his gender. Deborah is a college graduate, employed in the county in a CTE job that is non-traditional for her gender, and is in a management position in a company where she has been employed for 20 years. She attended elementary, middle and high school in a neighboring county where she graduated from high school. Her son plans to

return to the career center to complete another two-year CTE program that is traditional for his gender, and Deborah supports that decision. She has reservations about her son being employed in the field related to his recently-completed CTE program but feels that it is important for her children to make their own decisions and be happy in their chosen employment. She indicated that her busy schedule has kept her from knowing very much about the career center and was not aware of the wide range of programs and courses that the career center offered. She plans for her son to go to college and acknowledges that he would be happy doing work that requires him to be outside, such as forestry.

“Mitchell” is the school division CTE director. He has lived in the county all his life, graduated from High School #1, did not attend the career center when he was in high school, and is a college graduate with a master’s degree in Administration and Supervision. He has been employed in the school division since graduation from college, first as a teacher and then as an administrator. He plans to remain working in the school division until retirement.

“Robert” is a high school principal in the school division. He has lived in the county all his life and attended elementary, middle and high school in Coalfield County. He has held a variety of positions in the school division after graduating from college, including classroom teaching and coaching sports prior to becoming an administrator. He did not attend the career center. He is very supportive of the career center and is quick to cite the accomplishments of its students and the awards they have received. He noted that the career center provides students with important skills that can support them with a comfortable lifestyle. Robert has a master’s degree in Administration and Supervision.

“Margaret” is the principal of the career center. She has lived in Coalfield County all her life, as did her parents and grandparents. She graduated from High School #1. Prior to

becoming an administrator, she was a teacher in the school division. She plans to continue working in the school division until retirement. Margaret mentioned several times during her interview that she wished her own children had attended the career center.

“Wilma” is the principal at High School #2 where she also went to school and graduated. She is now the principal, a job that she describes as non-traditional since she explained that for years, women were not given that position in Coalfield County. She indicated that she had broken through the glass ceiling. Wilma did not attend the career center when she was in high school, but she noted the skills that it provides and the ways that those skills can be used throughout students’ lives. She also noted that the traditional stigma of attending the career center is declining in her school.

“George” is a high school principal in the school division. He works at High School #3 and has lived in Coalfield County all his life. He described his family as having lived in the county for 100+ years. George worked as a teacher in Coalfield County after graduation from college. He began his leadership career as an assistant principal and later became principal of the school where he is currently employed. He plans to remain in his current position until retirement. He shared numerous ideas with the researcher for expanding career preparation in career and technical education. He is particularly interested in careers which would provide jobs for both males and females and incorporate technology.

“Rebecca” is an instructor at the career center. She is a graduate of High School #2. She did not attend the career center. She has lived in Coalfield County all her life and attended elementary, middle and high school in the school division. She describes herself as a non-traditional instructor because she teaches a program that is non-traditional for females but primarily enrolled in by females.

“Kimberly” is an instructor at the career center. She is a graduate of High School #1 and has lived in the county all her life. She attended the career center and completed a CTE program. Prior to joining the faculty at the career center, she was employed in a variety of positions which provided background and experiences for her current position. She is a non-traditional instructor because she teaches a CTE program that is non-traditional for females.

“Thomas” is a male instructor at the career center. He is a life-long resident of Coalfield County, attended elementary, middle and high school in the county and graduated from High School #1. He did not attend the career center as a student but acquired his CTE skills through employment in business and industry.

“Roger” is a male instructor at the career center. He is a graduate of High School #1 in the school division and attended elementary and middle school in the county as well. He attended the career center for four years and received certification in a CTE program that is traditional for males. He has experience working in business and industry and returned to the career center as an instructor. Roger credits the career center with giving him everything that he has today.

“Amanda” is a high school counselor in the school division and graduated from High School #1. She and her immediate family have lived in the county all their lives. After graduation from college, she joined the school division as a teacher and later moved to a counseling position. She did not attend the career center.

“Susan” is a high school counselor in the school division. She did not attend school in Coalfield County and did not attend the career center. She worked in the school division first as a teacher and now as a counselor. Susan is currently employed at High School #1.

“Julie” is a high school counselor in the school division. She graduated from High School #2 and attended elementary and middle school in the county. She did not attend the career center. After graduation from college, she returned to Coalfield County where she began working as a counselor at High School #2. She and her family currently live in the county.

“Jennifer” is a high school counselor. She is a life-long resident of the county and graduated from High School #3. She did not attend the career center. She began working in the school division in a variety of para-professional positions and earned degrees in teaching and counseling. After several years teaching in the classroom, she transitioned to a counselor position at High School #3, which is her current job. Her plan is to remain a counselor until she retires.

The nineteen participants interviewed for this study provided descriptions of their work or participation in the school division and responded with varying levels of detail to questions presented by the researcher.

Evolution of Themes

Participants in this research represented selected stakeholders from five distinct groups: students, parents, teachers, counselors and administrators. Each group provided perceptions that were unique to their experiences with the career center. Early in the data collection as interviews were transcribed and coded, it became apparent that an examination of perceptions about barriers to non-traditional enrollment by gender and strategies to remove those barriers and subsequently improve non-traditional enrollment at the career center were evolving into themes of influence: those that existed within the school division and those that were outside the school division. Examples of influences within the division included but were not limited to scheduling, guidance from counselors, peer pressure, high school teachers’ biases about the career center, stigmas

attached to the career center, and administrators' knowledge of CTE programs. Examples of influences outside the school division included but were not limited to community support for providing job opportunities, traditional and cultural expectations, and views about gender roles.

Pilot Study Implications

A pilot study was conducted with three participants to determine the effectiveness of the interview protocol for gathering data to address the research questions. Selected participants for the pilot study included a male CTE student who completed Coalfield County Career Center's Welding program, a male administrator who worked for several years as assistant principal at the career center and is now employed in the school division's central office, and a female CTE teacher who worked at the career center in instructional technology and is now an administrator in the school division's central office. Each pilot study interview lasted an hour and was conducted in a distraction-free private location, which provided participants the opportunity to speak freely with assurances of confidentiality.

The interview protocol used during the pilot study proved effective in eliciting responses to the research questions, and no changes in the interview questions or delivery of the questions were deemed necessary for interviewing future participants. Pilot study participants responded in detail to the questions, with spontaneity and candor, providing a number of relevant examples.

In addition, each pilot study participant completed a Demographic Information Form, which gave the researcher an opportunity to gather demographic information prior to the interview, a strategy which collected contextual data about each participant. The Demographic Information Form was used throughout the data collection process without changes.

Virginia Tech Institutional Review Board forms used with the 19 study participants were also provided to and signed by pilot study participants. Each pilot study participant received a \$25.00 gift card at the end of the interview in appreciation for his or her participation.

The researcher transcribed each pilot study interview within hours of each appointment, and the transcriptions were coded, categorized, and themes were identified. The coded pilot study transcripts aligned with data that were later collected from the 19 stakeholders. Perceptions of the pilot study participants regarding barriers, both internal and external to the school division, and strategies for improving non-traditional enrollment at the Career Center were similar to those identified by the 19 stakeholders.

Research Question 1: Barriers to non-traditional enrollment

Research Question 1

What are the perceptions of selected stakeholders regarding why male and female students rarely enroll in CTE classes and programs that are non-traditional by gender in Coalfield County Career Center?

Sub-question. What barriers do students, parents, teachers, counselors, and administrators think exist that prevent a majority of students at the career center from enrolling in non-traditional courses for their gender?

This research uses the Social Cognitive Career Theory (SCCT) definition of barriers. “In SCCT, barriers generally refer to negative contextual influences, with the understanding that contextual barriers are often functionally related to, yet conceptually distinct from, detrimental person factors (e.g., adverse learning conditions can diminish self-efficacy).” (Lent, Brown & Hackett, 2002, p. 39).

Two themes emerged from the research regarding barriers that inhibit non-traditional enrollment by gender. They are internal barriers that exist within the school division and external barriers that exist outside the school division.

Internal Barriers Inhibiting Non-traditional Enrollment by Gender

Participants identified six internal barriers that inhibit non-traditional enrollment by gender. They included: 1) career center stigma, 2) peer influence, 3) traditional enrollment expectations, 4) high school schedules and graduation requirements, 5) lack of information, and 6) student characteristics. Table 11 provides codes and specific barriers relating to the internal barrier theme. Examples of participant responses are included after the table to provide greater insight into each of the internal barriers.

Table 11
Internal barriers inhibiting non-traditional enrollment by gender

Code	Barrier	Theme
Perception of Career Center (S) Career Center Stigma (T) Guidance Counselor Negativity (T) Career Center Stigma (C) Career Center Stigma (A) Counselors as Gatekeepers (A)	Career Center Stigma	Observed Barriers Within the School Division
Peer Reaction and Influence (S) Peer Influence and Pressure (P) Peers and Relationships (T) Peer Influence and Pressures (C) Peer Influences and Pressures (A)	Peer Influence	
Traditional Enrollment Expectations (S) Traditional Expectations and Courses (P) Traditional Expectations (T) Traditional Expectations (C) Traditional Expectations (A)	Traditional Enrollment Expectations	
Academic Requirements (S) High School Schedules (S) Scheduling and Placement (T) Graduation Requirements (T) Diploma/Graduation Requirements (C) Academic Boundaries (C) Career Center Bus Issues (A) High School Schedules (A)	High School Schedules and Graduation Requirements	

Table 11

Internal barriers inhibiting non-traditional enrollment by gender (continued)

Code	Barrier	Theme
Career Information (S) Lack of Communication (P) Lack of Parent Programs (P) Eighth-grade Tour (T) Eighth-grade Tour (C)	Lack of Information	Observed Barriers Within the School Division
Gender Issues (T) Physical Requirements (T) Non-Traditional Student (C) Student Immaturity (C) Student Maturity issues (A) Student Self-image (A) Discipline Issues (A)	Student Characteristics	

Note. S = Student; P = Parent; T = Teacher; C = Counselor; A = Administrator.

Career center stigma. Examples of participant responses by participant groups are provided below.

Student perceptions regarding career center stigma. The students interviewed in this study perceived a stigma or limitations attached to attending the career center, with Marcus being more measured in his responses. While he did not originally see the career center as having barriers or a stigma, his perceptions ultimately identified a limitation: the career center does not develop book smarts. By the end of his interview, Marcus acknowledged the following regarding barriers to enrollment at the career center:

If it is, its students making it harder for other students (Marcus, Line #394).

Me, personally, I was never big in book smarts or anything like that, and my whole plan has been to go straight to work once I graduated. Or, go to a technical college where I could get more certifications to get a hands-on job. That's why I came up here. It's a good way to get set up for that kind of thing (Marcus, Line #319).

Terry's perceptions and descriptions provided additional insight about career center limitations and stigma.

A lot of people think that these places are for kids who don't want to go to the high school and stuff and for kids who can't pass in high school, but everybody judges it

from that, but a lot of people come up here and get a full scholarship. That's like my buddy in Welding. He signed up today for a full ride in Florida in Welding (Terry, Line #119).

Vickie shared similar comments about the persistent career center stigma.

Most of the kids don't think about coming up here. They think it makes you less of a person and that you can't do the actual school work at the school (Vickie, Line #159).

When asked why she felt that way, Vickie responded:

I'm not sure, but maybe it's because you don't go to school all day; and if they have never been up here, they don't know (Vickie, Line #163).

Teacher perceptions regarding career center stigma. Career center teachers also noted the career center stigma as a barrier.

It's like it's always been. They look down on these kids. They think they are not privileged, they look down on them as the poor kids, the lower class. I think that's what they look at. The redneck kids (Roger, Line #436).

Roger extended his comments to include high school students' perceptions of girls who attend the career center and enroll in non-traditional programs.

Oh, I'm sure. I would say they probably look at the girls as being lesbians. If you're in a man-dominated area and you're doing it, then you're probably a lesbian. That's how I think they perceive it (Roger, Line #439).

Thomas supported Roger's comments about the perceived stigma.

Perception of our school is that well, you're not going to do this and you're not going to do that, so you need to go to the trade school. Or, so you're not going to go to college, so you need to go to vo tech so we don't need your types, so we need to get rid of you for half a day because you've been in trouble too much. Whatever, I don't think that's a good reason for placing kids. We'll take all they've got, but don't just throw them here because you want to get rid of them. (Thomas, Line #103).

Roger perceived high school guidance counselors as negatively influencing non-traditional enrollment at the career center and the career center stigma.

I was just going to say that the guidance counselors have a lot to do with that as well.

I think they kinda say, "You don't want to do that. Why does a girl want to go to Welding? You don't want to go to Welding." And a girl might say, "Yeah, I think I might like to try that." I think they talk them out of it sometimes. I really do (Roger, Line #379).

When asked about how guidance counselors perceive the career center, he replied:

I don't know. I would like to talk with them. Sometimes I don't think it is very good. I don't think they realize the importance of this school. I really don't (Roger, Line #383).

Counselor perceptions regarding career center stigma. Jennifer, a counselor at High School #3, described the career center stigma and her efforts to convince a parent that the center was a good choice for her daughter despite the parent's concerns about the career center.

And we have to get that negative stigmatism that goes with it. Going to the vocational school. Those are the good old boys and girls who are not going to college, so you're not doing that. (Jennifer, Line #555).

Administrator perceptions regarding career center stigma. Administrators agreed that there has been and continues to be a stigma attached to the career center and enrollment in programs offered there, extending to the students who attend the career center.

I think they see them as a little less than, but that's improved what it was a few years ago (Mitchell, Line #115).

I think it used to be seen that kids who came to the vocational school were troublemakers, and they were seen that way by administration, faculty, and students; and there may have been good reason for that general perception (Mitchell, Line #247).

I think those kids are seen as different, don't fit in, not one of us. I would love to be able to change that. I don't know how you change that (Robert, Line #74).

If they were honest, I think there are a lot of kids, if they didn't have the stigma that's attached to it, would go (Robert, Line #82).

I think the bottom line is the stigma attached to the career and technology center (Robert, Line #123).

And I think that's the barrier. I mean, you want to talk about barriers and this and

that, but the barrier is what the career and technology center is to others (Robert, Line #135).

What I'm going to say is that in the past some of the students probably felt like, well, only the dumb kids or those kids that are not going to college go to the career and technology center (George, Line #7).

According to comments from the administrators, high school counselors influence students' decisions about non-traditional programs and hold positions of power. Counselors were perceived as gatekeepers.

I think it is just interests. For me personally, I wasn't interested in being an auto mechanic. I wanted to take Cosmetology, but I didn't because my guidance counselor talked me out of it. I would have been right here in Cosmetology. I always wanted to do hair. Always (Margaret, Line #180).

I also know that the counselors are the key to that (course selection). I think that if they were to say anything to discourage that, that would close the door for many kids. At the same time, if they encourage that boy to take Cosmetology or that girl to take Welding, that's another extra move. I think they (counselors) are the keeper of the gate (Mitchell, Line #112).

The guidance counselors at the high schools are not geared to vocational thinking. They are worried about kids graduating and where they are going to college. And that's okay because that's what you're supposed to do (Robert, Line #459).

If you think about it, most principals have been involved in some kind of academic theory so their knowledge of career and technical is pretty limited. They are dependent on guidance counselors to pretty much take care of those kids for the most part (Robert, Line #511).

Peer influence. Examples of participant responses by participant groups are provided below.

Student perceptions regarding peer influence. The two female students also indicated that fellow students fear being perceived as different, and Brenda and Vickie provided their reactions to the question of why male and female students do not enroll in non-traditional programs for their gender at the career center.

I think that they are just worried that they are going to be looked at as different, and

they are not going to take them as just another person, and that a girl cannot do this because she's not strong enough, and she's not going to understand, and most guys will think that boys will not understand or be able to do hair and make-up or help somebody in CNA (Certified Nursing Assistant) (Vickie, Line #381).

Their classmates. Their friends. And I think they are scared of being alone. They want their friends with them. All their friends wouldn't want that. Like my friend. I don't think she would follow me into a guys' class. She would tell me not to do it. And I wouldn't want to be alone. I wouldn't want to be the only girl in the class (Brenda, Line #190).

Perceptions about peer reaction and judgment to student enrollment in non-traditional programs generated further comments.

The barriers are mostly the students. We make it hard for other people. We don't look at why they are doing it. We judge them, and we don't know their story. We just automatically assume that it is attention-seeking, or they are doing it for the guys or that it is something stupid. We're kids and that's how we do, and it's sad. It really is (Brenda, Line #313).

Parent perceptions regarding peer influence. Deborah, parent of a male student enrolled in Criminal Justice, indicated that her son's choice to go into the program was a surprise to her and her husband and not the result of conversations within the family. Instead, she felt that his decision was influenced by his friends. He did not consult with her or her husband prior to enrolling, so she was surprised when he brought home a paper for her to sign that gave him permission to be in the program. She noted, however, that he had been very successful in the program and had excelled to the extent that the teacher had contacted her at least twice to praise the student.

I think he was influenced by some of his friends (Deborah, Line #17).

Yeah, like Marcie and Joe (peers), and Joe started out with it. Marcie started it. They went through the program, and now he's got another one of his little friends that's in the program. She's a girl. That's how I know there were girls in the program (Deborah, Line #33).

Teacher perceptions regarding peer influence. Kimberly and Rebecca addressed the influence of peers, relationships and intimidation when looking at non-traditional enrollment.

It would make them ... (hesitation). We have girls in almost every program here. We have guys in almost every program. But I wonder if it is an intimidation factor as far as the girls may feel a little bit intimidated. You know some girls are shy. You're the only female, and you walk into a class of 19 males. There might be a little bit of intimidation as far as getting out of their comfort zone (Kimberly, Line #275).

I do think that ...in my first-year class, I have five girls who are best friends. Girls who are BFF's. The first day of class, two of them said, "We are changing out of your class. We want to take something else." I said, "Okay, just hang with me for a day or two and you might change your mind." They said, "We are so glad that we stayed." So, I do think that the peer influence has a lot to do with it. So, they stayed with me. Sometimes a boyfriend-girlfriend relationship will pull a girl into a Welding class or a Building Trades, and that's all great until they break up. It's a nightmare (Rebecca, Line #263).

Counselor perceptions regarding peer influence. Counselors described the perceived barrier of peer influence and pressure based on their experiences.

I think their friends influence them. "Yeah, come on out to the vocational school This is what we can do. And we can be in this class together, and we can do this, This, this and this." That kind of thing (Susan, Line #321).

The boys, the ones they fight over, word of mouth. They all like cars and working with their hands with wood, and I find that's where they split off. The boys who like wood go to Masonry and Building Trades. If they like cars, I find that they go in the direction of Auto. So, it's kind of like what they are already interested in by the time they reach this age group, especially with the boys. Now the girls, they will tag team right off each other. They will go together (Amanda, Line #114).

Amanda added that peer approval and peer attachment are especially strong in ninth grade. (Amanda, Line #122).

If they are really good friends, they want to be with their friends; so, if this one is taking a class there, they will try their best to pull this one in, even if it is taking something different (Jennifer, Line #245).

Administrator perceptions regarding peer influence. Administrators identified peer pressures and influences as barriers to student enrollment in non-traditional programs at the career center.

But a lot of it is just peer pressure. They are afraid of how they are going to look in front of their friends if they choose to take something that is non-traditional. You know, it's hard for a fifteen-year-old to go out and say okay. Like a little girl to be an auto mechanic (Margaret, Line #392).

Mitchell agreed, responding to a question about how much peers influence decisions.

A lot. And that goes back to our staff and are we teaching the right values. What they see on TV and the news doesn't really bode well for us when we are trying to instill values of respect and openness, and if they get it from home and you ... I tell you, a teenager has a lot to deal with to go down a path that is not well-traveled (Mitchell, Line #275).

When peer pressure reaches the level of bullying, Mitchell stated,

For a timid teenager, preteen, that could make you not follow your dream just to avoid that possibility (Mitchell, Line #283).

Robert agreed.

I think a lot of it depends on the individual, and peer pressure is real. It's not something that is fake or made up or anything like that. Kids can be mean. Kids can be cruel (Robert, Line #197).

It's peers that greatly influence other peers (Wilma, Line #246).

Traditional enrollment expectations. Examples of participant responses by participant groups are provided below.

Student perceptions regarding traditional enrollment expectations. Student participants described their perceptions about a barrier of traditional expectations by gender.

Vickie associated male enrollment in courses such as Welding, Automotive Repair and Building Trades that are traditional for males as aligning with perceived male traits.

They are manly. They think it is more like hard work so that's what they should do. (Vickie, Line #135).

Marcus was hesitant when expressing his perceptions about why males and females do not enroll in courses that are non-traditional for their gender. His body language and reticence in responding to the question indicated a possible lack of comfort with the question.

(Hesitation). Well, there's a lot of factors in that I think that what people take up here is what peaks their interest and what they are interested in most. And, I guess, I just don't know (Marcus, Line #263).

Brenda was more specific, citing students' concerns about selecting non-traditional programs for their gender.

They probably think other people are going to judge them or have something to say about them or they might think they are going to get bullied or something, but personally I don't see anything wrong. They just go ahead and take it (Brenda, Line #357).

Brenda's perceptions also extended into the classroom environment when students enroll in non-traditional programs, causing teachers to teach differently if they have a non-traditional student in the class.

Yeah. I feel like they would have to because coming up here you don't always know what everybody else knows. Like if I was in Auto Mechanics or Masonry, I don't know what I'm doing. I have no idea. I know nothing about it. And guys who go in there probably know what they are doing. They (teachers) probably have to backtrack, explain, and go over everything. Like if you tell me something. Go point to that part in the car. I'd be like what? I feel like you would have to be re-teaching and explain and put it in something that they know. Like whenever you're teaching math, put it to a sport and explain it that way. I feel like up here they are going to have to do that with some things (Brenda, Line #241).

Parent perceptions regarding traditional enrollment expectations. Denise, parent of a student who completed the Culinary Arts program and the Cosmetology program, indicated that her child's choices at the career center were influenced by traditional expectations and concerns and the need to identify a career path that would provide money and stability for the future.

Denise is an older parent and expressed concern about her child's financial security. Denise and her husband are the legal guardians of their grand-daughter, who has lived with them since she was born. While the student was interested in Cosmetology and Culinary Arts, the parent had re-directed her into what she viewed as a higher paying career path: Nursing. The student completed two-year programs and certifications in Cosmetology and Culinary arts. At the time of the interview, the student was on a career path to become a nurse by completing an LPN program at the local community college and progressing from that completion into the RN program, which is also available at the community college

Both Deborah and Denise expressed opinions about traditional expectations and student enrollment in programs traditional for their gender. When asked if being in a non-traditional program at the career center presented any pressures for students, Denise responded:

Well, I'm sure it does, but wouldn't it? Struggling. This center does great with its kids. My experience is that that I've never had a bad experience here (Laugh). That's my experience (Denise, Line #172).

Deborah indicated that her son had not shared information with her about student enrollment at the career center in non-traditional programs, but her expectation was that most students enrolled in traditional programs, such as girls in cosmetology and boys in automotive repair.

He's never mentioned it. I knew the program was there, but he's never mentioned it. I would think that would be mostly boys (Deborah, Line 77).

When asked why, Deborah responded,

Looks. Fashion maybe. Usually that's not a boy thing. Boys tend to, at least from my perspective, they tend to go into the more manly, hands-on, get dirty kinds of fields (Deborah, Line #81).

Yeah. Fingernails, toenails and hair. And the boys are more attracted to the manual work (Deborah, Line #85).

When asked her perceptions about male students enrolled in non-traditional programs such as Cosmetology or Nursing, Deborah replied enthusiastically,

Nursing programs? They absolutely need men. I can't imagine me, being as small as I am, lifting some of these heavier patients. There is no way. The men in Cosmetology? (Laugh). That's not what I would perceive them to do, but I know that some men have a more feminine... I'm not saying that there's anything wrong, but they have a more feminine side to themselves. Some of the best cooks are men. It's not women. You know Culinary School. It's men (Deborah, Line #306).

Deborah elaborated further regarding Culinary Arts, which she did not know was non-traditional for female students. She stated that she did not know that the career center had a Culinary Arts program, that she loved to cook, and that she would like to be in that program. She also indicated that in the surrounding area women and cooking are connected.

I think it is. The women stay at home and cook, so if it's cooking then they think that's where the girls should be (Deborah, Line #322).

Regarding male students in Cosmetology,

There is excellent men who cut hair, too. I just think, maybe it's just me, that women tend to do because they have the long hair. They have to deal with it. They know what it is like. Boys tend to have a short cut. Men cutting men's hair is probably the best aspect there (Deborah, Line #326).

Teacher perceptions regarding traditional enrollment expectations. Rebecca, the Culinary Arts instructor, addressed the issue of students continuing to enroll in programs that are traditional for their gender. She provided the following explanation.

(Sigh). I just think that is what they think they are supposed to take (Rebecca, Line 237).

When asked about females specifically, she stated:

(Laugh). I'm not sure. I guess when they walk in the hospitals, they see female nurses. When they go to get their hair cut, it is predominantly female, and if you go to Walmart to get your hair cut, it is all females (Rebecca, Line #239).

She offered the following perception about male enrollment in Welding, Building

Trades, Auto Body and Collision Repair.

Those are all hands-on. They can go in and get their hands greasy and dirty. And guys like that kind of thing. Girls don't. I would like that class. I like to feel things. I like to work on cars. Most girls aren't interested in exploring that avenue (Rebecca, Line #255).

Rebecca stated that she supported non-traditional enrollment.

I think it is great. I think it is awesome that they are willing to subject themselves to some ridicule, especially in a very rural area like we live in. There are a lot of stigmas attached to guys who take Cosmetology (Rebecca, Line #363).

She noted, however, that students face real-life barriers to enrollment in non-traditional classes.

Because they are afraid that they will be made fun of. They may have an interest in that area, but they kind of push it aside to take a more masculine class. To take more of a boy class or a girl class (Rebecca, Line #383).

Counselor perceptions regarding traditional enrollment expectations. Counselors addressed the barrier of traditional expectations, overlapping internal and external barriers.

I think it is probably socioeconomic. I think it comes from, especially with our area, girls, you are going to do the cooking and the cleaning, the taking care of the family; boys, you're going to go out and get a job doing this, which is the manly thing to do, which is changing the tires and changing the oil and doing the welding. That's my opinion that's where it comes from, even though we specifically say, please, if this is something that you are interested in, try it. If you want to do Welding, you could probably ask your price (laugh). You know when you go into a job because it is non-traditional and employers want to see that, so we really push them. If it is something you are really interested in, try that (Jennifer, Line #124).

Well, I think society sort of funnels females into those careers. They are interested in that type of stuff, you know. If they go out there in Cosmetology, they get to do their hair and their nails. Color their hair whatever color they want to color it. Paint their nails, and that's something they like to do. (Laugh). Those girls like to do that. There are some girls that like to do that. What better way to go to school than spending three hours a day fixing somebody's hair (Susan, Line #228)?

Amanda provided a different perspective about traditional expectations.

Number one, they (courses) are non-traditional because it is not what we like. Females just don't like laying brick all day. It's not what God made us out to do. It's not what female personality traits do (Amanda, Line #259).

Administrator perceptions regarding traditional enrollment expectations. Traditional expectations emerged as a barrier to non-traditional enrollment.

It's just tradition, I'm sure. Tradition. What they've seen. Interests. These boys are interested in cars. Trucks and motorcycles. And sometimes you've just got to think that's how God made us. That's just what we've seen, and for some reason girls love baby dolls and taking care of people; and you know whether it's feeding them or nursing them. And Criminal Justice. That's taking care of people. And plants. You're nurturing plants. It's all a nurturing thing. And with boys, it's more interests. What interests them and what they like. And I think with Masonry, that's hard work. You've got to have a strong body and a strong back to lift that. Girls just traditionally don't do that. I don't want to lift block all day long (Margaret, Line #91).

I think it is because it is traditional, and it is a comfort zone (Mitchell, Line #83).

Again, I think it is what people think. This is what boys do, and this is what girls do (Robert, Line #147).

Robert noted the consequences if a student selects a non-traditional program.

Well, they are putting themselves out there (Robert, Line 1#51).

High school schedules and graduation requirements. Examples of participant responses by participant groups are provided below.

Student perceptions regarding high school schedules and graduation requirements.

Another potential barrier to enrollment, whether traditional or non-traditional, at the career center are the academic requirements for all students who attend the career center. In order to take classes at the career center, high school students must successfully complete academic requirements for graduation. That requirement is a potential barrier for students who want to attend the career center but may not be strong academically.

The first year you come up here, you come up in the evenings (afternoon). You leave the high school about 12:30 p.m. and stay 'til about 2:30 p.m., and then

the next year you come in the mornings which are at 8:30 a.m. and leave at 11:55 a.m., and you've got to pass so many classes to be able to come up here like the next couple of years (Terry, Line #265).

You've got to have so many math classes and so many science classes at the high school, and say this year I don't pass biology, that means I probably won't be able to come up here next year so you've got to have so many classes in high school so that you can graduate (Terry, Line #269).

Students who are enrolled at the career center may also have the barrier of scheduling at their high schools. Scheduling of high school classes may emerge as a barrier to students to participate in non-traditional programs at the career center. Brenda described her schedule.

Well, your classes are limited. I was going to take Algebra II this year, and I dropped it because I didn't think I could juggle it. I'm the president up here, and it's a lot of work. It's a lot of responsibility. And up here is a lot of responsibility because it's not like you're writing a lot of questions down in a book. You're hands-on, and you're actually doing interesting stuff. And you have responsibilities. Up here we feed the animals every day, and that's our responsibility. We have to be sure that they live (Brenda, Line #158).

Teacher perceptions regarding high school schedules and graduation requirements.

Kimberly also noted that scheduling and placement at the career center can be issues.

Yes. I have had a problem in the past where they couldn't find a class for students to go, and they want to be in a program, which is good; but I had a couple of instances where that didn't work out so well because the kid is miserable. And it takes away from the other students who really want to be here (Kimberly, Line #207).

Kimberly described the unplanned benefit of students being placed in her Criminal Justice class.

I had one student this year that really wanted to be in Welding. First year student, and he's a junior. He really wanted to be in Welding. He was disappointed. He said, "Nothing against you, but I'm leaving," and I said okay. And I said that "If they don't move you, if they don't have a position for you in Welding, your only choice is me or to go back to the high school. And I said, "I really think you should give it a chance." Just by talking to this boy, he was a lot more mature than he seemed according to his age; and I said to just think about it; so he had to stay in here for three or four days because they were trying to get him a spot in Welding. Well then, the guidance counselor came to him and said, "We think we're going to be able to get you a spot," and he said, "I think I will stay." And he is one of my best students. And he said, "Miss

Kimberly, I don't know what I would have done if I had moved." So you have those students too (Kimberly, Line #243).

When describing the barriers that students face, Thomas described his perception of high school graduation and how it fits into career center plans. His narrative included his frustration with the process, pressure on students to graduate, pressure on teachers regarding competencies, and barriers brought to career center shops and laboratories when students do not have basic skills. His perception of the emphasis placed on graduation was an example of the complexities students navigate if they want to attend the career center and enroll in a non-traditional program. Thomas's response evolved from a question about students making career plans in eighth grade, selection of programs at the career center, and flexibility in changing career plans if the student wants to change his or her program.

Yes, but they (students) have to make a decision pretty quick, I think. Nowadays, I think they try to accommodate everybody, even if you've been here two years. I've found that in the past few years, somebody somewhere along the line wants you to graduate. I'm sure that everyone wants to graduate, but if somebody wants you to graduate no matter what, so. If I was a kid now and know what I know now, I would be the sorriest student that ever was because they are going to give me a diploma. One way or another. You can miss 40 days, and I hate that. I can fuss at you the whole year, but at the end of the day, I'm going to give you a diploma. That's not fair to the ones who work every single day. So, they got things, you probably know more about it than I do, they got Project Lifeline. I'm going to throw you a diploma out there and save your life. And they've got Alternative, which you can start that now in 10th grade. Looks like you're the kind of student that is not going to finish school. I had a student in tenth grade in Welding II, and he went to Alternative, and that summer I saw him somewhere and he said, "I graduated." They got him on a computer, somewhere, somehow, and they checked it off somewhere, and he graduated. I don't know how that is possible, but anyway that's what I see. It's sort of ... We are really pushed to make kids learn our competencies. And there is some math, and the kid may credential. We use NCCR and some other credentialing tests that, the end of the year tests, and it is tough when you have to teach tenth and eleventh graders how to add seven and three or how to read a tape measure, and you're required to have these goals. You're required to have these goals. You're required to get them through there. If they've not learned math previously, and you do all this work really hard in the classroom to get that through, and then you learn that even if they don't get it, they are going to get it. That's disheartening. In my mind if you're

going to do that, everybody wants to stay in the shop, so let's just stay in the shop. And we can fix Farmer Brown's bush hog, instead of being in here trying to learn math (Thomas, Line #112)

Thomas noted that different diplomas exist, and they present a barrier to enrollment at the career center, primarily because it is very difficult for a student to earn an advanced diploma and attend the career center. He described his solution.

But another problem, and I may be wrong. Someone may need to educate me. There are different diplomas: an advanced diploma and a regular diploma. Now, if you want to get the advanced diploma, then it is going to be tough coming to the vocational school. It's not impossible, but it is going to be hard. So, in my mind, if I go home and tell my mom that, she will say you have to get the advanced diploma. You may not even know what it is. It just sounds better. So, you're going to get the advanced diploma. Okay, you've said that. You don't even know what the advanced diploma is. And you're not really sure that you can't go to the vocational school 'cause somebody told you. But, you can't do both. You can't take study halls. I'm not really qualified to say so that's ... I hear some of my kids say I would like to come up here four years, but I can't come up here four years. So, what would be really great if a student could ... would be if a student took two classes, two years of one trade and two years of another one. Right? I think that would really change the non-traditional percentages because it would give you the chance to try something else, you know. So, you got your Welding certification so let me try Cosmetology. Who knows or something? (Thomas, Line #205).

Counselor perceptions regarding high school schedules and graduation requirements.

Julie, a counselor at one of the high schools, offered another view of the graduation and diploma barrier in contrast to what was described by one of the CTE instructors at the career center. She, too, saw the emphasis on graduation and diploma choices as potential barriers to non-traditional enrollment and offered the following perspective,

I would much rather a student say to me, I would much rather not do the advanced diploma and still do the career and technology than come in and say to me, I changed my mind in tenth grade. I want to do the advanced diploma track and the career and technology. Our major difference in the advanced diploma and the standard diploma is going to be the foreign language components. The number of credits you have and the number of verified credits you're required to have. If that's the case, then I'm going to say, let's talk about a standard diploma. Let's look at your GPA, and let's look at rigor of the courses you're taking, plus what

you're taking at the career center, and you are still going to be eligible for college just like with the advanced diploma. As long as you are taking the rigor of courses, it's not going to make a difference what that diploma says, whether it's an advanced diploma or a standard diploma (Julie, Line #152).

Susan and Amanda identified another barrier: academic boundaries.

I have the first male student who will be doing Certified Nursing Assistant this year. I haven't really gotten to know him. And, he'll be good. You can't be ADHD in that Nursing program. That's hard for any boy before the age of 30. They really have to be online. In CNA there are so many good things about it. But, if you have that true doctor, radiology, you know, the big names, they are going to stay and take that calculus and trig and all those classes and not come with us. They'll take the slow path in the direction that they want to do. Our classes in the CNA program are small (Amanda, Line #183).

Susan identified an additional program that had academic boundaries: Veterinary Assistant. She indicated that some students will not enroll in that program because of a perception that it will be academically challenging.

The math and science rigor of the Vet program may prohibit some students (Susan, Line #244).

She shared a story about a former student who did not understand math connections imbedded in skills-related careers, connections which she indicated career path students at the career center may not understand and will avoid because of the perception that a program is too challenging academically. The counselors were unanimous in their agreement that some career center students would prefer to spend their entire school day at the career center, focusing on their career path skills and ignoring academic skills, without realizing the academic foundations of their skills classes.

I don't think they make the connection all the time, and I will give you an example of that. When I taught Math, I had students who were on the career track that hated my Algebra class. Hated my Computer Math class. They hated Math. They didn't understand it. One particular gentleman after he graduated from high school went on and got a job at the power plant nearby. He was using his math skills. He came back to me, and he said, "I never realized when I was in class I would ever use the math skills you were teaching me. I did not realize that. And thank you for teaching

those to me.” And another gentleman who would give me fits all day along in Algebra class. “I don’t know why I have to do this. I’m never going to use it. Why do I have to do this?” And I asked him what he was going to do. He said he was going to be a game warden. I said, “Listen. Let me give you a scenario. You’re a game warden, and you’ve been given the job of having to track animals in a particular area and the growth pattern of that animal. You’re going to be using graphing, you’re going to be graphing this and plotting this on a coordinate plane in order to find the growth.” He said, “Oh, I’ll never do that.” Well, of course he did. He became a game warden and came back, and he said, “I’m having to draw graphs.” I loved it! Those are examples of how they have to use those skills. Being a math teacher, sometimes that math that we have to teach and our curriculum standards guide us in what we have to teach, does not cross over to the career path group. They cannot find the tie between Algebra 1 and Veterinary Science. They cannot see the connection (Susan, Line #305).

Administrator perceptions regarding high school schedules and graduation

requirements. George is principal of a high school that is approximately 15 miles from the career center. Many of his students use the school bus to travel to the career center because of the expense of gasoline. He admitted, however, that the bus is a problem for some students and a potential deterrent to enrollment at the career center and non-traditional programs.

You have kids that say things that are not appropriate, and we’ve got just one bus driver, so there’s not great supervision on the bus. The bus driver’s got to pay attention to what’s going on on the road. You got three, four or five girls on the bus, and the rest of them are guys. Sometimes it can get pretty tough for a girl or a guy to be on there (George, Line #458).

The issue of program protection and its potential to impact student enrollment in programs at the career center that are non-traditional by gender emerged as another barrier. Margaret described how the recently-implemented Agriculture programs at the three high schools compete with the programs at the career center.

Like High School #3. They are protective of their Ag program, which is CTE. But, you send students here to us, then that limits the number of students who are willing to take the Ag program at their school. So, you have to protect your own. And now, as you know, each of the high schools has an Ag program. Now you start them altogether, and that’s going to hurt our programs because the more CTE you have there, the less students will want to come here. I think it makes a difference. (Margaret, Line #462).

Lack of information. Examples of participant responses by participant groups are provided below.

Student perceptions regarding lack of information. Brenda provided the following insights into how students receive information about programs at the career center, traditional and non-traditional.

In eighth grade, they do an eighth-grade tour. You can't be a student until you are in ninth grade. You don't come up here until you're in the ninth grade. So, in eighth grade you do a tour of the whole school (career center), and they talk about each class. I missed that day of school, so I didn't get to go on the eighth-grade tour. I didn't get to know any of it. And whenever I came back, my guidance counselor talked to me about it (Brenda, Line #83).

As a result, Brenda's first experience at the career center was her first day of class there.

Kind of. Yeah. I didn't expect it to be so many classes. I didn't know they had so many classes. I knew they had Vet because that's what I took, and that's what I wanted to take. But I didn't know about Auto Mechanics and Collision Repair which is kind of like another car class. They wash cars. I don't know what they do (Laugh) (Brenda, Line #91).

Brenda acknowledged that her high school did not provide career information to her about courses at the career center or any information about traditional and non-traditional courses. However, she admitted that the eighth-grade tour of the career center may have given that information to other students who were present the day of the tour. She also emphasized the following regarding non-traditional enrollment.

No, not at the high school. But if the people actually went on the tour up here, they probably did. But whenever you go to the classroom, they (instructors) are explaining what their class is and how to do it. They don't tell you that girls can take the class. They don't tell you that girls actually take the class. They tell you what the class is. This is Auto Mechanics. Here we learn how to do this and this and this. They don't tell you, "Girls, you can take this class and it will help you in the long run. It is going to help you be on your own. It is going to peak your interest in something that you never thought about." And they don't say that. They just say what the class is about (Brenda, Line 277).

All of the students indicated that salary was important to them. However, salary information for the range of careers addressed at the career center was not provided at the high schools.

Once you start taking the class, they will sit down and talk about it. If you are at the high school, and you want to come up here, you don't really know unless you are looking it up on your own. If you're smart and you know what you want to do, and you look it up on your own. Nobody talks to you about it until you actually get up here (Brenda, Line #285).

Vickie shared Brenda's perspective about the lack of career information, programs at the middle school, or at the beginning of high school that described careers, salaries, job preparation and professions to help students make decisions about programs at the career center. When asked if she had participated in any programs about careers, she replied that she had not.

Parent perceptions regarding lack of information. Both parents indicated a lack of information about the annual eighth-grade tour of the career center that all eighth-grade students in the school division participate in during middle school. Denise responded that her child had never talked about the tour and that she did not receive any information about the tour from the career center, her child's middle school or the counselor at her child's school about it.

When asked about her son's guidance counselors, Deborah responded,

No. What's their names? He may have talked about them, and I didn't know who they were (Deborah, Line #262).

No, he's never talked about her (Deborah, Line #266).

Deborah also indicated a lack of information about her son's schedule for the next school year.

Not yet. But now come school time, I don't know if they've worked out schedules and all that at the high school. He hasn't told me anything, but it would probably come through him. He's terrible about giving me information (Deborah, Line #173).

Deborah was candid about her conversations with her son regarding job opportunities, information provided to him by the career center about salaries and job prospects in other parts of the state and opportunities in non-traditional fields, noting that when he tries to talk to her, she is usually very busy and doesn't remember the details.

He has talked to me a little bit about that, but he tries to talk to me when I have about five other things going on, and I don't remember what he says. But, yes, he has talked to me about salaries, like law enforcement, things like that. I don't remember what those amounts were, but I think they are low (Deborah, Line #355).

Teacher perceptions regarding lack of information. While the annual eighth-grade tour of the career center was designed to introduce students to the wide range of programs offered at the career center and also to bolster enrollment in non-traditional programs at the center, Thomas described the tour as not being a good depiction of Welding. He cited the tour of his shop as limiting, primarily because it is not possible for the shop to be in operation when eighth-grade students are present because of safety issues. He described his presentation during the tour:

I make it a point to look those girls in the eye and tell them because my spiel is, okay, you're here in the welding shop and we can't really show them anything about the way that it really works because you can't grind anything because they don't have on safety glasses, you can't weld, and so we're just sort of hanging out. And so, I've got a bunch of guys in there sitting around like they're on a construction job, and these kids come through. So that's a little intimidating to start with, so I let them know that we are just hanging out because they're coming through today, and I sort of strategically place my guys, kind of have them hanging out outside because I don't want them to say that I don't want to be like them, so I tell them that is Welding and even if you just want to weld in the garage at home, help your dad fix something or just want to work with your hands, or if you want to pursue a career in Welding, it might be bridges, or construction or the shipyards in Louisiana, for someone who wants to stay clean all the time like an engineer in a lab who is testing the strength of something. It's unlimited what you can do. So, I make sure that everybody knows that, but you have to start somewhere. If you're doing quality control, and you never really weld but you're a welder, you're classified as a welder, and it would be a pretty neat job to try to break stuff all day (Thomas, Line #153).

Counselor perceptions regarding lack of information. The eighth-grade tour, which is an opportunity for students in the school division to tour the career center, visit each shop and laboratory, and hear a presentation from each of the CTE teachers, receives mixed reactions according to Julie. The tour was designed to promote awareness and enrollment at the career center and provide opportunities for students to see pathways and opportunities in non-traditional programs. However, it has emerged as a potential barrier to non-traditional enrollment.

We have mixed reactions. Some of the students come back, and I don't know how they have really decided in eighth grade that you are absolutely 100% college-bound. It opens some eyes to say, "Hey, there is something else that I can do other than go to school and learn a trade," which I think is so important. A lot of kids will come back. "I'm not going there. I want the advanced diploma. I want to go out here and go to college at a four-year school immediately after high school." Others come back and say, "Here's some ideas I'm throwing around." And a lot of them will say, "What if I do Cosmetology for two years? What does that mean?" We can explore the options that come out of that. So, I have lots of mixed reactions (Julie, Line #55).

Student characteristics. Examples of participant responses by participant groups are provided below.

Teacher perceptions regarding student characteristics. Thomas, the Welding teacher, acknowledged that gender is an issue in his program, which is non-traditional for female students.

Well, I think, like for my class, I don't know ...if I want a couple of girls in my class, I don't mind it one way or the other. All guys, I'm good. All girls. That would make me feel different because we do a lot of stuff for the community and somehow or another we got into a lot of big projects. I need some big old beefy guys (Thomas, Line #235).

Roger noted that female non-traditional students are more accepted than male non-traditional students.

You mean the rest of the students like if a girl takes Masonry? You know, it seems to me that they don't necessarily look down on girls who take non-traditional courses as much as a boy taking a non-traditional class like Cosmetology. They have a different view of that. Like I say, I've had very, very

few issues with kids picking on them because they are in Masonry because they are a girl. I heard pretty much zero on that (Roger, Line #334).

When asked how male students perceive a male student enrolled in a non-traditional program such as Cosmetology, Roger said,

I think they would perceive you as a homosexual. I don't think they would perceive that a heterosexual would take a class like that. I really do. I think that is what they perceive (Roger, Line #412)

He also noted that boys are not accepting of other boys enrolling in non-traditional programs:

I'll tell you, not as much as the girls who take non-traditional classes. That's my view of it. I hear the other boys talking about those boys that take those classes. You hear the little snide things that they say. But I don't get that with the girls. I really don't. Unless the girls in Cosmetology might be talking about the girls who take non-traditional. That might be happening. As far as my boys, I don't hear them saying anything about the girls. Any derogatory things at all (Roger, Line #415).

Kimberly, the Criminal Justice teacher, related fellow instructors' concerns:

I have no problem with it because I'm used to working with males. Being non-traditional myself, I have no problem with either. But I have heard concerns of the more predominantly male classes here. The concerns being that the majority of the class is male and having things said to the females inappropriately. That is their concern. Not that they can't do the program. Their concerns are that they might be sexually harassed or (Kimberly, Line #259).

Another barrier to non-traditional enrollment, particularly for females, emerged during the interview with Roger, the Masonry instructor. He acknowledged the potential barrier of the physical requirement in programs such as Masonry as he recalled a former female student.

(Sigh). No doubt she could lay brick really well, and she wanted to, but then that's not the only part of Masonry. You've got cinderblock to lay, and a 12-inch cinderblock goes from 60 to 80 pounds. Yeah, she can lay them in the shop, three or four at a time; but if you do that 12 hours a day, that's a grind, and that's really, really hard physically. Yeah, I've had girls that could probably do it; but every day all day, I don't know. I have my doubts. I kinda pushed this girl more to doing tile, thin brick and things like that that wasn't so labor intensive (Roger,

Line #183).

He also acknowledged that Masonry is not for everyone, that some students cannot do it.

Counselor perceptions regarding student characteristics. Another barrier to non-traditional enrollment is found in male students' view of non-traditional students. Jennifer noted that female students appear to be okay with a male student in a non-traditional program, such as Cosmetology. However, she did not see that same level of acceptance among male students.

Now the boys might be a little different. What I would call the good old boys, the ones who are the farm boys. They might see it a little different. Now if they knew the boy, truly knew him, then they probably wouldn't say a lot. And I know that behind closed doors and in the halls there probably is some back and forth, but we don't see that a lot (Jennifer, Line #265).

Amanda described other barriers to enrollment in non-traditional programs: student immaturity, lack of capabilities and lack of self-control.

Oh, I've never had a guidance counselor say that a student shouldn't be in a class because of sex. I have had them say that they shouldn't be in a class because of capabilities, maturity, things like that. We walk through kids like that ourselves. Usually the guidance counselors send them to me, and I have a conversation with the student. Do you understand what this class is all about? Are you okay with these types of situations (Amanda, Line #291).

And that is the number one reason for me to keep a kid out of a class. I think they might be in danger. A danger to everyone in that situation (Amanda, Line #296).

There cannot be horseplay, and the guy behind you knocks you into a saw (Amanda, Line #300).

Administrator perceptions regarding student characteristics. Margaret, principal at the career center, addressed the issue of maturity, which is another barrier to enrollment as she described.

That's right. Knowing how to mix those chemicals so they will be right. That's why the instructors are so important to the program (Cosmetology). Having the right instructors. And some of the talk is like freshmen. There is a maturity level. Sometimes that's a problem, especially in a freshman class because they don't have the maturity to use the tools and mix the chemicals. We try

to limit, especially like in Cosmetology, the freshmen because they also have state board testing at the end of the program. If they take Cosmetology as a freshman, they finish up as a sophomore. They are a little bit young to be doing state board testing. What are they doing to do with it? Every two years you have to renew. They wouldn't even be able to work until renewal time is ready. That's something to think about as far as some of these programs. The certificates and state boards that have to be taken. You have to have a certain maturity level, and you have to have a certain age (Margaret, Line #260).

Mitchell described self-image and a pre-conceived mindset as a potential barrier to enrollment in non-traditional programs at the career center.

I think they have pre-conceived mindsets that they have acquired through home and school growing up, and I think particularly in southwest Virginia boys are subjected to slang and terms that reflect negatively on their gender; and just to avoid those kinds of things, I think that's the way for most kids. Unless you have a very strong boy, and girls too (Mitchell, Line #267).

Another barrier to non-traditional enrollment, cited by Margaret who is the principal of the career center because she is the person who has to address this issue at her school, is discipline.

Also, if they want to take another program and they've been a problem in the program that they are in for the past two years, then we have to say, you need to go back to the high school and take some academic classes this year because you weren't serious about what you were doing while you were here. That would be students who are discipline problems that we are constantly seeing in the office, that weren't serious about what they were doing while they were here and we've had to turn them those students away (Margaret, Line #308).

External Barriers Inhibiting Non-traditional Enrollment by Gender

Participants identified six external barriers that inhibit non-traditional enrollment by gender. They included 1) perception of career center, 2) influences on course selection, 3) traditional enrollment expectations, 4) employment and salaries, 5) family responsibilities and obligations, and 6) family perspectives and influences. Table 12 provides codes and specific barriers relating to the external barrier theme. Examples of participant responses are included after the table to provide greater insight into each of the external barriers.

Table 12.

External barriers inhibiting non-traditional enrollment by gender

Code	Barrier	Theme
Community Perception of Career Center (S) Public Perception of Career Center (T) Perception of Career Center (C) Perception of Career Center (A))	Perception of Career Center	Observed Barriers External to the School Division
Influences on Course Selections (P)	Influences on Course Selections	
Traditional Expectations (S) Traditional Expectations (P) Traditional Expectations and Culture (T) Traditional Expectations (C) Traditional Expectations (A)	Traditional Enrollment Expectations	
Limited Local Employment (S) Salaries (S) Limited Employment Locally ((P) Employment Parameters (T) Employment Barriers (C) Limited Employment Opportunities (A)	Employment and Salaries	
Family Responsibilities (S) Family Obligations (P)	Family Responsibilities and Obligations	
Family Perspectives (S) Family Perspectives (P) Parental Influence (T) Family Structures (T) Parental Pressures and Influences (C) Parental Concerns (C) Lack of Family Role Models (A)	Family Perspectives and Influences	

Note. S = Student; P = Parent; T = Teacher; C = Counselor; A = Administrator

Perception of career center. Examples of participant responses by participant groups are provided below.

Student perceptions regarding perception of career center. Vickie, a student in Cosmetology, a program that is traditional for her gender, explained her perspective about the community perception of non-traditional enrollment and the career center in general. She stated that she wanted to enroll in Auto Body or Welding but had the following reservations.

I've never like talked to anybody about it because they would take me different since I'm so into dressing up and doing my hair and make-up. They would think I was extremely different but that's (Auto Body and Welding) always been an interest (Vickie, Line #119).

Teacher perceptions regarding perception of career center. Another external barrier is the public's perception of the career center.

The public still has the idea that it is just a place to go to get out of going to the high school (Rebecca, Line #403).

Counselor perceptions regarding perception of career center. The career center was perceived as a barrier, with parents viewing enrollment as a limitation.

Some parents are always onboard for their kids to go. I specifically, I will tell you this. When I had seventh-grade registration. So, we go over, and I go to the elementary school, and we do the registration with the seventh-graders, and we talk to them about the advanced and standard diplomas and their options as they move into ninth grade. I like to go ahead and lay it all out there so they can be thinking about it. I had a couple of parents come in, and they said, "I absolutely do not want my child in the career and technology center," and I said, "Why?" They said, "I feel like that limits them and what their opportunities are going to be after high school" (Julie, Line #71).

When asked if parents understand that Culinary Arts is non-traditional for girls, Julie responded about a male student who wanted to enroll in Culinary Arts.

I don't know. I really don't know, but I think his (parent) perception of that was that was a complete waste of time for him. And so, it was frustrating (Julie, Line #124).

Administrator perceptions regarding perception of career center. As mentioned by previous groups of participants in this research, the stigma or perception of the career center persists and continues to be a barrier to both enrollment and to decisions about non-traditional programs.

I think a larger problem for the students is their parents see the vocational students as troubled kids and don't want their children up there (Mitchell, Line #255).

Robert agreed.

I think a lot of it is parents and the community. I don't think they fully understand. I think it's always been that the vocational school is where kids who can't do go. And that's not the case (Robert, Line #86).

Friends' Influence on Course Selections. Examples of participant responses provided below.

Parent perceptions regarding friends' influence on course selection. Deborah, whose son completed the Criminal Justice program, indicated that friends in Law Enforcement and in Welding influenced her son, along with a family friend who is a Nursing instructor and provides information to the family about career center programs.

He's so influenced by ... we have a lot of friends in Law Enforcement. Aaron and Ethan both are Law Enforcement. My husband where he works at the store in sporting goods. We know all of the game wardens. We know most of the police officers. They come into our house to do weapons checks and ammunition pick-up, and he's involved a lot in it (Deborah, Line #49).

Welding. Definitely Welding. And then the Criminal Justice. And that's really the only programs ... Oh, Nursing for the girls. I forgot about that one. We're connected with that through Elizabeth who teaches at the career center. We hear a lot about that through Elizabeth (Deborah, Line #69).

Traditional enrollment expectations. Examples of participant responses by participant groups are provided below.

Student perceptions of traditional enrollment expectations. Marcus described the traditional influences that played a major role in his program decision at the career center. While he indicated that he did not see barriers or limitations to course selections at the career center, his comments indicated the parameters that surrounded his course selection, beginning with family members' influences.

Well, I personally think that it goes back to how you were brought up. Like I think the boys were brought up working on cars. Stuff like that. Boys were working with their dads. And girls were working with their mom cooking (Marcus,

Line, #51).

I grew up doing things hands-on with my dad, and that got me into doing more hands-on things. Welding has always interested me, so I decided to do that (Marcus, Line #231).

I don't think there are any barriers. I think people take what they want to take. I think that the influence is just the way you are brought up (Marcus, Line #422).

As Marcus cited previously in the quote at the beginning of this chapter,

Well, it goes back to what you're used to doing. If you were brought up to help your mother cook and clean, you'll take Culinary Arts. But if you were an outside kind of person helping your dad and things like that, then you're going to take a hands-on class (Marcus, Line #426).

Parent perceptions of traditional enrollment expectations. Deborah described traditional expectations as influences on program selections. When asked about the Culinary Arts program, which Deborah did not know the career center offered, she expressed surprise that the program is the first step to becoming a chef. She agreed that the local perception of cooking aligns with traditional expectations.

I think it's the way they've been raised. I think they think girls should go a certain way, and boys should go a certain way. That's the way they are taught, and they are raised even though today's society is a little bit more forgiving in those things, but I think they are still raised that way at home (Deborah, Line #347)

In the case of her child, Denise indicated that her age and her husband's age influenced the pressure that she put on her daughter to select a career that would provide future security for the child. She also noted financial issues.

She's my child. And I don't think it was Nursing that she wanted to go in, but I told her that we don't have very many years left, and I said you need something that will prepare you, that will give you money, stability, you know. I said that Maw-maw and Paw-paw is not going to be here, and we don't have the money to put her in her own cosmetology (Denise, Line #35).

Teacher perceptions of traditional enrollment expectations. Rebecca and Kimberly

explained that local traditions and cultural expectations presented potential barriers to student enrollment in non-traditional programs.

I think it is predominantly in a rural area. In more urban areas, pretty much anything goes. There aren't limited places (Rebecca, Line #487).

I'm not sure if it is just the area that people think that women are not suited for the job or if it's the fear or if it's the aspect of being the mother in the home. And it takes a lot of time away from your home as far as ... I know that I was called out at 3:00 in the morning to search females or you may have a sexual assault. I was called away from home, so it could be something to do with that. Several different things that it could be (Kimberly, Line #51).

Counselor perceptions of traditional enrollment expectations.

And that's something that we have to work on. When you said, and I know we haven't gotten there yet, but when you're talking about non-traditional courses, parents automatically assume, and I think it is a great divide, that if I have a son that is going to career and tech, the male students they think have more opportunity there. There's the Welding, Auto Body, Masonry, Building Trades. All these classes, and I don't know if that was from decades ago but that we felt like that was where the boys wanted to go, but I see parents who are more willing to say, my daughter, I don't care for her to take Auto Body. That's a good thing for her to do. Bu, if you have a boy who wants to take Cosmetology, I can see the parents saying, no, I don't think that is really what I want him to do, and I think its gender roles. That's really what it comes down to. And that is frustrating. While our boys may do very well in the Welding program, I would say that a girl can walk in there and do the same. And I would venture to say the same thing about Cosmetology (Julie, Line #108).

Administrator perceptions of traditional enrollment expectations. As with the other groups of participants, traditional expectations and local culture were identified by administrators as barriers to non-traditional enrollment.

It's because, you know, in our community growing up in Coalfield County, you didn't have men cooking at the house or something else. It's the women. And that's the culture of where we live at that has a lot to do with it (George, Line #37).

That's what they've seen growing up. They've seen their mothers in the kitchen and their grandmothers in the kitchen. You don't see your dad in the kitchen at all. I did, but most people don't (Margaret, Line #51).

I think the problem lies in the attitudes growing up in this area and doing a better job of counseling them in their classes to include non-traditional roles (Mitchell, Line #308).

A lot of it is tied to, especially in our area I think, in the more rural areas you see a lot more of the everyone does the traditional because it's the values. It's the way people were raised. It's the way we think here. I think when you get in to more metropolitan areas, like the Richmond area and places like that, you probably have a much more diverse situation (Robert, Line #171).

For the older generations it was expected that girls would do these jobs and boys are supposed to follow in their fathers' footsteps and do those jobs. For older generations that's just the way they were raised (Wilma, Line #47).

Employment and salaries. Examples of participant responses by participant groups are provided below.

Students perceptions of employment and salaries. Students acknowledged salaries as barriers. They had gathered information about careers and salaries and found that certain careers did not earn high salaries or what a student had expected to make in a particular job.

I thought about it. I was going to go into game warden (Criminal Justice) because I like to be outdoors hunting and fishing and stuff, but I looked up stuff; and they only make about \$35,000 their first year, and I thought more about it, and I've always wanted to do pipe welding too. So, that's why I'm taking pipe welding next year. If I can possibly get a full ride like my buddy did (Terry, Line #290)

Parent perceptions of employment and salaries. Deborah reiterated her concerns as a parent.

Uh-huh. I have talked to my son that if he pursues the officer program what kinds of risks he will be taking and with the salaries. Salaries for officers are not very good in this area along with the risks so that's not something that I personally would want him to go into; but I appreciate the people who do it. I do, but I don't want my son to do it (Deborah, Line #359).

Teacher perceptions of employment and salaries. Thomas described his perspective on the local employment situation.

The thing is, the farther you go up the ladder with most things and the easier the job gets, the more you get paid; and the longer you stay, the more you get paid. But here, locally, you can top out at maybe \$25.00 an hour in a couple of places (Thomas, Line #157).

Counselor perceptions of employment and salaries. According to Amanda, students who graduate from the career center do not have equal opportunities to become employed immediately after graduation from high school. Students who graduate in Certified Nursing Assistant, for example, are quickly employed. She described getting a job in Welding, however, as a slow process because of students' lack of experience.

Experience. The last kid that I spoke with graduated from our program, completed JAG, and graduated from the local community college. I contacted a local business and said, this was a good kid, if you will just give him an interview, and he made it through, and they loved him, and they told him after the interview that he looks really good, but anyone has more experience than you do, so he did not get the job (Amanda, Line #195).

Administrator perceptions of employment and salaries. Administrators acknowledged that there are employment issues locally and in the surrounding area. This is a problem for those students who have already decided that they will not relocate after graduation from high school and a barrier to those students who might consider enrolling in a non-traditional program. Margaret's perception was that jobs exist, but that the work is hard and not everyone wants to work at that level.

And we need to talk about welding jobs and how many welding jobs are out there that cannot be filled. The same thing with Masonry. Masons are coming from Mexico to work, even in our area and in our state because we can't find people who want to do that hard work (Margaret, Line #148).

Mitchell offered a slightly different perspective, especially regarding the number and kinds of jobs in the area.

In this area, maybe not so great. I don't think employers really have any objections to non-traditional employees, but if you've got someone like a female welder who

wants to go to the shipyards, they are going to do well. And they can go to (local business) and do well. But there are other trades, auto mechanics, there's just not a big demand for that. Male or female. So, it's harder. Culinary Arts for example. I think our females would fare well there (Mitchell, Line #195).

Robert explained that students who graduate from the career center will get jobs but not necessarily in Coalfield County.

I'm not going to say that it will be here in Coalfield County, but I think they can get a job (Robert, Line #403).

Yeah, because it's limited what we have here (Robert, Line #407).

Wilma agreed.

I'm not sure that they think in this area they can get a job (Wilma, Line #297).

Family responsibilities and obligations. Examples of participant responses by participant group are provided below.

Student perceptions of family responsibilities and obligations. Student participants provided a range of perspectives about external barriers to non-traditional enrollment, describing in some instances personal obligations that limit relocation for a better job opportunity or family responsibilities that restricted participation in career center programs and presentations.

My parents work full-time jobs. They are never home. My mom works day shift, and my dad works day shift. By the time they get home, we are going to bed. So by the time I get home I watch my brother and feed him, and I make dinner for my sister too. And that comes back to the responsibility. Being up here was easier than being at the high school. I have responsibilities at home that I have to take care of. So, your home life definitely factors into what you choose (Brenda, Line #301).

Parent perceptions of family responsibilities and obligations. Denise clarified her family responsibilities, explaining her limited knowledge of career center programs and her inability to attend career center functions.

No. My child has invited me, but I tend to kind of stay away because I'm not outgoing. My husband is sick. He has Parkinson's, and I'm a caretaker, but our daughter has always been our number one priority. You know. If I

needed, they know I will be here. I just don't (Denise, Line 2#44).

Family perspectives and influences. Examples of participant responses by participant group are provided below.

Student perceptions of family perspectives and influences. Brenda provided her description of family perspectives based on what she has observed.

Some parents are very strict, and they are like, that's guys. You can't do that. But my parents are very understanding most of the time, and most of my parents' friends are understanding. I don't really know how to explain it. It is most the full-out Christians who have a problem with their kids doing something like that. I'm a Christian, and my parents are Christians, but the full-out God-all-the-time, no, you can't do that. You're under-age and that's going to lead to something else, and you're sinning. I don't understand it. I don't get it (Brenda, Line #321)

Parent perceptions of family perspectives and influences. From a family perspective, Deborah described her husband's feeling about their son enrolling in Criminal Justice.

I think he was along the same idea that I was, you know, going into the police force and we know what they've been going through lately, so he wasn't real tickled with him going into like being an officer. Now the game warden part, he would be okay with (Deborah, Line #101).

Teacher perceptions of family perspectives and influences. Regarding parents' perceptions about their children taking non-traditional programs, Rebecca described an incident in her program with a female student, who was non-traditional for the program.

I'm not real sure on that. Most parents ... I know I have a girl who wants to take my second year class. Her mother is refusing to let her take it because she wants her to take Band and Art and Choir or something like that. She wants her to stay at the high school and get some exposure there so (Rebecca, Line #299).

Adding to her perception about barriers, Kimberly addressed the influence of family structures.

You know, it could stem from families because we have a lot of dysfunctional families in our county. We have a lot of grandparents raising our kids, and we have a lot of single-family parents. Some parents are incarcerated. It is very sad (Kimberly, Line #327).

Counselor perceptions of family perspectives and influences. Parents make the final decision for their children because a parent's signature is required on a student's career plan and course selections, which are usually, according to Susan, guided by a desire for children to do better than their parents and to be more successful than their parents. She added another perspective about parental influence.

You do see a lot of children raising children. And so you do have that group of students who don't see any promise of anything. There's no role model there, so, they don't see any light at the end of the tunnel. Those are the ones that you want to give a lot of attention (Susan, Line #449).

Julie shared Susan's perception of parental influence about parental pressures and influence.

I really think it is a lot of parent influence. I think society as a whole is getting over some of the gender roles. We expect girls to do what we expect boys to do. I think we're moving toward that. Southwest Virginia is going to be a little bit behind the curtain. We're very set in our ways and the way we do things, and that's just our culture. So, the more we can have conversations and get the material out there, the kids will say this is what I want to do and why I want to do it and have candid conversations about what they want to do. We will then see a big change in that, but it really comes down to this is a job for a male. This is a job for a female. And we can't cross that. And that is hard (Julie, Line #292).

Jennifer, counselor at High School #3, indicated her perceptions of parental influence on non-traditional enrollment.

The boys, I think, it's the stigmatism, with doing the Culinary Arts and the Cosmetology. Especially those two. The others, because I know we have several in the other fields. The girls, I think they are more influenced by Mom saying, Oh, you can't do that kind of thing. You have to do this. You can't go get your hands dirty. You can't do that boy stuff (Jennifer, Line #410).

Jennifer stated that she felt fathers were more supportive of non-traditional enrollment than mothers.

It's more the mother. I think the dads would say, you need to learn

to change a tire. Change your oil. That kind of thing. Lay block. I think it would impress a dad if a daughter did that, but moms are more traditional in this area. And I'm just thinking about my granddaughter. My daughter did the dental hygienist. She wouldn't go on and do the other, so I said try this and if you like, you can go on or that kind of thing. My granddaughter, if she wanted to take Welding, I would push her as far as I could push her. the only thing that I wouldn't like is that she is going to be in a job field that is 99 percent male, and that is what mothers think about too (Jennifer, Line #414).

Administrator perceptions of family perspectives and influences. Another external barrier, described by Margaret, is the lack of parental role models. In a discussion about salaries and security, Margaret revealed that some students at the career center have no goals. They aspire to be on welfare like their parents. She described the situation in some families when the researcher asked if earning money is important to career center students.

It (money) is to some students, but, you know, to some it's not because they are just waiting because their parents have gotten a check and they are just waiting to get a check and that's all that matters to them. It's just, you know, they don't have any aspirations or any goals. And I think that if you could just get that first check. Get that first check and that feeling of having that money in their pocket. What that would mean! And a lot of them never get to that (Margaret, Line #376).

Strategies to Remove Barriers and Improve Non-traditional Enrollment by Gender

Research Question 2

What are the perceptions of selected stakeholders regarding how enrollments can be improved by gender in non-traditional CTE classes and programs at Coalfield County Career Center?

Sub-question: What strategies do students, parents, teachers, administrators and counselors recommend for overcoming the barriers that cause low enrollment?

Participants identified five strategies to remove barriers and improve non-traditional enrollment by gender. They included: 1) communication, 2) activities for students, 3) activities

for parents and other adults, 4) focus on counselors, and 5) instructional strategies and programs.

Table 13 provides codes and specific categories relating to the strategies theme.

Table 13.

Strategies to Remove Barriers and Improve Non-traditional Enrollment

Code	Barrier	Theme
Communication (S) Communication (P) Communication (T) Communication (C) Advertisements (A) College Employment Options (C) Perception of Career Center (C)	Communication	Recommended Strategies to Remove Barriers and Improve Non-traditional Enrollment
8 th -grade Tours and After-school Program (S) Skills USA Competitions and Scholarships (S) Job Shadowing (P) Informational Programs for Students (S) Career Fair (T) Tours and Afterschool Programs (T) Exposure to Programs (C) Criminal Justice Job Shadowing (C) Afterschool Programs (A) 8 th -grade Tour of Career Center (A) Skills USA Competitions and Scholarships (A) Non-traditional Presenters (A)	Activities for Students	
Programs for Parents (S) Programs for Adults (S) Activities for Parents (P) Programs for Parents (T) Programs for Parents (A)	Activities for Parents and Other Adults	
Counselors (S) Counselor Professional Development (T) Counselor Visits to Career Center (A) Focus on Counselors (A) Focus on Family Influence on Careers (C)	Focus on Counselors	
Expanded Programs at Career Center (T) Recruiter (T) Recruitment and Advertisements (A) Inclusion of Local Employers (C) Emphasis on Male Nurses (C) Connect Programs to Student Interests (A) Proactive Planning (A) Non-traditional Instructors (A)	Instructional Strategies and Programs	

Note. S = Student; P = Parent; T = Teacher; C = Counselor; A = Administrator.

Communication. Examples of participant responses by participant groups are provided

below.

Student perceptions regarding communication. The students agreed that communication from the job placement director and among students had potential for increasing non-traditional enrollment.

I feel like the job placement director would find out first. She is looking into that stuff because she is trying to better our future. She cares about everyone here. And she goes online a lot and looks at stuff online. If something changes, she tells the principal first, of course. And the principal tells her to tell the instructors, and the instructors tell us (Brenda, Line #382).

One person to another and eventually it gets around to everybody. I think if a bunch of girls stood up and a bunch of boys stood up and said that they were going to take a non-traditional class, more people would do it (Vickie, Line #470).

Try to meet with people, talk to them, and tell them that it doesn't matter. If that is what you want to do, then do it. Don't let your buddies and friends tell you what to do. That's your life, and you need to do what you want to do. Really, that's what they need to do (Terry, Line #524).

Maybe they could talk to people they know who have come up here before and enrolled in a class up here (Marcus, Line #402).

Parent perceptions regarding communication. Deborah also had suggestions for improving communication with parents. She noted that parents need information about programs, that they have no idea what is offered.

I think if maybe parents received information about all of the programs that are offered. I know that I have no ideas what is taught up there, only the few classes that I know about through family and friends (Deborah, Line #439).

She mentioned that she did not know about Open House.

It's probably done while I'm working. No. I've never been to an Open House. It needs to be at a time when people can come (Deborah, Line #443).

And don't rely on the kids to bring it (information) home. They might have given the information to the kids, but don't rely on them to give it to the parents. They need to mail it or email it, you know. Something other than relying on the kids to bring it home. Then I'll have something

to look at. I may briefly look at it for five minutes, but I've got that paper and I can go back and say, wait a minute. I think I saw something on here. I can go back and reference it (Deborah, Line #447).

Touch base with the seventh-grade parents and maybe mail that information to the seventh-grade parents. And say, these are programs that are offered. Your child will be able to sign up for these programs the next coming year. I don't know if that is a lot of work or not. Maybe make an Open House for the seventh-grade parents so they can go. The parents can go along with the kids. I'm sure that for an Open House the parents would surely go (Deborah, Line #455).

Teacher perceptions regarding communication. Rebecca, the Culinary Arts instructor, suggested several strategies specifically targeting communication. To provide parents with communication about her class, she designed a page on a social media site.

I think it would be great to open the school up to have the public come here. Maybe like one of our work days during the summer. Just have kind of like Open House for parents of seventh and eighth graders possibly come. The afterschool program has helped tremendously and boosted our numbers because not this year but last year and year before last we had middle school students which was fifth, sixth and seventh grade students. They were able to come here and experience Welding, Cosmetology, Culinary Arts, so they could get a taste of what is actually offered here. Hands-on (Rebecca, Line #411).

Counselor perceptions regarding communication. Counselors described the strategies they used to improve communication.

I think that would be through information going home. We could do a better job of advertising what our career center does to our parents because our career center is different from what it was when we were in school. It's a different place. It's not that stigma of I can't do anything else, so I'll go to the vocational school (Susan, Line #523).

Right. I think just giving them more information, more hands-on information letting them see the different programs that can come from this, just like we were talking about. The webbing of different opportunities from this one program. And educating the parents. And saying that is it not just about this, but it is about this. It's about the big picture (Jennifer, Line #434).

We have made quite a few changes, and I will show you the document. We've all done the course description, and we have a course description available. And I think it is our goal to get as many of these in the hands of parents as we can when it comes time to select courses. We do have

career and technology courses in this so the parents can look through it (Julie, Line #140).

To provide parents with more information about the career center and non-traditional programs, Julie added:

We should take them on a tour and let them see it. It would be proactive to get them in there and have them see what it is now (Julie, Line #305).

Counselors explained the role of communication as a strategy for implementing change.

I think it is through communication and getting information out. And I think it has to go with our community. Our community has to understand that in order for our community to survive, we are going to have to change. And we are going to have to break down those stereotypes that prevent us from doing what we want to do (Susan, Line #548).

Julie explained that communication between the high school counselors and teachers at the career center is key to improving non-traditional enrollment.

When we do registration, I want to involve them as much as possible. I always would love for them to come. The invitation is always open. They are so busy. We need them to talk about their programs as much as possible to the students (Julie, Line #296).

For communicating with students, Susan included recruitment posters describing non-traditional careers that the CTE director purchased for each of the high schools and the career center.

The career center teachers talk about that (salaries), and we also have these posters that I need to get up on the walls that are career posters that show what types of job market availability is out there (Susan, Line #421).

The counselors agreed that advertising the career center takes a variety of forms.

I think that our career center has done a tremendous boost, advertising with the greenhouse what they are doing out there (Susan, Line #543).

Advertise it more. I notice it especially in the horticulture program the things they were pulling out of that greenhouse and sending us. At a counselor

meeting at the career center, they said we appreciate our counselors for feeding our programs, and we want to give you this. It was the most beautiful potted plant. I mean it was gorgeous. And I thought, who knew they were growing this up here. I knew they were opening the greenhouse, but I had no idea. So, advertising of that would do a lot of good. A lot of good (Julie, Line #340).

Counselors also emphasized that communication should include more information about the employability of career center students when they graduate from high school. Susan explained that students who complete career center programs graduate from high school with skills. They have certifications which provide options. If students decide to go to college, they have avenues for paying college expenses, including summer employment based on their CTE skills.

When you graduate from high school and you're going to go to college, you don't really have anything. You're dependent on the job market (Susan, Line #282).

I think our career center does a tremendous job in making those students who finish out there employable (Susan, Line #294).

Counselors also remarked that the changing image of the career center should be communicated as a strategy for improving student enrollment in non-traditional programs. Jennifer explained.

They love it. Our teachers (at High School #3) love it. Especially over the past few years there have been so many improvements with the classes. Getting the dual enrollment. And I know they've always had the Skills USA and the competitions and so forth, but I think that the teachers there do more, I think. And I think they are more serious about the classes there (Jennifer, Line #277).

Administrator perceptions regarding communication. George, principal of High School #3, supported advertising as a communications strategy to inform parents and students about non-traditional programs.

You gotta advertise it, put it on Facebook and say, hey! We would like for more kids to get involved in these programs. It's an opportunity for parents to see what we're doing. There needs to be more advertisement. Social

media. That kind of thing. Your all-call through the school. Say, hey. This Tuesday night we're having Open Parent Night at the career and technology center. Any parent who would like to go and see what programs are available at the career and technology center, be there at 5:00 and tour the facility. I think that would help (George, Line #422).

Activities for students. Examples of participant responses by participant groups are provided below.

Student perceptions regarding activities for students. Vickie explained that the eighth-grade tour influenced students' decisions to take certain classes, including non-traditional programs.

I think that during the tours the teachers should welcome the girls more and say that they wanted them, and nobody would think of them as different. If they said that they wanted to be in non-traditional classes, just tell them that they should do it and encourage them (Vickie, Line #429).

Terry agreed, indicating that both the tour and the afterschool program had the potential to improve non-traditional enrollment.

I would say that is early enough. At middle school when they do afterschool (program), and they come up here and some students already know what they want to take, but a lot of kids don't know what is up here and how everything goes. I think that if they did more tours and got the word out there about the opportunities that you get (Terry, Line #445).

Terry and Marcus described how Skills USA competitions and scholarships provide opportunities for students to pursue careers of their choice with funding and jobs, including non-traditional careers.

You can go big places from here. A girl won state in Culinary Arts, and last year she won state in Culinary Arts too, so this year ... she got \$3,000 last year for winning state, and this year she got more than that. I can't remember how much. It was money for college. Skills USA is the one that does that. You pay like \$25.00 when you first get up here to Skills USA, but Skills USA does a lot. They help us out tremendously (Terry, Line #464).

There is different kinds of competitions that you can go into. You can

make a sculpture, a welding sculpture, or you can just weld and they will give you tests and things to do. And if you do really good, oftentimes a college will take an interest in you and offer you a scholarship (Marcus, Line #323).

Parent perceptions regarding activities for students. Deborah suggested job shadowing as a strategy for improving non-traditional enrollment.

Maybe letting them kind of shadow a class. Shadow a class to see if that is something they would like. Going on a visit when there's nobody there, no students, nobody doing anything, just the teacher. You have to go with what the teacher says. But if they get to go, and they get to sit in that class, and they get to see the activities and what's going on, that might spark their interest a little bit more than just going in and talking to the teacher (Deborah, Line #431).

Brenda explained that her high school did not provide information about courses or any information about non-traditional classes for non-traditional students. This strategy would give students information required to make program selections, especially regarding non-traditional enrollment. She offered the following comments.

No, not at the high school. But if the people actually went on the tour up here, they probably did. But whenever you go to the classrooms, they (teachers) are explaining what their class is and how to do it. They don't tell you that girls can take the class. They don't tell you that girls actually take the class. This is Auto Mechanics. Here we learn how to do this and this and this. They don't tell you, girls, you can take this class and it will help you in the long run. It is going to help you be on your own. It is going to peak your interest in something that you never thought about. And they don't say that. They just say what the class is about (Brenda, Line #277).

When asked if she thought it would help if the instructors said, "Girls, you can take this class too," Brenda replied "Yes. I think it would." (Brenda, Line #281).

Teacher perceptions regarding activities for students. Rebecca described the annual Career Fair, which is held each year at the career center as an opportunity for high school students to meet representatives from a range of careers, many of which include non-traditional employees. She included that high school counselors also attend this annual event.

They come maybe once or twice a year (to the career center). We have Career Day, and the guidance counselors will come. They have a pretty good idea of what is going on (Rebecca, Line #451).

Rebecca described the eighth-grade tour.

The eighth-graders are transported from their high schools to the vocational school, and they will go into each class, and I will tell them basically what we do from the start. First year and second year. They will do a little tour of the area, and then they will walk to the next class. I think if parents were invited to that, it would be a great idea (Rebecca, Line #423).

Thomas and Roger agreed that the eighth-grade tour and the afterschool program are good strategies for increasing enrollment in non-traditional CTE programs at the career center. Thomas felt, however, that the tours could place more emphasis on inclusion of female students in programs that are non-traditional for their gender

I think the tours that we already have could be guided that way a little bit more (Thomas, Line #145).

Roger viewed the afterschool program as a successful strategy for influencing students' program decisions at the career center.

Oh, yeah. I think it does tremendously if they can get their little snippet of Masonry, their little snippet of Welding or Auto Body or whatever, and they are like, that is what I want to do when I go up there. I think it has helped the enrollment quite a bit (Roger, Line #362).

Counselor perceptions regarding activities for students. Jennifer described the eighth-grade tour as a strategy for students to see first-hand the programs offered at the career center.

We do the eighth-grade tour usually in the fall before we start scheduling them because they can begin going to the career center in ninth grade. So, we take the eighth-graders over, and they tour; and, of course, I have a direct line with the placement director. We did take the tenth-graders, but what they began to do, the placement director comes here now and talks about the different programs. Like last year, the horticulture teacher and the placement director came here and talked to the students about that because it was a new program. So, we try to give them as much information as we can, and we also do the tenth- and eleventh-grade Career Fair, and we take them to

that facility so they have access to look around a little bit and also hear the Career Fair people (Jennifer, Line #11).

She described the influence of the tour on program selection.

Absolutely. I know the eighth-graders when they go, they see the different areas. They show them every area, and I think it has improved so much over the years. We do have more information, written information, that we can send home to parents for them to see the programs there that are available (Jennifer, Line #15).

Susan and Julie described their students' reaction to the tour and exposure to programs offered at the career center.

The students, they see every program that is available. The way it is set up, they get to visit every classroom that's out there in the morning. Our group goes out in the morning. They get to visit every classroom that's available, and there are classes going on at the time. So, they get to go in and visit during class time. It's important for our eighth-graders because a lot of them don't understand what the vocational center has to offer (Susan, Line #51).

There are so many options that come out of that. And then I have my group who say, I know I want to learn a trade because I'm not going to college. I don't like school. I want to work with my hands and at least get me a half day of being able to do that. I can do my classes that I absolutely have to have to get my diploma, but I'll do something else that I enjoy for a half day (Julie, Line #55).

Amanda, job placement director/counselor at the career center, described a multi-county expo that provides early exposure to careers to fourth and fifth-graders from surrounding counties.

Yes, and they have a grocery store chain, power company, the hospitals. They probably have over 100 different jobs represented (Amanda, Line #139).

Exposure. To all the different types of jobs to try to get them. Do they need more math? What do they need for their future so that we've got them (Amanda, Line #143).

Job shadowing was cited as a strategy, notably in the Criminal Justice program, which is non-traditional for females but typically has an enrollment of 50 percent

female.

I have a couple of girls who want to go back and do that, and that is always an option too. If you know that you don't want to go back and take another (program), let's wait until tenth grade, and then you can finish up there (Julie, Line #204).

Administrator perceptions regarding activities for students. Administrators described the federally-funded 21st Century Community Learning Center afterschool program at the county's middle school as an effective strategy for addressing non-traditional enrollment.

I think it has a lot of value, because many of the students in the eighth-grade have no idea what they want to do, have no idea what is up here, so that opens their ideas to possibilities. Also, that was part of the 21st century grant with the middle school. They loved it, and that is educational for them to see that there are other opportunities (Mitchell, Line #156).

I think one of the best things we ever did when I was there was the afterschool program. And we would actually bring kids from the middle school to our school, and we had instructors that would actually take classes there. They lasted about an hour and a half a day, and it was a year-long program. Students were in the classes for a semester. 15-16 weeks (Robert, Line #463).

Administrators also viewed the annual eighth-grade tour of the career center as a strategy that influences students' choices.

I think it is a significant impact because I think that when the students go and see firsthand what's going on there rather than just hearing about it, I think that if they go there and actually participate and do something, they will be more likely to consider participating (George, Line #77).

I still have my little say when we bring our little eighth- graders up here for our tours, and I get them altogether in the auditorium first. I go through these things with them. Don't take things just because your friend's taking it if there's something here you think you would really like to do. I try to mention that 75-80% of those jobs out there are by people with the education. Do you stop here? No. The more education you have, the better off you're going to be. Whatever. The skills are going to be important. The jobs that are going to be in our community and out in the world (Margaret, Line #415).

When we bring them in for the tours of the building, and when they would come in, he was, I don't care if you're a guy or a girl. Whatever. Come take Welding. The teachers encourage it (Robert, Line #311).

Administrators cited participation in Skills USA as a strategy for calling attention to students' accomplishments and successes at the career center.

I think the shift is that we are sending some of the best and brightest kids over there. We have a kid who got a Welding scholarship that is fully paid because he won the state competition and is going to nationals. It's those kinds of success stories and actual monetary and financial gains that kids are getting by going there and learning and doing well, those kinds of things open some eyes for people and they'll say, hey, maybe I can do it (George, Line #467).

One of the previous principals at the career center did a good job of making those kids feel good about themselves and elevated the status, and then they did well in competitions like Skills USA and state level competition, and they get accolades for that, and I think the image is changing (Mitchell, Line #247).

Regarding scholarship opportunities through competitions in Skills USA, Wilma added the following:

I think the ones who attend the vocational school are more aware. I'm not sure about the others. Some of the kids who attend the vocational school are making them more aware because their kids are going and competing and doing well and telling them about it (Wilma, Line #314).

The administrators identified non-traditional speakers as a strategy for improving non-traditional enrollment.

Well, as far as non-traditional, we like to have speakers come in who are non-traditional for that field. That's like you said, a girl who is a mason. Once the kids are already in that class, it's not as ...once the kids are in the class, that speaker's not going to do much good. A speaker may be used for recruitment at the high school. Alright, we've got such and such here. A chef who is a lady, and she is going to talk about her work. When we have the Career Fair, it is important maybe to have some non-traditional speakers in non-traditional roles (Margaret, Line #361).

It is better to listen to someone working in that field rather than listen to me talking about it. It's a little bit better share (Robert, Line #339).

I think another thing we can do that we're about is at the career and technology center when they bring guest speakers in, include non-traditional people in the advisory committee. If I'm going to bring someone in to do a demonstration, that teacher could request a female welder, or a female could come with whoever

comes. That would be exposure of the kids to non-traditional role models (Mitchell, Line #377).

Two administrators cited the need for programs for parents to orient them to programs provided by the career center.

While we can encourage them here, I think they (instructors) are more knowledgeable up there. If our parents go up there, the instructors know their field and what the possibilities are and what the wages are more so than my guidance counselors here. You can look it up and talk about it to some degree, but those people up there doing the jobs, the instructors would get the message across better than us (Wilma, Line #387).

I think that if we could get the parents into the building, that's the hard part. The selling part is easy. It's getting them into the building. That's the problem. So, in that sense we have to get kind of creative with them (Robert, Line #491).

Activities for parents and other adults. Examples of participant responses by participant groups are provided below.

Student perceptions regarding activities for parents and other adults. Brenda suggested that a strategy for improving non-traditional enrollment was through programs for adults, with the potential for adults to serve as role models.

It is just a wonderful place, and I think everyone should get the chance to feel how wonderful it is here. I don't think you should be limited about how much time you can spend here. I think they should offer this to adults, too. I think there should be adult classes. Of course, they would have to pay. But you would have students and grown-ups working together. I think that would be good. Of course, not in the same classroom but have different classes for the adults and the students. I feel like we have CNA up here that has adults in it. That's a nursing program. The adults being here makes us have good role models as well. And it tells us that we can do anything we want to and they've already graduated, and they came back to learn something new (Brenda, Line #398).

Parent perceptions regarding activities for parents and other adults. Deborah and Denise suggested activities for parents, which included specific invitations to visit the career center and observe.

Maybe if there were more activities where the parents could come and be a little bit more involved. If I got invited to watch my son do some of these hands-on defense stuff, I would have been there in a minute. Absolutely (Deborah, Line #496).

Deborah indicated that she would love to see her son in Criminal Justice participating in a scenario. She also suggested including parents in Welding and Culinary Arts.

Yeah. I would have loved to have seen it. Welding. The Welding instructor calls us, and we order for him. So, I deal a lot with the Welding (at the career center). If my son was a welder, I would enjoy going and watching him weld something and come out with one of the welding creations. When you take a piece of metal that starts out as a rectangle and you create this object that he has in front of the school and see how the kids get involved because the parents don't get to see that. They don't get to see how it goes from this piece and is made into this piece. They just get to see the end. They don't realize. And his students compete at the highest level and win (Deborah, Line #500).

Most parents, even if their kids aren't in the Welding program, so if the parents could come, maybe watch to see something. I know the instructor does those little small flowers. Just come and be able to watch their kids start out with some rebar and that little leaf and weld it together and have to form it and paint it and to see it being created (Deborah, Line #504).

And the Culinary. I would love for my daughter to go into Culinary. I love to cook. For the parents to come and their children make them a meal and let them try it. Make a dessert and let them try it, you know. Get the parents to see that the children are doing these things and they are learning these things and this is the result that comes out of it (Deborah, Line #508).

Denise indicated that she had never attended an Open House at the career center or received an invitation to attend.

I think Open House would be a good idea, if they had an Open House. I don't know. But, you know, that couldn't hurt (Denise, Line #364).

Teacher perceptions regarding activities for parents and other adults. Kimberly recommended a program for parents.

Well, I think number one it has to start at home. The parents need to be educated on the different programs and what careers are around here. What do those careers pay? You've got a lot of them like Cosmetology for instance. When

you pass your state boards, you can graduate from high school, and you basically have a job. You can go to a beauty shop or do your own. So, I guess parents. Another thing would be the guidance counselors at the high schools (Kimberly, Line #303).

It definitely needs to be done for parents. You need to have meetings, like evening meetings with parents for when it is more convenient for them after work to educate them on what is available and where can they go with this. Okay, so they get a certificate. Then what (Kimberly, Line #362).

Administrator perceptions regarding activities for parents and other adults.

Administrators described activities for parents to orient them to programs provided at the career center.

I haven't heard anything about it, but we do that from the elementary to the high school. We bring the parents in and the students in the summer of the eighth-graders. Why not take those parents up there (to the career center) before the eighth-graders become ninth-graders and go up there as ninth-graders (Wilma, Line #372).

I know that when we do those advisory board meetings up there, the Culinary Arts kids, they prepare a meal. They could prepare not necessarily a meal for the parents but perhaps a snack table so the kids there could talk about it (Wilma, Line #376).

Focus on counselors. Examples of participant responses by participant groups are provided below.

Student perceptions regarding focus on counselors. Vickie and Terry indicated that high school counselors should encourage students to enroll in non-traditional classes at the career center.

When people ask about it (non-traditional programs), they should just encourage them to not worry about it and take what they want (Vickie, Line #450).

I really don't know what the counselors can do except talk to the students more and get them to be interactive with each other in the classes. Stuff like that (Terry, Line #488).

Teacher perceptions regarding focus on counselors. When asked if guidance

counselors receive professional development about non-traditional careers, Rebecca responded,

To my knowledge, no. I don't know. It would be good (Rebecca, Line #455).

Thomas suggested that guidance counselors be more visible at the career center.

Every now and then one will come along like our principal, my sister. I may be a little bit prejudiced. Someone who really cares about these kids, but I understand that they've got a job to do too, and they are pressed for time. Someone needs to explain these trades and do a little bit of research to see what these kids are doing in the trades and how much money they are making. There's nothing wrong with going to college, I know that; but there's nothing wrong with coming out here. They can do both. A lot of people do both (Thomas, Line #181).

Kimberly suggested a program for counselors to develop their understanding of non-traditional programs, citing that some girls want to be in non-traditional programs.

To get them to better understand the programs that we offer here. And that Welding is not just for ...because I think now as it is, the girls who sign up for Welding, Masonry, and Building Trades, they sign up; they want to be there (Kimberly, Line #307).

Administrator perceptions regarding focus on counselors. The career center principal cited the importance of connecting counselors with the career center through a schedule of visits to the center.

You need a day when you invite your counselors up here for lunch. You know you have your counselors. We did send them a plant this year from our horticulture program, and we told them this plant was a reminder of our horticulture program because we wanted to recruit students for that program. How important it is. To think about how we need students in that program right now. We're trying to get it built up. So, we did that. But we need to have them up here at least once or twice a year and walk through the classes. They don't get to do that. They don't get to see that (Margaret, Line #453).

Other administrators agreed, citing the counselors as key to a plan focused on improving non-traditional enrollment but also including others in the school division as part of a professional team.

I think we have to make it a good experience for those non-traditional students, and our staff has to be open, trained if needed, to be embracing non-traditional students. I think the counselors are the key. If they encourage that, then it is going to be a lot more than if they discourage it. Any educator, your English teacher, your math teacher, can give a word of encouragement along those lines. Say to that girl in Welding, I know that you can go to Virginia Beach and make a lot of money. Just anything to bolster that kid and make them feel good about what they have done. The adults in the education system can all contribute (Mitchell, Line #357).

Counselor perceptions regarding focus on counselors. Amanda offered her perception, as the job placement director/counselor at the career center, about the focus on counselors. She reiterated that exposure to careers is a critical strategy that counselors can use for helping students make choices about non-traditional programs at the career center. However, her position regarding counselors was that family influence is more powerful than what counselors are able to do to influence non-traditional enrollment.

Exposure. I've said all along that we're starting too late. This thing. Basically everything. We're starting too late. We're focused on things that they don't understand. They don't know what Welding is. Exposing them to what Welding is and what you can do with Welding is one thing. When we see a non-traditional, not all the time, but 50 percent of the time, that non-traditional has been involved in the family in that field in some way. They've worked with their daddy. My dad is a welder. The little girl, her daddy is a welder, so she wanted to do it. Her brother took it. They've been exposed to it. They know what it is and heard them say how much they like it. We did that with the horticulture. When we started this program, we went out, the teachers and I, and we went to the high school and talked to them and had seeds and tried to talk with them about how cool it is to grow stuff. What you will be doing here and the end product and the success story. When you're sitting at the supper table, and they say, man, I had the best day. And the next week you hear someone say, and we did this in Welding. I'll never win that war. They will expose those kids to much more than I ever can in 15 to 20 minutes with them and begging them to come spend time with me (Amanda, Line #348).

Instructional strategies and programs. Examples of participant responses by participant groups are provided below. Teachers, counselors and administrators suggested a variety of strategies in this category to remove barriers and improve non-traditional

enrollment at the career center.

Teacher perceptions regarding instructional strategies and programs. Rebecca suggested adding programs to what the career center is currently offering to provide more non-traditional enrollment options.

I would like to see some other programs added. I think plumbing would be an awesome class. I think electricity would be good to add, just because plumbers and electricians are getting old, and there aren't a lot of people going into those areas and they need to be tapped into (Rebecca, Line #507).

Her strategy included hiring retired plumbers and electricians.

Kimberly suggested a strategy which would utilize a recruiter. Roger, the Masonry instructor, had previously supported a recruiting team of representatives from the career center. Kimberly's strategy differed in that it involved only one recruiter who focused on CTE.

And I think another strategy, this is just something that I thought of myself, at some point in my life it might be something that I want to do as I get older, is to have a recruiter that actually goes to the high schools to explain the programs to the students. So, you come in to me and say, Okay, Miss Kimberly, I'm interested in Welding; and I can tell you what jobs are here and what you can make and why you want to do this, but have a recruiter that would actually work in the school system to help the CTE program (Kimberly, Line #343).

And be the intersection between the student that is getting ready to graduate and a company or college, being the go-between, I guess to the parents to make sure they get into the right field of study. This is just a big dream (Kimberly, Line #382).

Counselor perceptions regarding instructional strategies and programs. Julie acknowledged that conversations about job markets needs are a strategy.

To be the person sitting in this seat or in the seat at the career center and to be able to talk open and candid about what the market requires. We are no longer looking for four-year educated people. We need people with the trades, and I really wish that we could do plumbing. You have to be educated on what the market needs, and I think people having that conversation is helpful (Julie, Line #224).

One of the boys told me that he wants to be a nurse, and I told him that I absolutely

want him to be a nurse because for one, your opportunity is greater. We need male nurses. How many male patients do we have? Two, when you're going into a non-traditional field, your opportunity for scholarship goes up. People are going to invest in you because we need that. I have no problems with talking to these kids about it and wanting them to make those choices (Julie, Line #286).

Administrator perceptions regarding instructional strategies and programs. To promote non-traditional enrollment, one of the administrators suggested a recruiting strategy involving presentations at the high schools by career center instructors and their students.

I think it would be beneficial to bring a few of the instructors and students. They could alternate (Wilma, Line #399).

To talk about their programs, especially the non-traditional programs (Wilma, Line #403).

The principal at High School #3 suggested programs that tie to student interests.

We gotta tie the programs that we have into the interests that the students have already. So, you take examples of things that students are doing now outside of school that are of interest to them and tie that into what they've doing at the career and technology center (George, Line #402).

He also suggested a proactive approach as a strategy.

The principals and the technology center need to look at what is available here for students in the career and technical field. Something that is getting ready to happen. Hasn't happened yet. Be proactive and prepare for it (George, Line #479).

The principal of the career center described how a non-traditional instructor at the career center had impacted student enrollment in the Criminal Justice program.

Having a female instructor, I'm sure helps. When you have a male instructor, it makes a difference for the girls taking that. Females can relate to the instructor, and she is very good at what she does. She has such a caring nature. She takes those kids in like she's a mother hen, and she pulls them right in and she cares so much about them, and she wants to know what they are doing on a daily basis and how they are feeling, and she helps them. She mothers those students. She really does. I think that helps as far as the program (Margaret, Line #43).

Another administrator agreed.

I think it is an easier sell for your program, for sure. When girls see that she is doing this for a living, then I can do this too. So, as far as selling the program, I think it makes it a lot easier. Without question (Robert, Line #347).

Summary

Chapter Four focused on findings from data collected through interviews with 19 participants regarding their perceptions about non-traditional enrollment at Coalfield County Career Center. The participants represented five groups of stakeholders: students, parents, teachers, counselors and administrators. All participants had a connection to the career center. The interviews revealed areas of commonality, but primarily the expressed views were unique to the relationship that each group of participants had with the career center. Participant views are included in Chapter Four in the form of direct quotes.

Identified themes include 1) internal barriers to non-traditional enrollment at the career center, 2) external barriers to non-traditional enrollment at the career center, and 3) strategies to remove barriers and improve non-traditional enrollment at the career center. Themes addressed the study's research questions. Organization of the data enables readers of the study to readily ascertain the perceptions of specific groups of participants within each theme.

As data was coded by the researcher, it became apparent early in the analysis process that lack of communication was a common thread running through each interview and a concern that all participants suggested improving. Each group's perceptions were unique to their relationship to the career center as students, parents, teachers, counselors or administrators.

At the time of the interviews the students were completing their first CTE program. Those programs included Criminal Justice, Cosmetology, Welding and Veterinary Assistant. Each student was enrolled in a program that was traditional for his or her gender. The students

explained their perceptions of barriers to non-traditional enrollment and suggested strategies for overcoming those barriers. Identified barriers included but were not limited to peer pressure and influence, lack of information about programs at the career center, high school counselors' perception of programs at the career center, and high school students' perceptions of students who attended the career center.

An important note to the reader of this research is that student participants in this study had a maximum of two years' experience at the career center while administrators had spent their entire professional lives in the school division and were aware of the career center's programs and accomplishments. In some instances, administrators' length of employment in the division represented over 35 years of experience. Of note, also, is the lack of knowledge that parents interviewed in this research had about their children's experiences at the career center. They acknowledged that they had not attended events at the career center and had received no information or invitations that would encourage them to visit the center. Consequently, they had limited knowledge about what was offered at the career center.

Based on their experiences and perceptions, participants provided suggestions and strategies to benefit enrollment in non-traditional programs at the career center. Suggestions included but were not limited to stronger communication with parents about programs at the career center, advertising career center accomplishments as a means of attracting more students, highlighting non-traditional careers through billboards and posters, and inviting non-traditional speakers and presenters to events at the career center. Results of the interviews will be shared with the school division for the purpose of providing awareness about barriers and for highlighting strategies to improve non-traditional enrollment by gender at the career center.

Chapter Five of this study will present a summary of the study along with conclusions, a discussion section, and recommendations based on collected data and the researcher's observations. Also included will be recommendations for further research.

Chapter Five

Discussion of Results, Conclusions, and Recommendations

Chapter Five presents a summary of the study, discussion of findings and conclusions, recommendations for practice, recommendations for future research, and concluding remarks.

Summary of the Study

This study addressed the enrollment of male and female students in non-traditional Career and Technical Education (CTE) classes at Coalfield County School Division's Career and Technology Center. It examined data collected from 19 participants, including students, parents, teachers, counselors and administrators in the school division. Perceptions of those participants regarding non-traditional enrollment at the career center provided information about barriers to non-traditional enrollment both within the school division and outside the school division. Participants also shared their perspectives about strategies to remove those barriers and improve enrollment in programs that are non-traditional by gender.

Problem Statement

Since the beginning of Coalfield County Career Center, male and female students have enrolled in CTE classes and programs traditional for their gender. Consequently, female students rarely enrolled in traditionally male-dominated classes such as Welding and Building Construction, and male enrollment in traditionally female-dominated classes such as Nursing and Cosmetology has also been low (VDOE, 2018). Low non-traditional enrollments in these programs continued throughout the years at the career center, even though the Commonwealth of Virginia has consistently encouraged school divisions to increase non-traditional enrollments, and the Carl D. Perkins Acts prescribed increased non-traditional enrollment.

Purpose of the Study

Despite the need to identify the root causes of these low enrollments, no study had been undertaken to determine the barriers that exist to increasing non-traditional enrollment in CTE courses offered at Coalfield County Career Center and to identify strategies for overcoming those barriers. The purpose of this study was to collect data regarding participants' perceptions about barriers that prevent students from taking non-traditional CTE courses and programs as well as strategies for overcoming those barriers. To collect the data, the researcher personally and individually interviewed five groups of individuals. Coalfield County Career Center students, teachers, and parents were interviewed. In addition, principals and guidance counselors from the career center and the three county high schools were interviewed. And finally, Coalfield County Schools CTE director was interviewed.

An analysis of the data clarified barriers both within the school division and outside the division that contribute to student enrollment at the career center in non-traditional programs and provided potential strategies for removing those barriers and improving student enrollment in programs that are non-traditional for their gender. The data also provided information to support planning efforts for the career center in the form of program awareness initiatives for students, parents, teachers, counselors and administrators and professional development for school division faculty.

Research Questions

The researcher analyzed participant responses to the following research questions and sub-questions:

Question #1: What are the perceptions of selected stakeholders regarding why male and female students rarely enroll in CTE classes and programs that are non-traditional by gender in Coalfield County Career Center?

Sub-question: What barriers do students, parents, teachers, administrators and counselors think exist that prevent a majority of students at the career center from enrolling in non-traditional courses for their gender?

Question #2: What are the perceptions of selected stakeholders regarding how enrollments can be improved by gender in non-traditional CTE classes and programs at Coalfield County Career Center?

Sub-question: What strategies do students, parents, teachers, administrators and counselors recommend for overcoming the barriers that cause low enrollment?

Methodology

The researcher used a basic qualitative methodology for this study. Interview questions were semi-structured and comprised the major source of data collection. Prior to each interview participants completed a Demographic Information Form, which was created by the researcher. The purpose of the form was to provide contextual information about each participant and potential clarification regarding CTE experiences and backgrounds that may have influenced participant responses during the interview process. Nineteen participants were interviewed, and each interview was recorded with participant permission, transcribed, and coded. Themes emerged from the coded data, which addressed the research questions.

Key Findings

Key findings in this study were found in three themes that emerged during interviews with students, parents, teachers, counselors and administrators regarding perceived influences on non-traditional enrollment at the career center by gender and are restated below:

- Barriers exist *within* the school division that inhibit student enrollment in CTE courses and programs at the career center that are non-traditional by gender. The barriers include (1) career center stigma, (2) peer influence, pressures and relationships, (3) traditional enrollment expectations, (4) high school schedules and graduation requirements, (5) lack of information, and (6) student characteristics.
- Barriers also exist *outside* the school division that inhibit student enrollment in CTE courses and programs at the career center that are non-traditional by gender. Those barriers include (1) community and public perception of the career center, (2) influences on course selection, (3) traditional enrollment expectations, (4) employment and salaries, (5) family responsibilities and obligations, and (6) family perspectives and influences.
- Strategies were identified by participants for removing barriers and improving non-traditional enrollment by gender at the career center. Strategies included (1) improved lines of communication and information sharing, (2) inclusion of activities for students to promote awareness about non-traditional careers and opportunities, (3) activities for parents and other adults to create awareness of non-traditional careers and opportunities, (4) focus on counselors, and (5) instructional strategies and programs.
- A systemic lack of communication limits the flow of information within and from the career center. Lack of communication exists between the career center and parents, between the career center and the high schools, and between the career center and

students. Without reservation, each group of participants described examples of not being included in a chain of information about CTE programs and activities at the career center.

Discussion of Findings

Barriers that Inhibit Student Enrollment in Non-traditional CTE Programs

Three themes emerged during analysis of the data collected during this study about the perceptions of selected stakeholders regarding enrollment at the career center in CTE programs that are non-traditional by gender. Two of the themes involved barriers that inhibit non-traditional enrollment: (1) barriers that exist *within* the school division and (2) barriers that exist *outside* the school division. The third theme identified participants' perceptions of strategies to remove barriers and improve enrollment in programs at the career center that are non-traditional by gender.

Barriers within the school division. Participants identified six barriers within the school division that they felt inhibited student enrollment in CTE programs at the career center that are non-traditional by gender: (a) career center stigma, (b) peer influence, (c) traditional enrollment expectations, (d) high school schedules and graduation requirement, (e) lack of information, and (g) student characteristics. Data collected from the interviews revealed that each of these barriers influence student decisions.

Career center stigma. The stigma attached to the career center is real, persistent and systemic. The center is perceived by some within the division as a training center for students who do not want to go to high school, who are not strong academically and have no plans to go to college or enroll in post-secondary education. Students interviewed in this study did not fit that mold. Two students indicated that they were going to college, and another described his

plan to attend a nationally-recognized 18-month training program after graduation that would strengthen his credentials and ensure employment. The fourth student was also considering post-secondary options. The perception that the career center is a training school is accurate, but the career center is not a barrier to further education. Instead, it strengthens the probability that students will enroll in post-secondary education.

Peer influence. Peer influence is powerful and plays a large role in determining if students decide to enroll in non-traditional programs. Students do not want to be seen as different, they do not want to be alone or be the only non-traditional student in a class of 19 traditional students. Peer influence is a barrier.

The barriers are mostly the students. We make it hard for other people. We don't look at why they are doing it. We judge them, and we don't know their story. We just automatically assume that it is attention-seeking, or they are doing it for the guys or that it is something stupid. We're kids and that's how we do, and it's sad. It really is (Brenda, Line #313).

Traditional enrollment expectations. Traditional expectations are gender-related. Female students are expected to enroll in programs at the career center that align with perceptions of work that are traditional in the region. Likewise, male students are expected to enroll in programs that are associated with manliness, hard work and getting dirty. Bandura explained that ideas about gender are internalized early in children and cause students to make choices that are considered *appropriate* (Bandura, 1986; Bussey & Bandura, 1999; Gottfredson, 1996). A student who enrolls in a non-traditional program at the career center increases the possibility of being the object of inappropriate remarks, isolation and criticism.

Because they are afraid that they will be made fun of. They may have an interest in that area, but they kind of push it aside to take a more masculine class. To take more of a boy class or a girl class (Rebecca, Line #363).

Local perceptions provided another explanation about non-traditional enrollment

Number one, they are non-traditional because it is not what we like. Females just don't like laying brick all day. It's not what God made us out to do. It's not what female personality traits do (Amanda, Line #250).

That comment introduced a religious perspective. Without guidance and support within the school division, students who want to pursue non-traditional programs do not have a support system. The perception that “God made us to do certain things” aligns with the description in Social Cognitive Career Theory of a person’s socially constructed world (Lent, Brown & Hackett, 2002). Traditional expectations combined with religious perspectives inhibit enrollment in non-traditional programs.

High school schedules and graduation requirements. In order to attend classes at the career center, students must successfully complete academic requirements for graduation at their high schools. Those requirements are a potential barrier for those students who want to attend but may not be strong academically. Scheduling also affects non-traditional enrollment. Certain classes at the career center fill quickly. Twenty is the maximum number of students allowed per class. If a student cannot get into the class that he or she wants, a problem arises because the student’s high school plan may not provide a second chance to enroll. Career center classes are two years in length, and a student who is a junior will not have another opportunity to select a CTE program.

Lack of information. Lack of information influences decisions about non-traditional enrollment. Students do not receive information at their high schools about careers, salaries, and job preparation. While some students like Marcus, a Welding student, grew up with the expectation that he would go to the career center and enroll in Welding, other students who do not know about the programs at the career center decide not to attend or attend without any background information to help them choose a program. They rely on the job placement director

to select a program for them. Consequently, they may miss the opportunity to enroll in a non-traditional program which could provide them with future security.

Parents' descriptions of their lack of understanding about career center programs were the most disturbing. Parents appeared to have little or no knowledge about career center programs, schedules, and special events. This information came from parents whose children were successful and high achieving in their career center programs. For the center to improve its image, it must create effective channels of timely communication.

Student characteristics. Student characteristics influence decisions to enroll in non-traditional programs. In some classes, students get dirty because of the equipment they use in the class, such as Welding. That may not appeal to female students. In addition, there may be physical limitations, such as in Masonry where the weight of the materials is a struggle for a small student.

An interesting phenomenon exists among students regarding their perceptions of other students in non-traditional programs. Female students enrolled in non-traditional programs are more accepted than male students in non-traditional programs. In turn, male students are less supportive of other male students in non-traditional programs, especially if they are part of the “*good old boys, the ones who are the farm boys*” (Jennifer, Line #265).

Other characteristics inhibit non-traditional enrollment including student immaturity, lack of capabilities and lack of self-control. Students may be removed from or not allowed to enroll in classes that involve dangerous equipment and chemicals if they do not exhibit the level of responsibility required in the class. Safety is a concern at the career center in every class, and students must be responsible and mature.

Barriers outside the school division. Participants identified six barriers *outside* the school division that inhibit enrollment in CTE programs at the career center that are non-traditional by gender: (a) perception of career center, (b) influences on course selections, (c) traditional enrollment expectations, (d) employment and salaries, (e) family responsibilities, and (f) family perspectives and influences.

Perception of career center. The community perception of the career center is based on lack of understanding and a perception that enrollment limits students who go to school there. Some parents refuse to allow their children to attend, believing that career center students are troublemakers and people whose education will end when they graduate from high school.

The perception of the career center as a place where students' educational options are limited is a persistent barrier. While that barrier exists, student enrollment in non-traditional programs will be negatively affected. The challenge will be to garner community support for career center programs as viable preparation for college and the work force.

Influences on course selections. Friends outside the school division influence course selections at the career center, especially if the friends' area of employment appears glamorous, potentially dangerous or involves weapons. An example includes friends who are in law enforcement, particularly if they are available to answer questions and provide their perspectives about the law enforcement field, making them high influential in career decision-making, particularly to an impressionable student who is 15 to 18-years-old.

Traditional enrollment expectations. Students who grow up in families where there is an emphasis on hands-on work, such as Welding or Building Construction, may experience the traditional enrollment expectation described by one of the students in this study. The student acknowledged that the way he was brought up influenced his decision to enroll in Welding at the

career center. He described his early years. *“I grew up doing things hands-on with my dad, and that got me into doing more hands-on things. Welding has always interested me, so I decided to do that (Marcus, Line #231).*

Local perceptions and traditional expectations outside the school division influence students’ program choices. The perception locally is that women cook, so the expectation is that females will enroll in Culinary Arts. Parents are not aware that Culinary Arts is non-traditional for girls, and counselors do not share that information with parents or students. Consequently, enrollment in Culinary Arts has historically been dominated by females.

The rural setting of the school division is an influence. Local traditions and cultural expectations present barriers to student enrollment in programs that are non-traditional by gender. In addition, local attitudes dictate that females are not suited for certain jobs. Members of the community expressed surprise when the Masonry instructor informed them about the number of females enrolled in his program. Local traditions influence course selection and inhibit non-traditional enrollment for both genders, and local attitudes are strong regarding the programs that students select at the career center. Traditional expectations from the community about career center enrollment impact non-traditional enrollment.

Employment and salaries. The area offers limited employment opportunities, and salaries do not compare well with those in other parts of the state. Students who independently gathered information about salaries from the Internet were aware that local salaries were not what they had expected to earn. For example, a student in Criminal Justice described his plan to become a game warden, but he re-evaluated when he saw the starting salary of \$35,000, which he regarded as too low. Student plans change as a result of information about low salaries and limited employment opportunities. However, if a student is willing to move out of the region

after completing a program, the student can expect to earn a higher salary and anticipate better job opportunities.

Family responsibilities and obligations. Program choices at the career center are influenced by family obligations. Students who have responsibilities in their homes for the care of family members expressed an obligation to remain in the area and select a program that will not require years to complete after graduation from high school and place financial burden on the family. An example was in a student in the Veterinary Assistant program who described her family obligations and how they have impacted her career decisions. She had a clear understanding of programs offered at the career center and the wide range of career opportunities. However, family obligations were her priority. She made her program choice based on her perception of her responsibilities and obligations. She chose a traditional program for her gender, which allowed her to remain in the region, work for a veterinary service, and meet her family obligations and responsibilities.

Family perspectives and influences. Barriers within family structures inhibit enrollment in non-traditional programs, including what a student described as “full-out Christians and full-out God-all-the-time” parents who place restrictions on their children based on religious convictions (Brenda, Line #321). From a parent perspective, Deborah indicated that her husband “*wasn’t real tickled with him (son) going into like being an officer. Now the game warden part, he would be okay with*” (Deborah, Line #101).

In the school division and county, a variety of family structures exist, which impacts the level of influence exerted on students’ career center choices. Some families appear to have no influence, especially when students make choices without apparent parent advice. Others, as

Brenda described, provide parameters that define whether students will attend the career center and what programs they will select if they do attend.

Families influence student decisions about career choices with expectations that both males and females will follow traditional paths. While counselors in this study acknowledged that society is changing its perspectives about gender roles, they also expressed that southwest Virginia is slower to make changes than other areas of the state.

A problem in the region is the lack of parental role models and an absence of student goals. Some students have no goals. Instead, they aspire to be on welfare like their parents, which is a form of parental influence. For some students, the issue of earning money is not a concern. Family structures exist in various forms in the county and influence students both negatively and positively, impacting student enrollment at the career center and decisions about non-traditional career paths.

Strategies to remove barriers and improve enrollment. Participants identified five strategies for removing barriers and improving student enrollment in CTE programs at the career center that are non-traditional by gender: (a) communication, (b) activities for students, (c) activities for parents and other adults, (d) focus on counselors, and (e) instructional strategies and programs.

Communication. A variety of strategies emerged in the findings to improve communication. Conversations with parents revealed their need to receive frequent updates and information about career center programs and events. The indicated that students should not be expected to share information with their parents. The faulty expectation by the career center that students would update their parents resulted in uninformed parents. Frequent emails and mailings would give parents a document, something to reference, which a parent cited as critical

because of her busy schedule. Beginning with seventh-grade, parents need information about career center programs so that they can help their children select programs when they are completing their high school plan, which is done in eighth grade. An Open House at the career center for seventh-grade students and their parents would provide the opportunity to tour the center and help students and parents understand non-traditional programs.

A career center Facebook page was created for parents to access information about career center activities and accomplishments. The community needs information about career center successes and accomplishments to encourage more parents to send their children to the career center. Programs for adults that encourage the development of skills that can be used in and around the home and for the rest of their lives create a connection between the career center and members of the community.

Counselors suggested career center tours for parents to provide them with information about non-traditional programs and job opportunities in the region. Their message was that students can do anything they want to do. It was time to discard stereotypes. Counselors emphasized that communication should include the community as a strategy for encouraging change, noting that if the community is to survive, it must be open to change.

Counselors also suggested that career center teachers be present at the high school during registration to answer questions about non-traditional programs. They supported advertising the career center through posters displayed in the schools describing non-traditional careers and including salaries. Counselors also described the importance of communication that emphasizes the employability of students when they graduate from high school. Career center students graduate with skills, and they are prepared to go to college. Teachers at one of the high schools perceived a change in the image of the career center. The school counselor suggested that the

change should be communicated to parents, students and the community to improve non-traditional enrollment and acceptance of the career center.

The principal of High School #3 agreed that advertising is an effective way to inform parents and students about non-traditional programs. He suggested using social media such as Face Book to inform parents and students about career center programs. He also suggested using the school public address system to remind students about upcoming events at the career center.

Activities for students. Students provided a wide range of strategies to remove barriers and improve non-traditional enrollment. They supported continuation of the eighth-grade tour, adding that it influences student attitudes about the career center, including enrollment in non-traditional programs. A female student suggested that teachers at the career center should welcome girls and state that girls are wanted in the classes, specifically encouraging girls to enroll in non-traditional classes.

Other strategies to include and inform students include continuation of the 21st Century Community Learning Center after-school program, creating a partnership between the career center and the school division's middle school. Through that grant, students were introduced to programs at the career center and learned by doing as they were taught skills in the after-school program. Students described Skills USA and its competitions and scholarship programs as another strategy for supporting students in their pursuit of careers through funding and jobs, including awareness of non-traditional careers.

Additional strategies included job shadowing to give students the opportunity to learn about careers through on-the-job observations, and the annual Career Fair at the career center, which is an opportunity for high school students to meet local business representatives, some of whom are non-traditional employees.

Counselors supported continuation of the eighth-grade tour and the annual Career Fair as strategies. They also described job shadowing in Criminal Justice, which is a non-traditional program for females but has an enrollment of 50 percent female. The instructor for the program is female.

Administrators suggested several activities for students, including the annual eighth-grade tour of the career center. They, too, supported participation in Skills USA as a strategy for recognizing student accomplishments. Students at the career center have a history of success in Skills USA competitions and have won numerous national awards, which provided scholarships and jobs. Administrators identified non-traditional speakers at career center and at high school programs as a strategy for improving non-traditional enrollment. They agreed that students need to see and hear non-traditional presenters explain their experiences in the field and describe how they prepared for their career choices.

Activities for parents and other adults. Suggestions for activities for parents and other adults included programs and classes at the career center to help adults improve their skills. The opportunity to interact with students and instructors in a laboratory setting at the career center has the potential to change attitudes and opinions about the center. Parents in this study indicated that they had never attended an Open House at the career center or received an invitation to attend. They agreed, however, that an Open House would give adults an opportunity to observe the wide range of skills that are taught at the center.

The Culinary Arts instructor recommended providing a program for parents and other adults in the community that educates them about career center program options, salary information, descriptions of state board exams, and information concerning what career center students can do when they graduate from high school with their CTE program completions.

Programs and meetings for parents should be held in the evenings when it is convenient for parents to meet.

Focus on counselors. Students suggested that high school counselors encourage students to enroll in non-traditional programs at the career center. They also suggested that counselors explain to students that they should enroll in programs that are their choice and not be influenced by reactions and pressures from others. Students encouraged conversations between counselors and students and between students and other students to support non-traditional enrollment.

Instructors agreed that counselors should be more visible at the career center as a way to show support and to learn more about the classes that are taught at the career center and the skills that are developed. They want counselors to explain to students that they can attend the career center *and* go to college. Instructors noted that a student who completes a program at the career center and graduates from high school is prepared to enter the work force *and* go to college.

Administrators described counselors as key to a plan for improving non-traditional enrollment. They also suggested that all faculty members at the high schools should be part of a division-wide team to improve non-traditional enrollment.

The counselor/job placement director at the career center agreed with the strategy of focusing on counselors. She supported counselors' critical responsibility for exposing students to careers in order to help students make choices about non-traditional programs and careers. She noted, however, that counselors do not have the same influence as families and that families dramatically overshadow what counselors are able to offer. She explained that counselors have limited time to interact with students, which she described as 15 to 20-minute meetings.

Instructional strategies and programs. Instructors suggested that the career center add more programs to what it is currently offering as a strategy for providing more non-traditional

enrollment options. One of the instructors suggested adding plumbing and electricity classes. She explained her perspective.

I would like to see some other programs added. I think plumbing would be an awesome class. I think electricity would be good to add, just because plumbers and electricians are getting old, and there aren't a lot of people going into those areas and they need to be tapped into (Rebecca, Line #507).

Another instructor suggested hiring a recruiter to work in the school system to provide information to students about careers, salaries, and job locations. The goal would be to help the CTE program and promote non-traditional enrollment

And be the intersection between the student that is getting ready to graduate and a company or college, being the go-between, I guess to the parents to make sure they get into the right field of study. This is just a big dream (Kimberly, Line #382).

A high school counselor described how conversations with students about job market needs are a strategy to improve non-traditional enrollment. She acknowledged that her position as a counselor in the school division, along with her counterparts at the other two high schools in the division and the jobs placement director/counselor at the career center, are critical components in the decision-making process that students experience. She explained the need to stay informed about job market needs and continue a dialogue with students and parents to encourage students to enroll in non-traditional programs.

Administrators suggested a series of presentations at the high school by career center instructors and their students to encourage non-traditional enrollment at the career center. The principal at High School #3 agreed and suggested presentations that tie to student interests.

The researcher agrees with the participants' comments. Their suggestions are practical and thoughtful and reflect a willingness to be part of a team effort to improve non-traditional enrollment. In addition, the suggestions are student and community oriented.

Conclusions

This research aligned strongly with Social Cognitive Career Theory, the theoretical framework for this study, and lead to the following conclusions. Conclusions are based on the findings of the study and information shared by participants regarding their experiences at the career center and their perceptions about barriers to non-traditional enrollment. Students face a variety of influences that discourage them from enrolling in the career center and even more from enrolling in programs that are non-traditional by gender. Barriers exist both within and outside the school division.

A stigma has historically been attached to attending the career center and persists with the result that some students who desire to pursue career and technical education jobs refuse to attend the center. The stigma was perceived by students, parents, teachers, counselors and administrators. An essential task for the school division and the career center is incorporation of programs at the school and division level which focus on removing the stigma. Since the stigma is persistent and systemic, any plan to address it will require time, creativity and commitment. The stigma of attending the career center evolved in part from a perception that students attend the center in order to avoid academics at their high schools.

The findings of this study, however, revealed that most students who are enrolled in the center plan to work after graduation in the area of their selected two-year programs. Career center students also expect to go to college, and many are prepared to pursue a four-year degree or to complete a certificate program, which will enhance the skills they acquired at the career center. Peer reactions and influences are powerful determiners of student enrollment at the career center, potentially limiting students' options for successful careers and job security.

Additional conclusions about barriers *within* the school division are described below.

1. Traditional expectations, including gender roles, inhibit students' program choices at the career center, lessening the possibility of students enrolling in non-traditional programs that provide potential for job security and professional success.
2. High school schedules complicate student attendance at the career center because academic requirements must be met for students to enroll in and stay at the career center. Likewise, misunderstandings persist about diploma requirements, which complicate student schedules and inhibit enrollment at the career center. Students elect to pursue an advanced diploma without understanding that it is the rigor of their high school courses, not the kind of diploma, that supports success in post-secondary education. Students are well advised to select a standard diploma, which will enable them to enroll in and complete career center programs, graduate from high school with skills that make them work force ready and be prepared to go to college.
3. Lack of communication limits parent support for the career center, information that students receive about careers and job preparation, and student access to programs to build work- place readiness skills. Communication can be enhanced by acknowledging it as a problem that underlies many of the barriers to non-traditional enrollment at the career center and developing a long-term plan to address it.
4. A variety of student characteristics present barriers to student success at the career center, including gender issues, physical requirements, student immaturity, low self-image and lack of self-discipline.

Barriers *outside* the school division influence students' decisions to enroll in non-traditional programs at the career center.

1. A perception persists in the community that the career center is a place for low-achieving students to escape the academic demands at the high school, despite the fact that most community members are not aware of what goes on at the center. Parents perceive the career center as limiting and a blemish on a student's resume.
2. Students experience pressure and influences from friends who are outside the school division to enroll in programs at the career center because those friends completed the same programs.
3. Traditional enrollment expectations influence students to enroll in programs at the career center based on what they have observed in their homes regarding gender expectations, rural perceptions of male and female careers, and local attitudes.
4. Employment opportunities locally are limited for students in jobs that are non-traditional for their gender, and salaries are not competitive with what students can expect to make in other parts of the state, particularly northern and eastern Virginia. Opportunities and salaries improve if students are willing to relocate.
5. Family responsibilities and obligations limit student options for enrollment in career center programs, consideration of programs that require post-secondary education and training, and relocation to take advantage of opportunities.

6. Family perspectives and influences include strict religious views that limit student enrollment in non-traditional programs, perceptions that a career choice would entail personal risk, and role modeling within the family.

Barriers can be removed, and enrollment can be improved through the following strategies:

1. Communication must become a priority between students, between the career center and parents, and between the school division and the community to raise awareness of opportunities in non-traditional careers. This can be done through the use of social media to share information and highlight student accomplishments; frequent and targeted communications with parents through email and hard copies; Open House events for students, parents, school division employees, the community and business leaders; programs and presentations that emphasize non-traditional careers beginning in the primary grades presented by non-traditional presenters; and career center tours and professional development that emphasize non-traditional careers for all employees of the school division.
2. To improve student enrollment in non-traditional programs at the career center by gender, the following activities for students should be included: (1) continue the eighth-grade tour with an emphasis on highlighting non-traditional programs, (2) apply for additional 21st Century Community Learning Center grants to enable all middle-school students to participate in after-school programs at the career center, (3) promote Skills USA membership for all students at the career center, (4) provide programs and

presentations about non-traditional careers presented by non-traditional presenters, and (5) encourage job shadowing to introduce students to non-traditional careers.

3. Activities that focus on parents and other adults in the community should encourage parents to visit the career center to participate in programs, provide opportunities to observe students working in shops and classrooms, and schedule parent meetings after work hours that feature programs about non-traditional careers and include salary information and education requirements.
4. Ongoing professional development for counselors will help ensure an understanding of programs offered at the career center with a focus on programs that are non-traditional by gender, including current and projected work force needs.
5. With impending retirements in selected skill areas such as plumbing and electricity, expansion of program opportunities has the potential to encourage students to attend the career center. The school division and the career center need to provide programs that are tied to student interests outside the school and provide students with opportunities to enhance their skills by attending the career center.

Recommendations

Recommendations for Practice

The following recommendations for practice are provided to address identified barriers to student enrollment in CTE programs at the career center that are non-traditional by gender and to improve enrollment.

1. Seek funding for a 21st Century Community Learning Center after-school program for middle school students to be held at the career center to introduce students to CTE skills. Base the program on a successful program at the school division's middle school.
2. Continue the eighth-grade tour but enhance presentations and descriptions in each laboratory and class to emphasize inclusion of non-traditional students.
3. Improve lines of communication with students, parents and the community by using social media and email.
4. Provide informational programs and classes at the career center for parents and other adults to be held after traditional work hours to encourage attendance and participation.
5. Increase the number of career center tours by including adults and other members of the community.
6. Employ a recruiter to work with high school students to be a conduit between the high schools and the career center to keep students informed about non-traditional career opportunities and work force needs.
7. Provide a program of career awareness beginning in the primary grades featuring presenters who are non-traditional in their jobs. Continue the program through the tenth grade to encourage non-traditional enrollment at the career center.
8. Focus on a balance of instructors at the career center to teach programs that are non-traditional for their gender, such as a female instructor for Auto Body Repair and a male instructor in Cosmetology to model non-traditional roles and encourage non-traditional enrollment.

9. Develop a job shadowing program for career center students that focuses on non-traditional careers and provides information about career opportunities, salaries, and education requirements.
10. Provide a professional development program for all counselors in the school division, elementary through high school, that connects them to the career center through invitations to observe shops and classes, seminars and training sessions about non-traditional careers and employment opportunities, and updates about new and continuing programs at the career center.
11. Provide access by all career center students to Skills USA membership and encourage participation in competitions which offer scholarships to support post-secondary education.
12. Continue Dual Enrollment program with the local community college and include additional programs to provide students with college credit to encourage enrollment in the community college to expand skills and completion of post-secondary education.

Recommendations for Further Research

The following recommendations are suggested for further research.

1. Duplicate this study in surrounding school divisions to compare data about non-traditional enrollment in other school divisions, including barriers and strategies.
2. Conduct a longitudinal qualitative study in this school division to identify persistent barriers to enrollment in non-traditional programs at the career center.

3. Conduct a study in this school division to compare post-secondary education completion of career center students with high school students who did not attend the career center.
4. Conduct a study of students who completed non-traditional programs at the career center to determine their retention in non-traditional careers.

Final Thoughts

This study provided an opportunity to hear the stories of 19 participants who candidly described their experiences at Coalfield County Career Center. The stories that were told, based on perceptions of the career center and its programs, revealed barriers *within* the school division and also *outside* the division in the community and surrounding area to student enrollment in non-traditional programs. They revealed the issues that each group of participants had experienced, including lack of communication about programs and events. The stories also emphasized the stigma that persists regarding the career center and how that stigma deters students from enrolling in programs that could secure their futures.

The opportunity to interview participants and observe classes and shops at the career center helped me understand that good work is being done every day at the career center as students prepare for the work force and college. The career center is not an alternative to education. It is a pathway to successful careers that includes imbedded academics and specific skills development. Students who complete career center programs graduate from high school ready to go into the work force. Some will go immediately into jobs while others will expand their skills by going to college or enrolling in other training programs.

Participation in this study has increased my respect for career and technical education programs at the career center; the teachers, counselors and administrators who ensure that

students have access to high quality skills development; students who commit to non-traditional programs because they have what one parent described as “spunk;” and parents who support their children and respect the work that the career center does, frequently without access to timely information and updates. It has been a pleasure to conduct this research.

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Appendix A: Letter Seeking Permission to Conduct Study

Dear Dr. _____ (School Division Superintendent),

I am a Ph.D. candidate in Career and Technical Education at Virginia Tech, and I am conducting a qualitative research study as partial fulfillment of my doctorate degree. The title of my research project is “Perceptions of Students, Parents, Teachers, Administrators and Counselors about Student Enrollment in Career and Technical Education (CTE) Courses and Programs that are Non-traditional by Gender.”

Coalfield County Career and Technology Center has been selected as the location for my study, and the purpose of this letter is to seek your approval to conduct the study. The research involves gathering information about experiences and insights through one interview each with four CTE students at the career center, four parents of students at the career center, four CTE teachers at the center, principals of the three high schools and the career center principal, and one counselor from each high school along with the career center job placement director. The school division’s CTE director will also be included in the group of interviewees for a total of 21 participants.

I have received approval from the Institutional Review Board at Virginia Tech which aims to protect the rights and safety of human subjects participating in research.

I anticipate that data collected from the research will provide beneficial information about CTE enrollment at the career center in courses that are non-traditional by gender.

I realize that you have many commitments, and your assistance is great appreciated. I will contact you by email in the next two weeks regarding any questions that you have concerning my research and to confirm your willingness to grant approval. My contact information is _____ . I look forward to talking with you.

Sincerely,

Diane C. Tomlinson
Ph.D. Candidate
Career and Technical Education
Virginia Tech

Appendix B: Informed Consent for Adult Participants

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY **Informed Consent for Participants** **in Research Projects Involving Human Subjects**

Title of Project: Perceptions of Students, Parents, Teachers, Administrators and Counselors about Enrollment in Career and Technical Education Courses and Programs that are Non-traditional by Gender.

Investigator(s): Diane Tomlinson, Career and Technical Education, Virginia Polytechnic Institute and State University

I. Purpose of this Research Project

This study involves research for the purpose of investigating the experiences of students, parents, teachers, administrators, and counselors regarding student enrollment in non-traditional career and technical education (CTE) courses and programs at the school division's career and technical center. Data will be collected by the researcher through a one-on-one interview during which you will be asked to describe your experiences and perspectives on the above topic, and the results of the research will be incorporated into my dissertation. Twenty-one participants will be interviewed, including four students, four parents, four teachers, five administrators, and four counselors. The four student participants are high school age. The remaining participants are adults.

II. Procedures

Your participation will involve a one-on-one interview conducted by the researcher during which you will be asked to share your experiences and perspectives regarding factors associated with student enrollment in CTE courses that are non-traditional by gender.

During the interview process you will be asked questions on the following topics:

1. Your understanding and description about any barriers to student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.
2. Your ideas and suggestions for strategies to increase student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.

You will be interviewed at the school division's career and technical center or in your office or conference room at your school at a time that is convenient for you. Should you agree to participate, you will be asked to participate in a 60-minute audio-recorded interview.

III. Risks

The risks associated with your participation in this study are considered to be minimal

IV. Benefits

No promise or guarantee of benefits has been made to encourage me to participate. The anticipation is that the results of the research may have the following benefits: 1) contribute to understanding of students' perceptions regarding non-traditional career and technical education courses and program; 2) facilitate future students' enrollment in career and technical education courses and programs that are non-traditional for their gender; 3) provide the school division with information for professional development for teachers and career awareness programs for parents and students; and 4) potentially benefit other school divisions as they address enrollment issues in non-traditional career and technical education courses and programs.

V. Extent of Anonymity and Confidentiality

For the purpose of protecting each participant's identity, every participant will be assigned a pseudonym. The school division and career center will also be identified with pseudonyms. In addition, location of the school division will not be revealed in the results of the research. Data collected from participants will be done anonymously. Since the school division will not be identified by name or other identifying characteristics, no identifiers will be revealed in the written report. The researcher will make every effort to protect the identity of each participant.

The researcher alone will have access to the recorded interviews. In addition, transcripts of the interviews will be viewed only by the researcher and members of the dissertation committee. All data collected from the interviews will be stored in a locked safe.

At no time will the researcher release identifiable results of the study to anyone other than individuals working on the project without your written consent.

The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation

You will receive a \$25.00 honorarium at the time of the interview as compensation for your participation in the study.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being

asked of you without penalty.

Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject.

Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Office, at irb@vt.edu or (540) 231-4991.

IX. Subject's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____
Subject signature

Subject printed name

(Note: each subject must be provided a copy of this form. In addition, the IRB office may stamp its approval on the consent document(s) you submit and return the stamped version to you for use in consenting subjects; therefore, ensure each consent document you submit is ready to be read and signed by subjects.)

Appendix C: Parental Permission Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Perceptions of Students, Parents, Teachers, Administrators and Counselors about Enrollment in Career and Technical Education Courses and Programs that are Non-traditional by Gender.

Investigator(s): Diane Tomlinson, Career and Technical Education, Virginia Polytechnic Institute and State University

I. Purpose of this Research Project

This study involves research for the purpose of investigating the experiences of students, parents, teachers, administrators, and counselors regarding student enrollment in non-traditional career and technical education (CTE) courses and programs at the school division's career and technical center. Data will be collected by the researcher through a one-on-one interview during which you will be asked to describe your experiences and perspectives on the above topic, and the results of the research will be incorporated into my dissertation. Twenty-one participants will be interviewed, including four students, four parents, four teachers, five administrators, and four counselors. The four student participants are high school age. The remaining participants are adults.

II. Procedures

Your participation will involve a one-on-one interview conducted by the researcher during which you will be asked to share your experiences and perspectives regarding factors associated with student enrollment in CTE courses that are non-traditional by gender.

During the interview process you will be asked questions on the following topics:

1. Your understanding and description about any barriers to student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.
2. Your ideas and suggestions for strategies to increase student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.

You will be interviewed at the school division's career and technical center or in your office or conference room at your school at a time that is convenient for you. Should you agree to participate, you will be asked to participate in a 60-minute audio-recorded interview.

III. Risks

The risks associated with your participation in this study are considered to be minimal

IV. Benefits

—
No promise or guarantee of benefits has been made to encourage me to participate. The anticipation is that the results of might have the following benefits: 1) contribute to understanding of students' perceptions regarding non-traditional career and technical education courses and program; 2) facilitate future students' enrollment in career and technical education courses and programs that are non-traditional for their gender; 3) provide the school division with information for professional development for teachers and career awareness programs for parents and students; and 4) potentially benefit other school divisions as they address enrollment issues in non-traditional career and technical education courses and programs.

V. Extent of Anonymity and Confidentiality

For the purpose of protecting each participant's identity, every participant will be assigned a pseudonym. The school division and career center will also be identified with pseudonyms. In addition, location of the school division will not be revealed in the results of the research. Data collected from participants will be done anonymously. Since the school division will not be identified by name or other identifying characteristics, no identifiers will be revealed in the written report. The researcher will make every effort to protect the identity of each participant.

The researcher alone will have access to the recorded interviews. In addition, transcripts of the interviews will be viewed only by the researcher and members of the dissertation committee. All data collected from the interviews will be stored in a locked safe.

At no time will the researcher release identifiable results of the study to anyone other than individuals working on the project without your written consent.

The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation

You will receive a \$25.00 honorarium at the time of the interview as compensation for your participation in the study.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being

asked of you without penalty.

Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject.

Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Office at irb@vt.edu or (540) 231-4991.

IX. Subject's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____
Subject signature

Subject printed name

(Note: each subject must be provided a copy of this form. In addition, the IRB office may stamp its approval on the consent document(s) you submit and return the stamped version to you for use in consenting subjects; therefore, ensure each consent document you submit is ready to be read and signed by subjects.)

Appendix D: Child Assent Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Perceptions of Students, Parents, Teachers, Administrators and Counselors About Enrollment in Career and Technical Education Courses and Programs that are Non-traditional by Gender.

Investigator(s): Diane Tomlinson, Career and Technical Education, Virginia Polytechnic Institute and State University

I. Purpose of this Research Project

This study involves research for the purpose of investigating the experiences of students, parents, teachers, administrators, and counselors regarding student enrollment in non-traditional career and technical education (CTE) courses and programs at the school division's career and technical center. Data will be collected by the researcher through a one-on-one interview during which you will be asked to describe your experiences and perspectives on the above topic, and the results of the research will be incorporated into my dissertation. Twenty-one participants will be interviewed, including four students, four parents, four teachers, five administrators, and four counselors. The four student participants are high school age. The remaining participants are adults.

II. Procedures

Your participation will involve a one-on-one interview conducted by the researcher during which you will be asked to share your experiences and perspectives regarding factors associated with student enrollment in CTE courses that are non-traditional by gender.

During the interview process you will be asked questions on the following topics:

1. Your understanding and description about any barriers to student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.
2. Your ideas and suggestions for strategies to increase student enrollment in CTE courses that are non-traditional for their gender at the school division's career and technical center.

You will be interviewed at the school division's career and technical center or in your office or conference room at your school at a time that is convenient for you. Should you agree to participate, you will be asked to participate in a 60-minute audio-recorded interview.

III. Risks

The risks associated with your participation in this study are considered to be minimal

IV. Benefits

No promise or guarantee of benefits has been made to encourage me to participate. The anticipation is that the results of might have the following benefits: 1) contribute to understanding of students' perceptions regarding non-traditional career and technical education courses and program; 2) facilitate future students' enrollment in career and technical education courses and programs that are non-traditional for their gender; 3) provide the school division with information for professional development for teachers and career awareness programs for parents and students; and 4) potentially benefit other school divisions as they address enrollment issues in non-traditional career and technical education courses and programs.

V. Extent of Anonymity and Confidentiality

For the purpose of protecting each participant's identity, every participant will be assigned a pseudonym. The school division and career center will also be identified with pseudonyms. In addition, location of the school division will not be revealed in the results of the research. Data collected from participants will be done anonymously. Since the school division will not be identified by name or other identifying characteristics, no identifiers will be revealed in the written report. The researcher will make every effort to protect the identity of each participant.

The researcher alone will have access to the recorded interviews. In addition, transcripts of the interviews will be viewed only by the researcher and members of the dissertation committee. All data collected from the interviews will be stored in a locked safe.

At no time will the researcher release identifiable results of the study to anyone other than individuals working on the project without your written consent.

The Virginia Tech (VT) Institutional Review Board (IRB) may view the study's data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

VI. Compensation

You will receive a \$25.00 honorarium at the time of the interview as compensation for your participation in the study.

VII. Freedom to Withdraw

It is important for you to know that you are free to withdraw from this study at any time without penalty. You are free not to answer any questions that you choose or respond to what is being asked of you without penalty.

Please note that there may be circumstances under which the investigator may determine that a subject should not continue as a subject.

Should you withdraw or otherwise discontinue participation, you will be compensated for the portion of the project completed in accordance with the Compensation section of this document.

VIII. Questions or Concerns

Should you have any questions about this study, you may contact one of the research investigators whose contact information is included at the beginning of this document.

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the VT IRB Office at irb@vt.edu or (540) 231-4991.

IX. Subject's Consent

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____
Subject signature

Subject printed name

Appendix E: Participant Recruitment Letter

Dear Participant,

I am a Ph.D. doctoral candidate in Career and Technical Education at Virginia Tech, and I am conducting a qualitative research study as partial fulfillment of my doctorate degree. The title of my research project is “The Perceptions of Students, Parents, Teachers, Administrators and Counselors about Student Enrollment in Career and Technical Education (CTE) Courses and Programs that are Non-traditional by Gender.”

I need your help to conduct my research and would like to meet with you to conduct one audio-recorded interview with you to obtain your ideas and suggestions about CTE. The interview will take approximately 60 minutes and will be held at a time and place that is convenient for you. Participation in the study is voluntary. If you decide to participate, you can withdraw at any time during the interview process. After the interview is conducted, you will have the opportunity to review the findings of the interview for accuracy.

A representative number of students, parents, teachers, administrator and counselors from the school division will be invited to participate in an interview.

I am excited about the opportunity to conduct this research because I think that it will provide valuable information to the school division regarding non-traditional enrollment in CTE and potentially serve as a resource for other school divisions.

To thank you for your participation in the interview and support for my research study, I will give you a \$25.00 honorarium at the time of the interview. I will contact you by email in the next two weeks to see if you have any questions concerning the research and to confirm your willingness to participate.

Thank you in advance for your support and the level of insight that you will contribute to my study.

Sincerely,

Diane C. Tomlinson
Ph.D. Candidate
Career and Technical Education
Virginia Tech

Appendix F: VT IRB Approval Notification



Division of Scholarly Integrity and
Research Compliance
Institutional Review Board
North End Center, Suite 4120 (MC 0497)
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732
irb@vt.edu
<http://www.research.vt.edu/sirc/hrpp>

MEMORANDUM

DATE: March 18, 2019
TO: Bill Price Jr, Diane Tomlinson
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: Perceptions of Selected Stakeholders about Enrollment in Career and Technical Education Courses and Programs that are Non-traditional by Gender
IRB NUMBER: 17-1091

Effective March 18, 2019, the Virginia Tech Institution Review Board (IRB) approved the Continuing Review request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

<https://secure.research.vt.edu/external/irb/responsibilities.htm>

(Please review responsibilities before beginning your research.)

PROTOCOL INFORMATION:

Approved As: **Expedited, under 45 CFR 46.110 category(ies) 5,6,7**
Protocol Approval Date: **April 2, 2019**
Protocol Expiration Date: **April 1, 2020**
Continuing Review Due Date*: **March 18, 2020**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

ASSOCIATED FUNDING:

The table on the following page indicates whether grant proposals are related to this protocol, and which of the listed proposals, if any, have been compared to this protocol, if required.

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

Appendix G: Interview Questions

This study addresses the following main research question: What are the reasons that male and female students rarely enroll in career and technical education (CTE) courses and programs that are non-traditional for their gender at Coalfield County School Division's career and technical center?

Interviews will be conducted with purposefully selected students, parents, teachers, administrators and counselors and will be guided by the main research question, along with the following sub-questions:

1. What barriers do students, parents, teachers, administrators and counselors think exist that prevent a majority of students at the Career Center from enrolling CTE courses that are non-traditional for their gender?
2. What strategies do students, parents, teachers, administrators and counselors recommend to overcome the barriers that cause low enrollment in non-traditional CTE course at the Career Center?

Following is a list of prompts designed to collect data to address the research questions. The interview is designed to be semi-structured, which will result in participant comments and statements that may or may not relate directly to the research questions but could potentially contribute to the data collection. The following statements and prompts will guide the interview:

1. Thank you for agreeing to speak with me today. Please tell me your name and the title of your job or position in the school division. Please call me Diane. How would you like for me to address you?
2. What are your responsibilities in the school district? What tasks are you involved in most of the work day? Please share details about your job.

3. The purpose of our meeting today is to discuss student enrollment in non-traditional courses and programs at the Career Center. By non-traditional, I am referring to students who enroll in CTE courses and programs in which the student represents less than 25 percent of the class by gender. For example, the Virginia Department of Education identifies welding as non-traditional for female students and cosmetology is identified as non-traditional for male students.
4. What is your experience in this school division regarding CTE? What CTE classes have you taught? How have you been involved in the CTE programs and initiatives at the Career Center?
5. What is your perspective about the CTE programs offered at the Career Center? In what ways has the Career Center contributed to the educational program in the school division? What role has the Career Center played in preparing students for the work force and/or post-secondary education?
6. What has been your experience regarding student enrollment in non-traditional courses and programs at the Career Center? How have students been made aware of non-traditional courses?
7. How are students guided in their selection of courses at the Career Center?
8. What is your understanding about the school division's policy regarding student enrollment in non-traditional courses and programs?
9. From your perspective, what reasons do you see for students not enrolling in non-traditional classes? What or who influences students' decisions about the programs they select at the Career Center? What is the role of families regarding student enrollment decisions? How do peers influence students' decisions? What is the role of teachers?

What is the role of counselors? How do administrators impact student enrollment decisions?

10. What programs or initiatives are you aware of that the school division has in place to increase non-traditional enrollment?
11. What ideas or strategies would you recommend for increasing student enrollment in non-traditional courses at the Career Center?
12. Are there things about the CTE courses and programs at the Career Center that you would like to share that I haven't asked you about today? Also, if I have a question about our discussion today that needs further clarification from you, do you mind if I contact you by phone or email?
12. Finally, tell me a little more about your educational and professional background.

At the conclusion of each interview, the researcher will thank the participant for contributing to the study and give him or her a \$25.00 honorarium. The researcher will transcribe the recording as soon as possible after each interview and will contact the participant concerning clarifications if necessary.

Appendix H: Student Interview Questions

The following guide will be used when interviewing students who have been recruited to participate in the research study and have agreed to be interviewed based on parental permission.

1. Thank you for agreeing to talk with me today. I appreciate your willingness to contribute to this research study. As we begin, I would like to describe the purpose of the study, which is to gather information from you about your ideas concerning student enrollment in non-traditional courses and programs at the Career Center. For clarification about non-traditional courses, examples of non-traditional CTE courses include welding which is a non-traditional course for female students, and cosmetology which is a non-traditional course for male students.
2. Please tell me your name and which high school you attend. What CTE program are you enrolled in at the career center? How long have you been a student at the career center? Were you enrolled previously in any other CTE programs at the career center?
3. What are the reasons that you chose your program at the center? Who helped you make your decision?
4. What are your plans regarding what you will do when you complete your program at the center? What are your job plans? Do you plan to work in this area?
5. What input did your parents provide regarding your decision? What input did your teachers at your high school provide? What role did your friends make in your decision?

6. Please describe any career awareness programs that were presented to you and your classmates regarding jobs and the work force. How was the career center involved in your decision about your courses and program?
7. How do your parents feel about the CTE program that you selected?
8. Please describe a typical day for you at the career center. How do you get to the center from your high school?
9. If a student, including you, decides to enroll in a CTE program or courses at the center and the courses are non-traditional for the student's gender, what is the typical reaction to that decision?
10. Do you know any students at the center who are enrolled in non-traditional courses or programs? How have they described their school experience?
11. What barriers are you aware of to a student enrolling in a non-traditional program?
12. What are some strategies that the school division and the career center could use to encourage more students to enroll in non-traditional CTE courses at the career center?
13. Is there anything that you would like to add that I have not thought to ask you?
14. Thank you very much for your participation and your contributions. I will transcribe our conversation and contact you if I have any questions or if I need clarification about something that we have discussed today. Is that okay with you?

At the end of the interview, the student will be given a \$25.00 honorarium in appreciation for his or her participation in the study. The interview recording will be transcribed as soon as possible after the interview.

Appendix I: Samples of Analytic Memos from Interviews

5-16-2018: Interview with Marcus, a Welding student. The interview with Marcus revealed that he did not perceive any barriers to non-traditional enrollment at the career center. However, his remarks indicated otherwise. He commented that the career center did not require book smarts, implying that students who attend the career center are not engaged in academics or need to bring academic skills with them to the career center. He did not perceive this as a barrier, which would deter students from enrolling in the career center or view it as a limiting experience. Marcus appeared reluctant to make any comments about the career center that could be interpreted as negative or reflect poorly on the center. He indicated that he had been preparing most of his life, because of family support, to enroll in the Welding program at the center. He grew up doing hands-on work with his family who rarely depended on anyone else to do any repair work for them. He responded to each question but did not volunteer a lot of information.

6-6-2018: Interview with Deborah, who is the parent of a student in Criminal Justice. Deborah's comments indicated that she had an extremely limited amount of information about the career center. She knew of only four or five programs offered there and did not know about Culinary Arts. She became very excited about that program and indicated that she would like to enroll in it and would like for her female children to enroll as well. She was aware of Cosmetology and indicated that it, in her opinion, was a program for female students. She was very supportive of male students in Nursing, emphasizing that male nurses are needed because they are bigger and physically stronger than most female nurses. She indicated that the Criminal Justice instructor had contacted her by phone on two occasions to describe the outstanding classroom work that Deborah's son was doing. Deborah seemed very pleased about that. She also indicated that she has never received any communication from the career center or her son's counselor and had no idea about any special activities offered at the center or any events such as Open House. She provided several strategies for improving communication.

5-29-2018: Interview with Thomas, the Welding instructor. Thomas expressed a high level of frustration about the stigma attached to the career center and the community and school perceptions that it was a place where students go who can't do high school work. He also talked about the emphasis on high school graduation and the pressure on high schools to graduate students even when they did not have, in his opinion, the ability to pass high school classes or attend school on a regular basis. He noted that the high schools and the career center are not together in that regard. He felt that he was sometimes requiring more of his students in Welding than what was required at the high schools, where graduation was the emphasis. He described the Project Lifeline program to help high school students meet graduation requirements.

Appendix J: Sample of Level One Coded Interview

		CTE Teacher Interview – Thomas (Welding)
Line	Code – Level One	Interview Transcript
1.		R: We will begin the interview with some information about you and your relationship with the career center. Please tell me about your experiences with the career center. How long have you been there, and what do you do?
2.		
3.	Grown and changed as a teacher. Look forward to each day. Diversity of students.	P: I am a Welding instructor and have been a Welding instructor for the past 11 years here at Coalfield County Career and Technology Center. My experiences When I first came I have evolved into a different instructor from what I was beforeactually by learning the ropes per say you know... the diversity of the children we get here.... It is different every year. It is something different everydayMy feeling is that I don't dread it. I actually look forward to working here. I like working with students. Some are gungho and ready to work, and some are just trying to get away from their high school, and it's a good job.
4.		
5.		R: How did you prepare for this job?
6.		
7.	Background. Experienced welder in local industry. Learned Welding in high school. Local resident.	P: Well, I previously was a welder in a manufacturing plant, and my training was as a machine journeyman. I had an apprenticeship at ____ Corporation and I was trained in hydraulics and pneumatics, welding and machine; and I sort of gravitated to welding and once you get into it, that's sort of the way they use your expertise. Like, okay, you're a welder from now on. I worked there for seven years and I actually got a little bit of my training in high school in the FFA program. So that's where I learned to weld. Here at _____ High School.

		_____ was my instructor, so he got me to weld 40 years ago.
8.		
9.		R: So the shop was at High School #1?
10.		
11.	Home Ec and Ag in same high school shop.	P: Yes, it was down there, up from the cottage. You had Home Ec and Ag combined in the shop.
12.		
13.		R: I forgot about the school being in a different location.
14.		
15.	Ag class is CTE	P: Yeah. That was my beginning. (Laugh). Actually, that was considered CTE. I didn't put that down on your thing...
16.		
17.		R: Yes.
18.		
19.	Four years of Ag in high school.	P: Where it asked me if I went to the career center. I did not but I did take four years of agriculture, and we had.... We learned at the trade center. We had carpentry, we had horticulture.
20.		
21.		R: Were there any girls in your classes?
22.		
23.	Female students in Ag class	P: There were girls in ag. In mine, not that I remember such a thing, but I don't remember such a thing.
24.		
25.		R: So, only in ag, which would be the horticulture part?
26.		
27.		P: Excuse me?
28.		
29.		R: Horticulture would be the ag part.
30.		
31.	Ag class included carpentry, welding, horticulture, and farming.	P: Well, we called it ag. I'm not sure we had certain standards or what he went by but we had welding, which we normally did arc welding with the torches running off acetylene; we had carpentry, and we learned to use the lathe and the saws. Things like that. We had horticulture, the

		part. We learned about trees and the sawing and lumberyard, and things like that. We also learned about leaves, and I learned about the names of trees. And we learned about farming. We were down on the farm quite a bit. Our instructor had a little truck and he would load us up in the back and go down to the farm and we had a garden. And we called _____ and we artificially inseminated cows and kids LOVED to do things like that ...
32.		
33.		R: Yes.
34.		
35.	Credit to Ag teacher	P: Actually, I give _____, which is deceased, you know that, a lot of credit for what I do now because of the things, the approach, and how kids learn in different ways
36.		
37.		R: He loaded you onto the back of the truck?
38.		
39.	Ag class memories	P: It's unbelievable. A couple of times a year we might not make it to the farm. We might stop at Pizza Hut, eat off the buffet, and he would pay for us. You know. The good old days, I guess. (Laugh).
40.		
41.		R: Yes. So, what is your daily schedule here?
42.		
43.	Daily schedule includes driving a bus.	P: My daily schedule here is here at the career center I arrive at 6:30 a.m. Just to give you a little bit more background about what I do, I arrive at 6:30 because I'm putting in 30 minutes I drive a bus route.... So I arrive I owe them 30 minutes so I arrive 30 minutes early to do my lesson plans or study time or whatever. And then I leave for my bus route at 7 so I'll get back in here by 8:15. The kids start arriving about 8:25....8:35 and we are not very productive.....Now, HS#1 kids come first, and the kids from HS#3 get here a

		little later, maybe 8:50, and the HS#2 kids get here about 8:55. And then there is a little period. They get snacks and whatever. We don't really get started until about 9:00.
44.		
45.		R: So they have a time when they can actually be social.
46.		
47.	Everyone required to follow rules. Two classes of Welding	P: Yes, they have plenty of social time. (Laugh). They do intermingle with other classes. They go to a break room and do whatever and it is supposed to be pretty quick. My kids, well I don't want to talk about anybody else's kids, my kids learn in the beginning that I have certain rules and that the school has certain rules and we are going to follow those rules so we get to work pretty quick. They'll have announcements, the Pledge of Allegiance, and as soon as that is over we get to work. My older kids are here over the morning so that's Welding 2 and Welding 3. They are here, they work for 2 ½ hours and they leave in the same sequence. HS#2 leaves first so they are not really here as long as HS#1 and HS#3r. They leave about 11:35, HS#3 leaves at 11:40, and HS#1 leaves at 11:55.
48.		
49.		R: What classes here at the career center do you see the boys taking predominantly?
50.		
51.	Boys predominantly in traditional classes for gender. Masonry has non-traditional students. No girls in Welding.	P: It is definitely, welding, auto mechanics, and auto body. Those are the three that are mostly the boys. _____ in masonry has mostly boys, but he has girls some. And we all do. I'm not saying that none of us every have any girls. But I don't have any girls this year.
52.		
53.		R: Have you ever had any girls?
54.		
55.	Prefer not to have only one female student.	P: And I don't mind it. And again, I know this is confidential and I don't know what

		the laws are and all that stuff, but me personally, I do not like to have one girl. If she's in there by herself, I normally have 20 students because that's the max. Normally I have about 30 that want to take it, so they divvy it up some kind of ways so we're going to let everybody take freshmen. You can only have 20.....
56.		
57.		R: Is that OSHA?
58.		
59.		P: No, that's CTE, I think.
60.		
61.		R: Oh. CTE.
62.		
63.	Limit of 20 students in class. Prefer to have at least two girls.	P: 20 is a law. I wish it was 12 but 20 is better than 2. I don't want to lose my program. I've had girls in the past but I don't like to have one girl just because for a couple of reasons. I don't want to get into any situations personally for liability and then again she might be uncomfortable in a shop with 19 boys. Some of my kids change clothes in the shop. We do have dressing rooms. The girls we've had in the past, she can go in the hallway if she wants to change. Some of them wear the proper clothes PPE anyway and they can put on a jacket. We have welding jackets so we furnish PPE.
64.		
65.		R: What is PPE?
66.		
67.		P: Personal Protective Equipment.
68.		
69.		R: Okay.
70.		
71.	Welding compared to art and handwriting. Girls good at welding. Students lacking in academic skills.	P: So like jackets, helmet. We don't provide shoes, but they know they can't wear open-toe shoes, but the girls, I don't know if I'm giving you this later, but about the ones I've had do really well in welding. If you read anything on welding, that is normal for girls and that's because it's sort of like art and they when they are like

		<p>drawing, if they are welding on a pad or welding on something, they want it to be just so and that's the way it should be. Sometimes guys are like when we put down a bead, that's what we call it, they just say it's on there, but girls want it to be perfect just like I was doing a chimney fire. It's like they write. You can tell a girl's writing. Really good welders, and this is really way out there, good welders have good handwriting. I don't know if anybody ever noticed that, but the ones I've taken to competition and the ones who win things I've noticed that a lot of times they have good handwriting. Kids today do not have good handwriting skills or good reading skills. I'm talking about the ones that are a little different here. The kids we're getting, we're trying to train and all types of communication skills. When we come into the classroom, we notice that reading and writing and stuff is almost like starting over Whatever.</p>
72.		
73.		R: Well, that's good. That gives me a perspective on the students.
74.		
75.		P: Yeah.
76.		
77.		R: You said that the boys take welding, auto mechanics and auto body. Those are the kinds of things the boys take. What about the girls? What do they predominantly take here at the career center?
78.		
79.	<p>Girls predominantly in traditional courses. Exception is Criminal Justice. About half and half in that class.</p>	<p>P: What I've seen and you're going to talk with some other instructors, criminal justice could go about half and half. She may have more guys one year and more girls the next. It seems like its about the same. Now, predominantly female is CNA, and culinary arts, and cosmetology. And again, they have some guys in there but sort of like one or two per year.</p>

80.		
81.		R: Oh. Okay. Very small population.
82.		
83.		P: Very small.
84.		
85.		R: How do girls react to boys in what is traditionally their area?
86.		
87.		P: Girls? React to boys?
88.		
89.		R: Uh-huh.
90.		
91.	No female student reaction to males in Culinary Arts. Media shows men working in cosmetology.	P: Well, what I've seen ... like my understand is that culinary arts is ... non-traditional is backwards from what we have And I think in there they do not react in any way. They don't say, Hey, there are boys in here. If there is one or two a year, which is what I think he had, people accept things. Now cosmetology is a little different because it is so girls. You don't see that on TV because the guys are not that I watch the Kardashians or anything, but the Hollywood shows it is always the guys. At lot of times at the hair salons but I think that's because they can market themselves so well I think the same ways. Another thing I would say ... (hesitation).
92.		
93.		R: This is all confidential.
94.		
95.	Boys in Cosmetology are different. Different social structure. Like nice clothes and hair.	P: I know it is but it's a different type of guy. I'm not saying it's anything wrong. What I'm saying is it's a different type of guy. It's not the guy over here in welding who wear the boots and the dirty jeans. It's the guy who can relate to nicer clothes, the hair, someone who is in a different social structure, for instance. Several years. It seems to me.
96.		
97.		R: Okay. Who do you think helps students decide what they are going to take when they come here?

98.		
99.	Counselors help students with course decision.	P: Now that's It's definitely got to be the placement directors or counselors at the high schools. Okay, now you may get a totally different opinion from everybody, but what I've seen and I've got a problem with it is there's an opinion.... I'm looking for the right word.
100.		
101.		R: Perception?
102.		
103.	<p>Perception from the counselors that career center students are not going to college.</p> <p>Get rid of students for a half day.</p> <p>Students regarded as trouble.</p> <p>Counselors should guide according to students' interests.</p> <p>Using wrong procedures.</p> <p>Parents want children to go to college.</p> <p>Avoid the career center.</p>	<p>P: Perception of our school that well, you're not going to do this and you're not going to do that, so you need to go to the trade school. Or, so you're not going to go to college, so you need to go to voc tech so we don't need your types, so we need to get rid of you for half a day because you've been in trouble too much.</p> <p>Whatever, I don't think that's a good reason for placing kids. We'll take all they've got, but don't just throw them here because you want to get rid of them. They need to be talked to and say what are your interests. Whatever procedures they use, it is not right. The reason I say that is because I talk to a lot of kids and I'm out in the community a lot, and I talk to some kids and parents and I say that it is great at the vocational school and we want everybody, but we especially want those kids who excel in things and are outgoing. But I think their parents have the perception at the high school that those kids need to stay focused on what's at the high school and then we are going to shoot you off to college. So, we never see those kids.</p>
104.		
105.		R: Okay. When do students make the decision that they are going to come here?
106.		
107.	Students make career plans in 8 th grade.	P: They make it early. They make it in 8 th grade, right after Christmas. You can

		change it. I'm pretty sure. If it's not in the first four weeks, it's in the fifth six weeks.
108.		I'm thinking it is the third or fourth 6 th weeks.
109.		
110.		R: So, if they come here, and they find that it is not a good fit for them, can they go back to the high school?
111.		
112.	<p>Plans can be changed but must be done early.</p> <p>Pressure to graduate no matter what.</p> <p>Project Lifeline to support graduation.</p> <p>Pressure on teachers to mark off competencies.</p> <p>Lack of math skills.</p> <p>No application skills.</p>	<p>P: Yes, but they have to make a decision pretty quick, I think. Nowadays, I think they try to accommodate everybody, even if you've been here two years. I've found that in the past few years, somebody somewhere along the line wants you to graduate. I'm sure that everyone wants to graduate, but if somebody wants you to graduate no matter what, so. If I was a kid now and know what I know now, I would be the sorriest student that ever was because they are going to give me a diploma. One way or another. You can miss 40 days, and I hate that. I can fuss at you the whole year, but at the end of the day, I'm going to give you a diploma.</p>
113.		<p>That's not fair to the ones who work every single day. So, they got things, you probably know more about it than I do, they got Project Lifeline. I'm going to throw you a diploma out there and save your life. And they've got alternative, which you can start that now in 10th grade. Looks like you're the kind of student that is not going to finish school, I had a student in 10th grade in Welding II, and he went to alternative, and that summer I saw him somewhere and he said, "I graduated." They got him on a computer, somewhere, somehow, and they checked it off somewhere, and he graduated. I don't know how that is possible, but anyway that's what I see. It's sort of ... We are really pushed to make kids learn our competencies. And there is some math, and the kid may credential. We use NCCR and some other credentialing tests that, the</p>

		end of the year tests, and it is tough when you have to teach 10 th and 11 th graders how to add 7 and 3 or how to read a tape measure and you're required to have these goals. You're required to get them through there. If they've not learned math previously, and you do all this work really hard in the classroom to get that through, and then you learn that even if they don't get it, they are going to get it. That's disheartening. In my mind if you're going to do that, everybody wants to stay in the shop, so let's just stay in the shop. And we can fix Farmer Brown's bush hog, instead of being in here and trying to learn math.
114.		
115.		R: It's an interesting perspective, isn't it? So, why do you think any students do not take non-traditional classes?
116.		
117.	Welding is hot and dirty.	P: Okay. Two different reasons: one is because welding is a little bit different because you are going to get dirty. And, it is hot, especially at the beginning of the year. That's when you're starting, and it's August and September. The welding shop is hot and that's just the way it is.
118.		
119.		R: You don't think girls want to do that?
120.		
121.	Girls don't like to get dirty. Opinion is that girls should not enroll in Welding.	P: You're going to get dirty. I don't think they like to do that. Most of them don't that I know. So, I think that's part of the physical part of it. Then you have the mental thing. That's someone's opinion. If someone is telling girls that, then they need to stop right now. Okay? I think, whether they are told or whether they already know that, I think that's part of it.
122.		
123.		R: If they already know it, who told them? Who gives them this feeling?
124.		
125.	Not sure who tells girls not to take Welding.	P: It might just be. I'm not sure. It might just be. I'm not sure.

126.		
127.		R: Because somebody is helping them to make this decision.
128.		
129.	8 th grade tours important for recruiting. Welcomes both boys and girls. Prefers oldest and smartest students.	P: You're right. So, we do tours; and that's very important for our recruiting and whatever. We do 8 th grade tours. And again, I don't know what anybody else is saying because they don't give us a playlist or anything like that, but in my mind, I want to fill my class up. And it doesn't matter to me if it's girls or boys. If I had my druthers, I want the oldest and smartest kids. You know, if you get to pick, that's the ones who give you the least trouble.
130.		
131.		R: And they are going to try hard.
132.		
133.	Prefer students who want to be in Welding. Smart students work hard. Would like 10 boys and 10 girls.	P: They are going to try hard. I really do want kids who want to be in welding. Sometimes you get in here, and it is not the right fit. And Mrs. _____ will work with them. They don't want them to be here if they don't want to be here. They really need to be here two years to finish. Whatever. So, in the first six weeks, and if you are really not happy and I see that I'm not going to be able to win you over, then we are going to move you around because we want you to be happy. I'm never had a class with 20 kids where everybody is happy all the time. Some kids are not happy, but you don't know what happened last night. That's the big thing. Uh. If I had 10 boys and 10 girls, that would be fine with me.
134.		
135.		Stop transcription 23:50 minutes – May 8, 2018
136.		
137.	One female student would be a distraction.	P: Actually that would be an even class, and that would probably be the best. I don't think a girl would want to be in my class by herself. And this age, you know, if you've got one girl in there in my shop,

		you would have 5 guys hanging around her all the time. That's natural, and that's the way it has been in my shop.
138.		
139.		R: So, what do you do to the quality of the instruction in you have girls in there? Does the instruction change?
140.		
141.	Instruction does not change because of non-traditional students	P: My instruction does not change.
142.		
143.		R: It does not change. So, what are your ideas to increase enrollment in non-traditional CTE courses here, in this building?
144.		
145.	8 th grade tours need to be more guided.	P: I think the tours that we already have could be guided that way a little bit more. I think there are more girls enrolled, is there?
146.		
147.		R: You mean here in the career center?
148.		
149.		P: No, in the schools? Aren't there more girls enrolled than boys in the schools?
150.		
151.		R: I, I don't know.
152.		
153.	8 th grade tour is not a good depiction of Welding.	P: I make it a point to look those girls in the eye and tell them because my spiel is, okay, you're here at the welding shop and we can't really show them anything about the way that it really works because you can't grind anything because they don't have on safety glasses, you can't weld, and so we're just sort of hanging out; and so I've got a bunch of guys in there sitting around like they're on a construction job and these kids come through. So that's a little intimidating to start with so I let them know that we are just hanging out because they're coming through today and I sort of strategically place my guys, kind of have them hanging out outside because I don't want them to say that I don't want to be

		like them so I tell them that this is welding and even if you just want to weld in the garage at home, help your dad fix something or just want to work with your hands, or if you want to pursue a career in welding, it might be bridges, or construction or the shipyards in Louisiana, for someone who wants to stay clean all the time like an engineer in a lab who is testing the strength of something, it's unlimited what you can do. So, I make sure that everybody knows that but you have to start somewhere. If you're doing quality control, and you never really weld but you're a welder, you're classified as a welder and it would be a pretty neat job to try to break stuff all day.
154.		
155.		R: Is the pay pretty good?
156.		
157.	Local pay for welders has cap. Shipyards pay more, but student must move. Student strategies to save money.	P: The thing is, the farther you go up the ladder with most things and the easier the job gets, the more you get paid and the longer you stay, the more you get paid. But here, in _____, Virginia, you can top out at maybe \$25.00 an hour in a couple of places; but if you're willing to go to the shipyards, these contractors, I have two of my guys who are working with contractors ... I have a boy who graduated two years ago, and he is already making \$35.00 an hour. And, he makes a \$100 a day per diem working away from home which is pretty good and a motel room; and they all load up in a motel room, like eight of them so they all get to keep that money and there are things that they do and they go to the store and buy bread and baloney and save the per diem. Things like that.
158.		
159.		R: Laugh. In the tours do they get the exposure to possibilities?

160.		
161.	Unlimited possibilities and career opportunities.	P: It's really unlimited. You learn to read diagrams. You learn to use math, and it makes you realize that if I do this, then this can happen; and if I do this, then this can happen. And you learn the mechanical part of it. You can do about anything. You can go right into another trade just by learning those things and learning how things work together.
162.		
163.		R: So there is the possibility of moving, let's say, from welding into another trade?
164.		
165.	Transition from Welding into another trade.	P: Oh, definitely.
166.		
167.		R: Okay. So what strategies, and you've touched on this, what strategies would you use to removing the barriers to non-traditional enrollment?
168.		
169.	Start at home, but what is home? Start at the high schools with guidance counselors. No visits by counselors to shop in 11 years.	P: I think it would have to start, You would like for it to start at home, but we don't know what home is anymore, but it would have to start at the high schools. The guidance counselors would have to do it. You know, it's a shame that we do not see them here. They might not even know They praise us and this and that. When we see them out at a ball game or something, I've never had a counselor in my shop in 11 years.
170.		
171.		R: They don't come out for a visit?
172.		
173.	Two counselors at each high school.	P: I think they've got two at the high schools, don't they?
174.		
175.		R: I think they do.
176.		
177.	No visits to Welding class.	P: I've never seen them.
178.		
179.		R: Maybe one and a half.
180.		

181.	Counselors should come to the career center and learn about trades. Students can attend career center and go to college.	P: Every now and then one will come along like Ms. _____, my _____. I may be a little bit prejudiced. Someone who really cares about these kids, but I understand that they've got a job to do too, and they are pressed for time. Someone needs to explain these trades and do a little bit of research to see what these kids are doing in the trades and how much money they are making. There's nothing wrong with going to college, I know that; but there's nothing wrong with coming out here. They can do both. A lot of people do both.
182.		
183.		R: But you don't see that going on?
184.		
185.		P: I do not. I don't feel it going on either. I actually talk with kids. My kids will sit down and talk with you, and they'll tell you. When my son was in high school, I don't know exactly what was said to him, but
186.		
187.		R: Was he told not to come here?
188.		
189.		P: He wasn't told not to come here. He just
190.		
191.		R: Did they know that you were out here?
192.		
193.	Stereotypical perception of career center student.	P: It's almost like unless you are one of them. If you come in and say I'm going to the trade school, you're wearing a pair of dirty jeans and have a pair of boots on, and a hat on, then they're going to say, "Okay, what do you want to take at the trade school?" That's the way I think. I feel like out there, that's the way it is.
194.		
195.		R: How do you get rid of that?
196.		
197.	Counselors are prejudiced. Opportunities at career center but not at the high school for CTE students.	P: I feel that the counselors have a prejudiced attitude and you know, they know the kids in the halls, as soon as

		The eighth grade is not out there now. It would probably be better if the eighth grade was out there so that they could get a pre-judgment of people. You know what I mean. But it is good. This is a good sanctuary for these kids. Because they will find their home at the high school, social things that they can't do because someone will laugh at them or whatever because I'm sure that they are not going to be on the prom committee or those kinds of things, but here they are like king of the road, you know.
198.		
199.		R: They leave here prepared to go into the workforce.
200.		
201.	Students graduate ready to go into workforce and to college.	P: They leave here prepared to go into the workforce or they go to college.
202.		
203.		R: Maybe that's a message that needs to be out there.
204.		
205.	Different diplomas are a problem. Parents want advanced diploma. Difficult to attend career center and get an advanced diploma. Suggestion to take two years of traditional and two years of non-traditional.	P: But another problem, and I may be wrong. Someone may need to educate me. There are different diplomas, an advanced diploma and a regular diploma. Now, if you want to get the advanced diploma, then it is going to be tough coming to the vocational school. It's not impossible, but it is going to be hard. So in my mind, if I go home and tell my mom that, she will say you have to get the advanced diploma. You may not even know what it is. It just sounds better. So you're going to get the advanced diploma, okay, you've said that. You don't even know what an advanced diploma is. And you're not really sure that you can't go to the vocational school cause somebody told you. But, you can't do both. You can't take study halls. I'm not really qualified to say so that's I hear some of my kids say I would like to come up here four years, but I can't come up here four years. So what would be really great if a student could, would be if a

		student took two classes, two years of one trade and two years of another one. Right? I think that would really change the non-traditional percentages because it would give you the chance to try something else, you know. So, you got you're welding certification so let me try cosmetology. Who knows or something?
206.		
207.		R: Do you think there are students who don't know that business opportunities exist in cosmetology or culinary arts to have their own beauty shop?
208.		
209.	Few students plan to start their own businesses. Student goals are not high. Communication skills. Ability to deal with situations.	P: Oh, sure. I think that there is a very low percentage of students who think that they will learn a trade and then I will open a business, and then I will have my own truck or I will open my own restaurant or open my own beauty shop. Some of them do that. Not many. And we have a lot whose goals are not as high as you would like for them to be. For many of them, they think that if I can just start right there, I'll be all right. And that's not really what you would like to preach. (Gesture). This is where we are right now, and this is where we could be. Or, you've got something about you. You're good to people and you're honest. Learn the trade, and get out here and work for somebody and then you can open a shop, get you a truck, go out and work on things, build houses, and have your own crew. We do offer workplace readiness skills, and they are very good. About team work and learning the business. They go on and on.
210.		It has a lot to do with aspects that are not in the shop. It is also important for you to be able to communicate. If someone calls you and has a problem, how you talk with people on the phone or if there is a conflict. Conflict resolutions or whatever. How to deal with situations. We have those competencies and they are important.
211.		

212.		R: Who is this person, who are the people, who can eliminate these barriers and make things different? Who in this school division can
213.		
214.	Team effort in the school division. Where is non-traditional?	P: In this school division, we work together. It wouldn't be one person. If you want to eliminate _____, in five years there won't be any such thing as non-traditional. Where is non-traditional? Is that in the work force or is it in the schools?
215.		Where did non-traditional come from? Is it in the classroom or in the workforce?
216.		
217.		R: Well, that's a good question. It's been around for such a long time and it's related to Perkins funding. I think it came from the work force. But now remember, women took over the jobs in World War II. They did the work.
218.		
219.	Predominantly female enrollment in Culinary Arts. Culinary Arts is traditional for males.	P: Right. But the one piece of evidence I would say in the research would be culinary arts because I would say that any of the vocational schools would be mostly female.
220.		
221.		R: Yes.
222.		
223.	Mostly males in Culinary Arts in industry. Non-traditional term come from the work force.	P: And in the industry it is mostly males. So that's why I would think that the word non-traditional comes from the work force.
224.		
225.		R: Do you think the students who are enrolled in culinary arts here know that it is non-traditional for girls?
226.		
227.	Students do not know that Culinary Arts is traditional for males. Guidance counselors could guide students into non-traditional classes.	P: I do not. I think that if you wanted to do a survey or a study, you could give the guidance counselors a question that you want them to ask. Now, veterinary assistant, that is predominantly girls. You know what I'm saying. Veterinarians, in

		the past, have been men. But if you said veterinary assistant is all boys, but now we will take girls, if the guidance counselors would say that, you would definitely get some. If you told them that it would be mostly girls, that would change their minds.
228.		
229.		R: So we're identifying a powerful determiner then. The guidance counselors
230.		
231.	Guidance Counselors are powerful determiners. Need more high achieving students at the career center.	P: There is no doubt. And I know how important this school is and again we take all of them. But if you did a number survey and talked about intellect, social status, and financial whatever you call it, and it starts here and you have ten grades, we'll get these. It shouldn't be like that. We'll take these, but we need some of these too.
232.		
233.		R: Yes. This is a lot of information. Is there anything else that you would like to add before we conclude because I notice that we are approaching 40 minutes now.
234.		
235.	No preference about gender in Welding class.	P: Well, I think, like for my class, I don't know...., if I want a couple of girls in my class, I don't mind it one way or the other. All guys. I'm good. All girls. That would make me feel different because we do a lot of stuff for the community and somehow or another we got into a lot of big projects. I need some big old beefy guys.
236.		
237.		R: Some of these things are heavy, aren't they?
238.		
239.	Important to have some strong male students in Welding class. Preference for 50/50 enrollment.	P: Yeah. And I'm not a male chauvinist or anything like that, but I know there is a difference between women and men. And I know a girl will do anything that a fellow will. But, strength-wise, getting down and getting dirty, I would like to have a couple of fellows. Fifty-fifty looks good to me.

240.		
241.		R: Cause everybody has a role to play in this, don't they?
242.		
243.		P: Yes. Now I did hear somebody in the hallway say "Mr. _____ don't take no girls."
244.	No girls in Welding this year. Students' perception that teacher does not want girls in class. Not accurate perception.	And that really bothered me because I've never insinuated that or nothing. It's just that one of the guys, there weren't any girls in here this year or something
245.		
246.		R: But you've never done anything to make that happen?
247.		
248.	Girls formerly in Welding class.	P: No, actually I've had girls. I had two in one class and I had one girl in a couple of classes, and I didn't like that situation.
249.		
250.		R: But that's difficult potentially for her and puts you in a situation too.
251.		
252.	Difficult to talk to girls privately. Teacher has to protect himself.	P: Right. And if I call my kids into my office, even if it is something good, I like to praise my kids, and I bring guys in there and I hardly ever close my door. But, if I brought a girl in there, even if I didn't shut the door, I would not bring her in there by herself. I would bring another student in too.
253.		
254.		R: I understand exactly what you're saying. You have to protect yourself too.
255.		This has been an absolutely great interview. Thank you.
256.		
257.		42:46 minutes.
258.		
259.		Researcher presented gift card to participant.
260.		

Appendix K: Sample of Transcribed Interview

CTE Principal Interview Robert (pseudonym)
Interview conducted in conference room at high school
June 4, 2018; 54 minutes.

R: The first thing I would like to do is ask you about your experiences at the career center. When you were there, and what did you do? What was your job?

P: I was actually at the career and technology center for 10 years: three as assistant and seven as principal. Of course, as principal my primary function was the day-to-day running of the school. Make sure that things are in order and classes are running smoothly, and everyone has what they need so that they will have a successful day, each and every day.

R: Now that you are here at the high school, what do you see as the connection between the career center and the high school?

P: Well, I mean, the home schools are paramount to the career and technology center. And we are fortunate in the county that all three of our feeder schools have a good relationship with the career and tech center. That's always been my understanding of it. I know that it serves a great need for a lot of students here in the county. The principals at all three high schools understand the importance of it too and how important it is to a lot of students who are not going down that "traditional" path. For us at the high school, and I can only speak for here, it is a good work relationship and we encourage those kids to attend.

R: How often do you get over to the career center since you've been back at the high school?

P: I really haven't been back a lot.

R: Okay. That's important to know that. Why?

P: Just because ... (hesitation).

R: Remember, this is all confidential.

P: Yes. Well, one, when you leave a place you want the next person to come in to be successful. And I feel like me being there, whether it would or not, would probably create a little "why is he here?" And I don't want anyone to feel like I'm looking at what they're doing, judging what they're doing, and I want it to be their school. I had my run; and it's like Ms. _____ is there now, and she's doing a great job. Ms. _____ did a great job with it so I want those people to feel like it's theirs. Of course, the other jobs that I've had as principal of the middle school and here at the high school, there's a lot of time involved in that so it's hard to get back. I did go to some advisory dinners and stuff like that, and I was at the graduation. But that's about the extent of my going back there.

R: How did you feel about being at the graduation, looking out at the students and parents? What was your reaction to that?

P: I think like it always is. Hmm. You're proud of those kids because I think you really have to understand the background

R: Now when you say (noise from the hallway). Do you think we could close that door?

P: Yeah.

R: When you say the background of the students, I know what you are saying; but can you clarify that?

P: Yeah. I think you are dealing with a lower socioeconomic set of kids most of the time. Now that's not every case. There is kids who come from affluent families who go there, but the overall majority of the students come from a lower economic situation. Their parents struggle to make ends meet. They are not always the best students here at the school. They struggle grade-wise sometimes.

R: Do you think some of the students go to the career center because they don't want to be here?

P: Oh, yeah. I think the career center gives them a place that they can call their own. It's a place where they fit. You've got a lot of kids who go there who don't necessarily participate in sports. They are not in the arts. They're not involved in a lot of things at the high school. But when they get to that school (career center), they feel like that's their school because it's something that they enjoy. You know, they find their niche there. And they take ownership in it. I think it means more to them. You know, a lot of times you see kids who are in trouble here at the high school. I can remember that I would hear from people, "man, he's in trouble all the time," and I didn't even know his name at the career and technology center just because he may have been in auto mechanics and he loved auto mechanics. That's what his niche was, so it (career center) just provides such a great opportunity for a lot of students that I don't think people realize the significance that it really does have.

R: So, the students like that were not a discipline problem. They were there because they wanted to be there, but they weren't a discipline problem in the shops.

P: We had very few discipline problems at all. I mean, it's really quite phenomenal. When you go to the shops and you see those kids. They are very much hands-on and engaged, doing what they're supposed to be doing. There's always a few, but that's just the nature of teenage kids. There is always a few problems, but for the most part they... It's a good place. A really good place.

R: You're saying that they are there because they want to be there.

P: Yeah. I don't think there is any question. I think they enjoy being there. I think they love what they do. I think that they ...

R: Who do you think helps them to make the decision to go there? Is it their own or does someone else give them some guidance?

P: I think our counselors at the schools are good. I think they encourage those kids to attend. I think they see something in those kids that sways them to the career and technology center. I think parents have a little bit of say in it. A lot of times the parents of those kids that go there were also students at the career and technology center.

R: Oh. That's an interesting point. So, this is sort of a tradition.

P: Yes. It's something that's handed down family to family in the family tree. It's a traditional type thing.

R: That's pretty interesting, but the guidance counselors do fit into this?

P: Yes. Our guidance counselors are good. They really are. They persuade kids, encourage kids to attend.

R: Oh, they do? Sometimes I hear different stories.

P: It could probably be better.

R: Oh. Okay.

P: I'm not saying it's perfect, but they do encourage kids. Now I would like to see more go. I think it serves a great purpose than people realize. You know people think they are going to school and be a doctor or a lawyer and all those great things, but honestly that's just not the case. And the stats are there. Twenty-five percent of the population gets a college degree so that means seventy-five percent not.

R: Which is a huge group.

P: And that's a lot of people who are doing hard work. I mean labor jobs, and I think that's where the career and technology center fits in. Especially in our area, there's not a lot of jobs for college graduates here. You look at people who go to the career and tech center, and there are opportunities once they complete a program there.

R: How do the students in this building (high school) feel about the students who got to the career center?

P: Hmm. It's probably two-fold. I think there is a stigma attached to it. There always has been.

R: How....? Well, we'll talk about that later; but it still does exist, doesn't it?

P: Oh, yeah. It does. I think those kids are seen as different, don't fit in, not one of us. I would love to be able to change that. I don't know how you change that, but ...

R: That's the ongoing issue nationally.

P: Yeah, it is. It's kind of sad, but I have to say that I think those kids that go there, I think they accept who they are more than people realize; and I think they are okay with who they are. The kids you're getting up there, they're good kids. But they are not like the valedictorian and the salutatorian. However, some of them could be that. I have no doubt in my mind.

R: Do you think you have students here (at the high school), who would like to go there (career center)? Who would like to be at the career and yet they do not go?

P: Yeah. If they were honest, I think there are a lot of kids, if they didn't have the stigma that's attached to it, would go.

R: When you talk about the stigma, where or who is putting this pressure on the kids? Who do you think is attaching that stigma to the career center?

P: I think a lot of it is parents and community. I don't think they fully understand. I think it's always been that the vocational school is where kids who can't do go. And that's not the case. Those kids, if they continue developing their skills after high school, those are jobs that they will make a very living at. And make very good money. More so than myself teaching. I think those kids who go there understand that because a lot of the parents are doing the same type of work.

R: What kinds of programs tell students about these opportunities. What kind of money they will be able to make? What kind of job security they will have, and where the jobs are located? Who is doing that? Where is that coming from?

P: I know when I was there (career center), Ms. _____ was the placement director, and she was out in the schools talking to kids, and she made presentations at the schools. She actually showed the kids the kinds of jobs you can do and the money that was associated with each job and

R: Money is big. To people this age, money is important.

P: It is. It is very appealing.

R: The thought of making money is appealing. What about the parents? What kinds of programs do you have for the parents? Do you have anything here to let them know about the career center?

P: No, we really don't. That's probably something that we should do a better job at too.

R: Parents are powerful.

P: They really are.

R: Once they know about something, then they are in a position to do something. I just feel like the career center is almost like a secret.

P: Oh, it is. I've said this since my years up there. It is the best kept secret in Russell County. And I sincerely mean that. I'm not just saying it because of anything that I did or anybody before me or anything like that. I just see the kids that go there and I see the success stories from it, and it's working. And it's a good thing for a lot of people. It's just sad that more people don't realize the opportunities that they have by going there.

R: How is that fair? How is that fair to everybody else to not know about something that is very obvious, sitting up there on that hill, not to know what's going on up there in those two buildings?

P: I guess that really comes back to us. We need to do a better job of promoting what that is.

R: Yes. You're in an especially unique position having been the principal of that school. You know what goes on there now. I know you have a ton of responsibilities here. This job takes a lot of time.

P: It does.

R: But I'm wondering. You have a perspective that the others can't have. You watch the students. Do you ever say anything to the students like "hey, you might want to?"

P: Oh, yeah. I talk to the students about it. I tell them how good it is and how if they are thinking about it they should go try it. "If you don't like it, you can always come back." Yeah. I talk to them, and I encourage those kids who are thinking about it.

R: Do they go?

P: Some do. And again, I think the bottom line is the stigma attached to the career and technology center.

R: We can't get past that, can we? Or at least we haven't been able to so far.

P: It's like I don't know if those kids are criminals or Maybe that's a bad word. But I think they think less of them. Those are good kids. They really are good kids. It's just that they are different from what we consider to be a traditional student. They're just different, and there's nothing wrong with that. I just wish other kids would realize that it's okay to be an auto mechanic. It's okay to be a cosmetologist. It's okay to work in the food industry. It's okay because you know what? The funny thing is that there are going to be a lot more kids that go into something like that than are going on to get their college degree. And kids who are not taking advantage of it are some of those kids.

R: So we need an open-mindedness that we don't have yet because you and I, your family, you know what you want your son to do. It's not that, is it?

P: No. And that's true.

R: And for my kids, too, it was not that. I know my son begged to go there. I couldn't work it into his schedule. And then we had the other issue of perception.

P: Yeah. And I think that's the barrier. I mean, you want to talk about barriers and this and that, but the barrier is what the career and technology center is to others.

R: I agree. When you were up there at the career center, what courses did you see the girls taking predominantly?

P: Most of the girls were in cosmetology, culinary arts, criminal justice, vet assistant, nursing.

R: And what about the boys?

P: The boys were more toward auto mechanics, auto body, welding, masonry.

R: Why do you think the girls were taking those courses because you and I know that culinary arts is non-traditional for girls. Why are they taking that? Why are they in larger numbers in culinary arts? They just don't know, do they?

P: No. Again, I think it is what people think. This is what boys do, and this is what girls do.

R: Right. If a student "jumps ship" and goes over into another program that is non-traditional, what are they essentially doing to themselves?

P: Well, they are putting themselves out there.

R: They also may be securing their future.

P: But a girl going into auto mechanics ...

R: Can she get a job?

P: Yeah. I do believe that she can get a job, but ...

R: Around here? Can she get a job?

P: That's where I was going. I think it's got to be the right situation because I think she can get a job, but it goes back to that thing that the best auto mechanics are men. And that's not the case. (16:41). That's not the case at all because a girl can be as well qualified or better qualified than, but again it goes back to mechanics are men. Women do hair, not men. And it's just a mindset that has to be broken.

R: So this whole thing, say with culinary arts, that's confused then, isn't it?

P: Yeah.

R: So that goes back to families, doesn't it?

P: Yes. A lot of it is tied to, especially in our area I think in the more rural areas you see a lot more of the everyone does the traditional because it's the values. It's the way people were raised. It's the way we think here. I think when you get in to more metropolitan areas, like the Richmond area and places like that, you probably have a much more diverse situation.

R: More opportunities.

P: But I think it's a different mindset. The way we think.

R: If a girl completes the welding program and has the two-year certificate, could she get a job around here?

P: Well, yeah. She could get a job, but it's going to be It would have to be the perfect situation.

R: Isn't there something called Samuel's around here where they hire people. Right here in town. Maybe just across the road.

P: I don't know.

R: People have mentioned it, and I didn't know whether they had welding positions or not. That's come up a couple of times. Not in regard to auto but welding. I'm getting some feedback that girls are good at masonry. Masonry is heavy.

P: Very heavy.

R: Can girls do that?

P: Yeah, they can.

R: What kinds of jobs can they do in masonry because it seems to me that unless you're quite sturdy, it could be...

P: Of course, the good thing about masonry is that you do have workers who carry the brick and the block and all that stuff so that could be a benefit to them. But, honestly, in my experience, girls can do just as much as guys can in those fields; and guys can do just as much as girls can in their fields. It's just one of those things that you've got to be willing to put yourself out there and take the leap of faith and say I don't care what people say about me and do it.

R: Do you think that high school students are in a position to do that? Do they have the courage to do that? Let's say that they don't have a tradition in their family of auto body or auto mechanics or any of these others, would they have the courage? Can they do this because they have a lot of other pressures, too.

P: I think a lot of it depends on the individual, and peer pressure is real. It's not something that is fake or made up or anything like that. Kids can be mean. Kids can be cruel.

R: Well, you're working in the center of it.

P: And so, it takes a pretty strong-minded person who really believes in themselves and what they can do.

R: If a parent were to come to you and say, "Mr. _____, I would really like for my child to go to the career center. What would you recommend?" How would you deal with something like that?

P: I would say that it is one of the best decisions that you ever made.

R: How would you help them make the specific choice of what to take?

P: And then I would sit down and say, "What are you interested in? What are you wanting to do? What are your career aspirations?" And then you try to lead them into the program that you think they would be the most successful at. (20:47).

R: How do you think this whole perception that "we will send our weaker students to the career center" got started with this particular school? I mean the career center.

P: I don't know. I just think that I really don't know. I don't have an answer for that. I just think that something, well, we'll just send them there. I'm not saying that was the attitude, because I really don't know. I wasn't around, but I just think that it was somewhere like, well, that's something they can do and somewhere they can go and ...

R: So, there's a perception that hands-on is not something to do with the brain?

P: I think so. I think that's changed a little bit. It's not perfect by any stretch, but I think it's gotten better. There's still such a long way to go. This thing that we think those people cannot do. You know, if somebody builds a house, they have to be quite bright.

R: Yes, you do. There is a lot going on.

P: A lot going on with that. It's not just putting a nail in a piece of wood.

R: Do students understand how much math is involved?

P: I don't think they do until they get their hands on it and start talking to the teachers and understand that math has a lot to do with this.

R: And the same thing with cosmetology because we're looking at a lot of chemicals.

P: It's a lot of chemistry involved.

R: And there are those of us who would prefer that they not make a mistake.

P: (Laugh).

R: That would be pretty bad.

P: Yeah. Just like you said, there's a lot of chemistry involved, and you have to know how to measure and how to put the right chemicals together. It's not just let's put this together and see what happens.

R: When you're dealing with human subjects, you don't want to make a mistake.

P: You have to be bright, and I don't think people understand.

R: But that's a different kind of brightness, isn't it?

P: Yes, it is.

R: It's a perception of brightness and application.

P: Yes.

R: I've heard it said that girls are really good in welding and masonry, and it's because they are very particular and detailed.

P: Sure. They want it to look good. They know how they want it to be, and they expect it to be that way.

R: When you were at the career center, did you go into the shops?

P: Every day. (23:34).

R: Oh, everyday? Did you pick up on any dangers?

P: Well, I think anytime you're working with tool and equipment there is a risk there. All the kids have to take safety tests. All the kids have to be trained on all the tools, all the kids have to go through certain criteria before they even get to start working with those tools. And the teachers are good about who is good with this and with that so. But, yeah, you always worry about that because working with saws and stuff like that, the worst things can happen. You just

pray that it doesn't. Fortunately, I never had that, but most of the times the teachers are pretty good about making sure they avoid the hazards. And if the teacher identifies a student who is very limited, we do not let them use the tool.

R: Take them out of the class?

P: Yeah. If we don't take them out, then we are really limiting them to what they can do with the tools that we let them handle and work with. Sometimes we move people to another class because we feel that it would be better for that individual.

R: Do you have to go through parent approval to do that?

P: We do, and a lot of times there are IEP's involved with these students. So, you have to go through that whole process to change the IEP and put them back into another class. Parents are obviously involved in it.

R: How do the parents do with that?

P: Most of the dealings that I ever had they were okay with it. I don't remember much resistance.

R: When students complete a two-year program, what do you see them qualified to do? Let's say they completed welding or cosmetology or CNA.

P: We always encouraged, and when I say we I include Mrs. _____, let's say that they want to be a welder, to go on to the community college. Or to another school to further their skill level and you could see that person in the next two or three years making lots of money.

R: They are not committed to a four-year program when they go to the community college. It could be a certificate or an associate's degree or something like that. My understanding is that they have dual enrollment with the community college.

P: They do. They have dual enrollment at the career and technology center with the community college, and they have been great to work with. I wish all the kids that go up there would take advantage of the community college because I think it provides another avenue of opportunity for them.

R: I need to be careful here because I don't want to use up all your time. How did the boys, and I'm sure that you saw this, feel about a boy taking cosmetology? Did you ever see any reaction from the boys at the career center?

P: You know, honestly, I think not really. Now do I think they think things? Probably. But did we ever have any I can't recall any... I think most of the time kids know kids, and they know who they are, and they are more accepting.

R: You didn't see bullying or anything like that?

P: I'm not going to say that it didn't happen, but to say that I actually saw it or dealt with it, not really.

R: What about a girl going into a welding class?

P: Never.

R: Do you think the instructors would have to change their instruction in any way if they had a non-traditional student?

P: No.

R: Nothing.

P: No. A student is a student.

R: How did the instructors feel about having a non-traditional student?

P: Never had anybody ... They were always very accepting of every student that they had in their class. I'll use welding and Mr. _____. He encouraged girls to take his class.

R: When would he have the opportunity to encourage anybody?

P: When we bring them in for the tours of the building, and when they would come in, he was, I don't care if you're a guy or a girl, whatever, come take welding. The teachers encourage it. It's not ... I will say that about everybody up there. Those teachers there are really proud of that school. They've really got a pride about it.

R: Do they ever come here (high school) or to the other two high schools? I guess it is hard to get away.

P: It's hard to get them to go. The placement director and I used to take one or two with us to the schools, but like I said, it is hard to get away.

R: Well, that's true. You would have to get another instructor to take care of the class.

P: But when we do go to the schools, they promote their programs.

R: What do you do about the parents? Do the parents come in for a program?

P: There is an open-door policy for the parents. They can come.

R: Do they ever come to observe?

P: Rarely.

R: It's still that secret thing, isn't it?

P: Yeah. The sale is with the kid. You've got to trust that the kid will probably go home and talk to Mom and Dad and then you might get a phone call. Johnny came home today. He said he visited auto mechanics.

R: When you and the placement director and an instructor went out to recruit, did you ever take a student with you? Somebody who had graduated from a program.

P: We actually took people who were working in the industry to talk with us. We tried to be as innovative as we could as far as selling the programs.

R: To have the impact. Students listen to other students.

P: They do. And it is better to listen to someone working in that field rather than listen to me talking about it. It's a little bit better share.

R: Right. But I remember that you had a high level of enthusiasm when you were there (career center). So positive about the programs.

P: Yes.

R: What about the programs' instructors? I've noticed that some of them are non-traditional. Let's say they are non-traditional for the program they are in. And I'm thinking specifically about criminal justice, a non-traditional instructor. Who does that impact? Is that good or bad?

P: I think it is an easier sell for your program for sure. When girls see that she is doing this for a living, then I can do this too. So, as far as selling the program, I think it makes it a lot easier. Without question.

R: How difficult do you think it would be to have a welding instructor? Would that attract the same population?

P: Yeah, I think it would change the demographics a little bit.

R: Do you think students would still enroll?

P: I do. Most of the time those kids like something specific. I don't think it is necessarily the instructor. It's the field. And a teacher, you've got to prove yourself anyway. Whether you're a female or a male, whatever. So, if it's a man or a woman, whatever, if you go in and prove yourself, I don't care, you're okay.

R: The neat thing is that all the instructors seem to have done that. They seem to be the right choice for the job.

P: Yeah. The people that they have up there right now are really phenomenal in their field. And they are people who were making good livings before they came into education. But I think when kids see somebody like their teacher who has such a passion, then it makes a difference and creates a passion in you too. You know, if you show up and you hate what you do, it is going to show.

R: At the graduation the instructors seemed to be as proud as the students.

P: Oh, yeah. They really are. Like I said, it's the best kept secret around.

R: And it continues to be a secret that needs to be shared with a lot of people. I think we've touched on this, but I'll ask it again. Why do you personally think that boys and girls do not enroll in non-traditional courses at the career center?

P: Kids don't like to be ridiculed and made fun of, to be talked about. None of us. Not just kids. That's the human nature. So, I think it just steers kids away, and it's unfortunate. You've just got to do the best that you can encouraging the kids to do what you want to do and be who you want to be. No matter what anyone else thinks.

R: Talking about the high school being the lifeline. This is the population that the career center draws from. It sounds like something done here has the potential to change things out there. But there is another issue too. How much do we want those programs to grow other than the shift being to not having non-traditional? Just everybody take what they want to take. There's a limit to what they can serve in each of those shops.

P: There is. I think it is like 20 to a class. So, you're already saying that this is the number we can take.

R: Did you have a waiting list?

P: We did. We had kids who wanted into certain programs and what we did with those kids is normally with freshmen we would say that if you would stay with us, take another program, next year we will give you first choice.

R: So, you gave them that priority?

P: We did. And a lot of the kids when you put them in another program would kind of start liking that program so they would complete it and maybe then come back and complete the other program. So, you kind of serve two purposes, I guess. Something that they didn't even think about before. Then they got in there, and they kind of liked it so they wanted to keep doing it.

R: Again, it's the secret because they didn't know about those programs.

P: It is.

R: How do relationships fit into this? I'm thinking girl's best friend kind of things. Boys and girls. Boyfriend/girlfriend. How does that impact how people go into non-traditional programs?

P: Well, that's probably the best seller you have. Really. If you can get a buddy to come back and say, guys, this is a great place. I think you would enjoy it.

R: So, they are doing their own advertising?

P: Uh-huh. I think that's the best sell you can have.

R: Do you remember any programs at the career center that were longer than two years? Was there anything that went longer than that?

P: No. We had kids who would come back for a third year, but they graduated after they completed the two-year program.

R: What does the third-year person do?

P: Helps the teacher, kind of like another instructor. Kind of helps the other kids and is just somebody else there. But they work like any other student and increase their skills. They are just getting better and enhancing their skills.

R: Can everybody who graduates from the career center get a job? If they completed the two-year program and graduated, can they pretty much be guaranteed a job?

P: I'm not going to say that it will be here in _____ County, but I think they can get a job.

R: We may not have enough jobs around here.

P: Yeah, because it's limited what we have here.

R: Do you recall when you were up there (career center) people calling and asking for a welder or a mason?

P: Yeah. We had that. People would call and say, "Do you have anybody who might be interested in a welding job?" We actually had kids that once they completed would go to work. That happened pretty regularly.

R: But you don't let them take those positions until they graduate?

P: No. No. They have to finish, and those employers don't want those kids until they do finish.

R: Right. For a lot of reasons.

P: Yeah, we had that and that's a good thing.

R: Yes, it is. People calling up there and feeling that they can contact the career center.

P: And that they are confident enough about what we're training those kids that they would want to employ them.

R: Did that apply only to things like welding, masonry and maybe auto body? Did you ever notice anything with cosmetology or?

P: Yeah. We have a lot of girls who after they complete their second year, they get their licenses. And actually, in cosmetology, we had more to go to work than in any other program.

R: Did anybody call up to the career center and say we have a position and we sure would like to get somebody?

P: I don't recall anything for cosmetology, but those kids really go out and find their own once they get their licenses.

R: They can set up on their own, can't they?

P: Yes, they can.

R: Like a chair in a place?

P: Yes.

R: What percentage of the students who finish at the career center would ever move away?

P: Pretty low.

R: Yes. They are going to stay here, aren't they?

P: Those kids are from families who have lived here all of their life. I don't know. You wish that they would go find their way and look for other opportunities, but it's a low number. I don't know the exact number.

R: Even if they go to the community college and they get even more education, more than likely they will stay here.

P: Yes. A lot of those kids have never really been away from home. I don't think they know the world outside of here.

R: What are some ideas that you have for increasing the numbers of boys and girls who enroll in non-traditional programs at the career center?

P: One, you have to educate the schools as to what the program is and what you would like to see and encourage the guidance counselors to steer kids toward those programs.

R: What do you have to do to familiarize the guidance counselors with the programs?

P: I think you just have to educate. The guidance counselors at the high schools are not geared to vocational thinking. They are worried about kids graduating and where they are going to college. And that's okay because that's what you're supposed to do. But the career and tech center has to really let those people know we are looking for some girls who might be interested in welding and you can help us with that. When you're talking to those kids, let them know that we want them in welding, we want them in building trades, we want them in masonry.

R: We're talking about a big job to do something like that. You're talking about the whole county. All three high schools. And actually, the middle school. How soon do you think we ought to be telling students about what's available at the career center?

P: I think one of the best things we ever did when I was there was the afterschool program. And we would actually bring kids from the middle school to our school, and we had instructors that would actually take classes there. They lasted about an hour and a half a day, and it was a year-long program. Students were in the classes for a semester. 15-16 weeks.

R: During that time, they took one class such as welding?

P: Yes. And the next semester they could take something else.

R: Kind of like an abbreviated two-year program.

P: Exploratory sort of thing. The earlier you can expose those kids to that and get rid of some of the stigmas associated with it, because those kids are never really exposed to the career and tech center until they are in high school and by then it is hard to change somebody. If you can capture those kids when they are younger, and let them see, hey, this looks pretty fun. I might like doing something like that. I think you've got a better chance of getting those kids than if you wait until later.

R: And make sure that they understand that college is still an option for them.

P: Yeah. And we always told them that too. Always. Just because you go to the career and tech center doesn't mean that you can't go to college.

R: Do parents understand that?

P: I think some do, but most don't. I think they think that if you go to the career and technology center your life is over in education. To me it only increases your resume. It makes things look that much better.

R: If you could start here with the parents and explain that this is free.

P: Yes. We probably need to get more involved with the parents to let them understand what career and tech really is.

R: And they pick up on that word free too. It won't be free when students go to the community college.

P: Well, there are always scholarships. There's something with being considered a career and technical student. What I always told the students that if you're taking any business classes, and of course everybody would raise their hands, guess what? You're a career and technical student. But the only difference is that you do it at your high school. Right? And you don't get to come to the career and tech center.

R: At one time I think they did have academic classes out there. A long time ago. Space and teachers limited that. In your current position here at the high school, how do you feel like you could implement some of these things that you're talking about? Programs for parents? Programs for students?

P: I think that if we could get the parents into the building, that's the hard part. The selling part is easy. It's getting them into the building. That's the problem. So, in that sense we have to get kind of creative with them.

R: And show that when a person completes a program, this is what they are qualified to do. And this is what they can make. And they could still live around here.

P: And go to college. Still be a doctor if you want to. It's not an end of the road type of deal if you go to the career and technology center.

R: If you're in building trades, you might be able to do some work on your own house. Girl or boy, if you're in cosmetology, you can fix your own hair if you want to fix your own hair.

P: Exactly.

R: And save a substantial amount of money, too. I'm watching the time because I'm keeping you a long time. Looking at the strategies and ideas, they go together. Regarding the barriers, how do we remove the barriers?

P: You have to continue to educate. The only way you can be informed is through education. I think everyone in the school system, from the parents to the students to the guidance counselors to the teachers. All of the stakeholders who are involved. They have to understand what career and technical is.

R: Have there every been any programs here for the administrators about what career and technical education is?

P: Not that I'm aware of.

R: So, they could theoretically come into an administrative position and not have knowledge of CTE whatsoever?

P: If you think about it, most principals have been involved in some kind of academic theory so their knowledge of career and technical is pretty limited. They are dependent on guidance counselors to pretty much take care of those kids for the most part.

R: But like you said, only 25 percent of kids go to college and get a degree. The workforce is waiting for the other 75 percent to fill the jobs, and our role as educators is to get students out there so they can take care of themselves. Wouldn't it seem sort of natural for the administrators to have that level of knowledge?

P: It would. It makes common sense to me, but I've lived in that world too. So, it means a little more to me than to someone else. And I don't mean that in a derogatory way. I just think that I've seen it work. I know it works. And I know that there's kids that can benefit from it. Now we've just got to convince the kids that they can benefit from it.

R: Right. Prior to going to the career center as an administrator, what did you know about CTE?

P: Very little. I learned, and I learned what I wish I had learned a long time ago. I was one of those people who had his own ideas about what it was, and I probably had that same perception that a lot of people do. I mean I did. As people we are programmed to believe things, and we would like to believe a lot of the things that we hear. When you actually live something, you see how it actually works. Your perspective totally changes, and I saw that school. I saw the good that it did for so many people and the passion that those teachers have and really everyone associated with the career and tech center. The passion that they have for it. It works. It really does work. And I'm not saying that it gets everybody. There is some people that I wish them the best. I don't know what would work for them. But for the most part the people who go there are better because of it and I truly do believe that.

R: Was there any one individual who really gave you the full picture of CTE, who helped you to truly understand CTE?

P: Yes. _____. He was the principal when I was the assistant principal. And he is probably one of the brightest people. Quietest and the brightest. He never said a lot, but when he did say something, it was profound. He understood CTE and he understood those kids. He was pretty influential on me.

R: You were an interesting balance, weren't you? The person who had been there for quite a long time and knew so much about it and the new fellow comes in and doesn't have a background in CTE but a whole lot of energy.

P: Yeah.

R: And related to the students really well. It must have been an interesting relationship.

P: It was, and the thing that I appreciate is that he let me learn and fail on my own too. He didn't tell me you don't do this, this, this and this. It was kind of trial and error. When I would mess up, he would laugh at me. He knew I was going to mess up. But for me it was a good thing. And he let me learn how things work and things that I need to do, and he let me be my own person and there is a lot to be said for that.

R: He knew how to give you space.

P: He did. And still be in charge. It was his show, and that was fine. He knew his stuff. He really did. When he retired and you transitioned to be the principal, did you find that it was not a bumpy road but kind of smooth?

R: Yeah. It was probably one of the easiest transitions that I could ever have, but I think it was because of what he did those first three years that I was there. I knew what to expect. I knew how things worked. He let me do a lot of the stuff, so the transition was smooth and easy. I appreciate him for that. He's somebody special to me.

R: As we conclude this, is there anything that you would say about the career center that we have not covered so far? Any comments that you would make about the career center, how it works, and how it serves?

P: I think it has such a place for the people here in _____ County. And I say that without hesitation or reservation. It is a great place. People really need to go and experience it. Go visit it. And I'm not just talking about the people who have kids there. People who don't know what it is. People who think they know what it is. Those people need to go see what those kids are doing every day. They need to go see what those teachers are doing every day. And I think it would be pretty eye-opening.

R: The secret would disappear.

P: It really would.

R: Thank you very much.

54 minutes.

Appendix L: Demographic Information Form

Thank you for supplying the following demographic information. Please answer the questions as they pertain to you. Your answers will contribute to the research study “**Perceptions of Selected Stakeholders Regarding Enrollment in Career and Technical Education Courses and Programs that are Non-traditional by Gender.**”

Note: Please do not include your name.

1. Occupation _____
2. Location of home (circle one)
_____ Other
3. Primary ethnicity (circle one)
 - A. African American
 - B. Asian American
 - C. White, non-Hispanic
 - D. White, Hispanic
 - E. Middle Eastern
 - F. Other _____
4. How long have you lived in Coalfield County? _____
5. How long has your family lived in Coalfield County? _____
6. Did you attend school in Coalfield County? _____
7. If you are currently a student, how many years have you gone to school in Coalfield County? _____
8. If you are an adult, how many years did you go to school in Coalfield County? _____
9. Did your parents attend school in Coalfield County? _____
10. Did your grandparents attend school in Coalfield County? _____
11. Did you graduate from high school in Coalfield County? _____
12. Did you attend Coalfield County Career and Technology Center? (circle one).
Yes No
13. If yes, what classes did you take? _____
14. Did you complete a CTE program at the Career Center? (circle one). Yes No
15. What CTE program did you complete? _____
16. How long did you attend the Career Center? _____
17. Are you currently using skills you learned at the Career Center? (circle one) Yes No
18. What CTE skills are you using? _____
19. If you are employed, where do you work? _____
20. Marital status (circle one)
 - A. Married
 - B. Divorced
 - C. Separated
 - D. Never married
 - E. Other

Thank you for your responses.