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College of Education

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Abstract

This qualitative case study investigated how the attitudes and perceptions of Career and Technical Education (CTE) teachers toward students with disabilities influenced inclusion in CTE courses. The purpose of this study was to explore how positive or negative experiences of CTE teachers toward students with disabilities impacted the number of students accessing CTE courses. Fifteen high school CTE teachers, along with a focus group of six high school CTE teachers were interviewed. Results of this study revealed that despite positive attitudes toward inclusion in CTE courses, CTE teachers felt unsupported by special education and reported they felt CTE was being used as a dumping ground by counselors placing students with disabilities into any CTE course to fill students' schedules. Lack of professional development by special education to provide support to CTE teachers led to frustration. Additionally, study findings indicated that without the skills to educate students with specific disabilities, CTE teachers awarded passing grades of 70, even if the students had not completed the work earning a passing grade. It is recommended further research is needed to investigate the postsecondary outcomes of students with disabilities who were given credit for a CTE course and the rate of success for postsecondary education and employment.

Keywords: Career and Technical Education (CTE), inclusion, students with disabilities, teacher attitudes and perceptions, special education, grades

Dedication

I dedicate this dissertation to my parents who taught me I could do anything and be anyone at any age. My mother continues to be a model for kindness, strength, and love. To my father who has left this earth, I love you Dad.

To my adult children to whom I have modeled the idea that “you are never too old” to pursue your dream, I also dedicate this dissertation. Matthew, thank you for your encouragement and for taking care of the house while I worked late nights at the computer. To Aunt Nancy, who was more of a sister than an aunt and her never-ending encouragement, kept me believing I could do anything. To my brothers and sisters, including Martin, thank you.

To my many dear friends, some who have left this earth, and others who continue to support me across the finish line, my sincerest and heartfelt appreciation and dedication that we all share in making the world a little less crazy place in which to live. Never give up, never surrender!

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Thank you to all the CTE teachers who took the time to share with me their thoughts and experiences in teaching students with disabilities. I learned special education teachers are not the only educators with a heart for students with disabilities.

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Chapter 1: Introduction

Almost 25 years ago, in 1994, Dan Fornero, a high school vocational computer programming teacher, wrote an article in the *Vocational Educational Journal* about special needs students being too needy. “If legislators and educators insist that special-populations students be included in vocational-technical programs, then let them develop programs appropriate for students who can read and write at a fifth-grade level” (Fornero, 1994, p. 62). Research is needed to discover if this attitude still prevails, along with other attitudes of Career and Technical Education (CTE) teachers impacting their perceptions of students with disabilities’ ability to successfully perform in a CTE course.

In Texas, students who identify as having a disability and who meet eligibility for special education services have a meeting once a year to review and update their progress on their Individual Education Program (IEP). The planning meeting is called an Admission, Review, and Dismissal (ARD) meeting (The Legal Framework for the Child-Centered Special Education Process, 2018). One of the required members of an ARD meeting is anyone who may provide information on future educational programming, including a CTE representative, preferably a CTE teacher. As part of the ARD committee, a CTE teacher provides information to the ARD committee on CTE courses and any relevant information allowing the ARD committee to decide educational placement of the student in courses.

In 2013, the Texas state legislature passed House Bill 5 (HB 5), which restructured the course of study needed for students in Texas to earn a high school diploma. A portion of HB 5 required the “SBOE [State Board of Education] to adopt rules that allow elective credit requirements to be met by successful completion of advanced CTE courses, including those that

lead to a certification or an associate degree" (Aycock, 2013, p. 2). The Texas Education Agency (TEA) defined CTE programs as a "sequence of courses that provides students with coherent and rigorous content. Content for CTE courses is aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare students for further education and careers in current or emerging professions" (TEA, 2017, para. 2). With increased accountability for districts to meet the new requirements of HB 5, teachers including CTE teachers may feel they are unprepared to teach students with disabilities in more rigorous courses designed to prepare students to earn an industry level certificate or licensure. Researchers have found that general education teachers are not as positive toward educating students with disabilities in their classes as special education teachers (Casci-Noethig, 2015; Parker, 2009; Satterwhite, 2015; Shady, Luther, & Richman, 2013).

Background of the Study

In March 1979, the U.S. Department of Health, Education, and Welfare issued the Guidelines for Vocational Education Programs. These guidelines contained not only explanations of how civil rights laws and Department of Health, Education, and Welfare regulations applied to vocational education programs but also how these guidelines would be adopted by the states. The Guidelines for Vocational Education Programs were written in response to injunctive orders rendered from the United States District Court for the District of Columbia and because the Department of Health, Education, and Welfare found "evidence of continuing unlawful discrimination in vocational educational programs" (p. 2). The expectation for the Guidelines for Vocational Education Programs was that it would contribute to "bringing an end to unlawful discrimination against persons seeking the skills necessary for gainful

employment" (p. 5). In 1979, there was no available information on enrollment of individuals with disabilities or minority groups in vocational programs. Today, in Texas there continues to be a lack of data on how many students with disabilities participate in CTE courses. The U.S. Department of Health, Education, and Welfare (1979) stated that any entity or any individual receiving federal funding,

> may not deny handicapped students access to vocational education programs or courses because of architectural or equipment barriers, or because of the need for related aids and services or auxiliary aids. Academic requirements that the recipient can demonstrate are essential to a program of instruction or to any directly related licensing requirement will not be regarded as discriminatory. However, where possible, a recipient must adjust those requirements to the needs of individual handicapped students. (p. 12)

Before HB 5, students with disabilities learned job skills, interviewing skills, and some social skills needed to work part-time, entry-level employment in entry-level workplaces like fast food restaurants and grocery stores through specially designed instruction taught by special education staff in either an Occupational Preparation class or on-the-job training, also known as Vocational Adjustment Class. In Texas, HB5 eliminated the course numbers associated with special education vocational classes. Vocational classes in areas such as occupational preparation, marketing, daily living, and on-the-job training were removed, leaving districts without options for vocational training except for CTE courses.

The term *inclusion* is not defined in any federal law but has been developed by educators in efforts to meet the federal requirement that students with disabilities be educated in the Least Restrictive Environment (LRE). State educational agencies, county offices, and districts may

interpret *inclusion* under the terms of *mainstreaming, integration*, or *full inclusion*. For this qualitative case study, inclusion was used in the context of students with disabilities' participation in CTE courses alongside their nondisabled peers. Teacher attitudes play a role in accepting students for inclusion (Ross-Hill, 2009).

Context of the Study

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) was signed into Reauthorization by President Obama in 2012 (Dortch, 2012). One of the goals of this reauthorization was to have a more effective alignment of CTE programs with labor market needs and high-growth industry (Dortch, 2012). Perkins IV is the primary source of specific federal funding for CTE (Dortch, 2012). The purpose of the funding is to develop the academic and career/technical skills of secondary and postsecondary education students who elect to enroll in CTE programs that prepare students for high-skill, high-wage, or high-demand occupations (Dortch, 2012).

The reauthorization of Perkins IV recommended the CTE programs of study link to the requirements of the labor market through rigorous standards for academics as well as technical achievements (Dortch, 2012). Advance CTE, formerly the National Association of State Directors of Career Technical Education Consortium, believed that the reauthorization of Perkins IV would build upon this vision of rigorous academics and technical skills to strengthen the law's focus on ensuring that students "have equitable access to high-quality CTE programs of studies" (p. 1). If CTE courses as mandated by Perkins IV increase academic rigors to meet the new requirements under Perkins IV, students with disabilities may be perceived as unable to meet the higher academic expectations in their classrooms and may not be allowed enrollment in

the CTE class (Casale-Giannola, 2012). Research is needed to discover if the demands of increased academic rigors of CTE courses influence the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in CTE courses.

Conceptual Framework

Social constructivism was the framework for this case study. Social constructivism allows individuals to seek understanding of the world in which they live and work (Creswell & Poth, 2018). Case study research as part of this framework allows a researcher to explore the attitudes and perceptions held by CTE teachers toward students with disabilities. Creswell and Poth (2018) noted that, in social constructivism, "rather than starting with a theory (as in postpositivism), inquirers generate or inductively develop a theory or pattern of meaning" (p. 24). Lincoln and Guba (1985) are credited with first applying the basic tenet of constructivism as "reality [that] is social, culturally, and historically constructed" (Bloomberg & Volpe, 2016, p. 42). This qualitative case study explored how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses.

Statement of the Problem

Students with disabilities are not accessing CTE courses at the same rate as their nondisabled peers (U.S. Department of Education, 2018). Students with disabilities are leaving high school unprepared for the workforce and postsecondary education (Lee, Rojewski, & Gregg, 2016; Trainor, Smith, & Kim, 2012). CTE courses can provide both vocational and academic skills in preparation for work or college (Casale-Giannola, 2012). Research has shown those general education teachers have a higher level of negativism toward inclusion of students

with disabilities. This qualitative case study focused on the problem of how CTE teachers' attitudes and perceptions of students with disabilities influence their views on inclusion.

Purpose of the Study

The purpose of this qualitative single case study was to investigate the perceptions and attitudes of CTE teachers toward students with disabilities and inclusion. This case study focused on the CTE teachers in a high school in Texas. Despite increases in inclusion offerings in core content subjects (English, science, math and social studies), students with disabilities are not accessing CTE courses at the same rate as their nondisabled peers (U.S. Department of Education, 2018). In studies of inclusive classrooms, teachers' attitudes toward students with disabilities have not always been positive (Casci-Noethig, 2015; Parker, 2009; Satterwhite, 2015; Shady et al., 2013). I investigated whether the attitudes and perceptions of CTE teachers in a high school in Texas were influencing enrollment of students with disabilities in CTE courses.

Research Questions

The purpose of this qualitative case study was to explain how CTE teachers' attitudes and perceptions toward students with disabilities influence inclusion in CTE courses. The questions used to guide the research were as follows:

RQ1: How have the experiences of CTE teachers with students with disabilities in or outside of the classroom shaped their attitudes and perceptions of students with disabilities and inclusion in CTE courses?

RQ2: How do the attitudes and perceptions of CTE teachers as part of an ARD committee influence their decisions and recommendations for placement of students with disabilities in CTE courses?

RQ3: How do the increased academic rigors of CTE courses to meet the Texas standards for college and career readiness for all students influence the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in their CTE courses?

Rationale for the Study

Studies showed the value of CTE classes for students with disabilities when it comes to postsecondary access and success in continuing education or vocational training and employment. These elective courses offer job skills, training, and social skills needed to maintain employment and other soft skills needed to compete with nondisabled peers for better-paying jobs and careers (Lee et al., 2016). CTE pathways offer certification or licensure opportunities which increase postsecondary outcomes for higher education and employment. Wagner (as cited in Lee et al., 2016) "found students with disabilities in occupationally oriented secondary vocational education had a greater likelihood of obtaining paid employment or enrolling in postsecondary vocational education after high school than peers with disabilities who had not participated in these programs" (p. 80).

In this case study, I investigated how the attitudes and perceptions of CTE teachers affect their attitudes towards students with disabilities in a CTE course. The information gathered from this research may be critical in developing strategies to improve teacher efficacy in educating students with disabilities, resulting in more students with disabilities enrolling in CTE courses.

Relevance of the Study

As part of special education services, a local education agency is mandated by the Individuals With Disabilities Education Act (IDEA) of 2004 to provide postsecondary transition

services. As part of transition services, a course of study is developed to include coursework needed for students with disabilities receiving special education services to progress toward meeting employment, education, training, and independent living goals. When addressing the career goals of a student with a disability, the ARD Committee must consider how CTE courses are viewed by the ARD Committee when developing the student's course of study. According to the U.S. Department of Education (2018), in Texas for the 2016–2017 school year, of the 1,337,230 students in secondary high school CTE concentrator programs, only 111,057 were students with disabilities. The Texas Administrative Code stated that "a student with a disability shall have access to career and technical education in accordance with the provisions of the Individuals with Disabilities Improvement Act (IDEA) of 2004" (The Legal Framework for the Child–Centered Special Education Process, 2018). Research was needed to investigate how CTE teachers' attitudes and perceptions are influencing students with disabilities access to CTE courses.

Significance of the Study

Research has shown that students who have participated in CTE classes acquire technical and academic skills preparing them for postsecondary education and employment (Grindal, 2013). Grindal (2013) stated that "prior work indicates that students with disabilities who enroll in CTE are more likely to be employed as adults and once employed, earn higher wages" (p. 2). The Association for Career and Technical Education (ACTE: 2018) reported high school students involved in CTE are more engaged, perform better and graduate at higher rates. Through the use of a qualitative case study of CTE teachers' attitudes and perceptions toward students with disabilities and inclusion, this research study addressed the problem of students

with disabilities either (a) not accessing the CTE classrooms or (b) not being successful in a CTE course.

Definition of Terms

Terms used in this study are defined in the context of educational settings.

Admission, review, and dismissal (ARD): In the state of Texas, an ARD Committee consisting of educators, professionals, parents, the student with the disability and any other invited individual with specific knowledge of the student, meets annually to review and update the child's Individualized Education Program (IEP).

Career and technical education (CTE, CATE): Also known as Career and Technology Education, CTE programs "offer a sequence of courses that provide students with coherent and rigorous content. Content in CTE courses is aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions" (Texas Education Agency, n. d., p. 2). Researchers use both CTE and CATE acronyms to describe Career and Technical Education courses. In the context of this study, the abbreviation CTE was used when discussing Career and Technical Education courses.

Career and technology for the disabled (CTED): In Texas, CTED courses are CTE courses taught by a certified CTE teacher for classes made up of only students with disabilities. Students earn state credit toward high school diploma and content is modified to meet the goals and objectives of the students' IEP.

Carl D. Perkins Act: Legislation was passed in 2006 called the Carl D. Perkins Career and Technical Education Act of 2006 that provides an increased focus on academic achievement

of career and technical education students (U.S. Department of Education, 2007). Carl D. Perkins is a funding source for districts with CTE programs.

Inclusion: Texas State law says that in a mainstream classrooms, "students with disabilities and their teachers [must] receive the direct, indirect, and support services necessary to enrich the regular classroom and enable student success" (Legal Framework, 2018, para, mainstream). State rules for special education provide that support services include, but are not limited to, co-teaching, direct instruction to special education students, reduction of student/instructional staff ratios and special materials/equipment (Texas Education Code, 2019).

Least restricted environment (LRE): LRE is a federal requirement of IDEA (2004) that requires local school districts to ensure to the maximum extent appropriate that children with disabilities are educated with children who are not disabled and removal of the child with a disability occurs only when "the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (IDEA, 2004).

Individualized education program (IEP): An IEP is a written statement for a child with a disability that is developed, reviewed, and revised in accordance with §§300.320 through 300.324 (IDEA, 2004). In the state of Texas, IEP meetings are called Admission, Review, and Dismissal (ARD) meetings.

Programs of study (CTE): "The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins) calls upon states to create sequences of academic and Career Technical Education coursework to help students attain a postsecondary degree or industry-recognized certificate or credential, otherwise known as programs of study (POS)" (Advance CTE, 2012).

Transition planning: Transition planning is part of the student's IEP meeting where the IEP team (called the ARD committee in Texas) creates a vision for the future and develops annual and postsecondary goals. Transition services include creating a course of study to facilitate movement toward fulfillment of postsecondary goals (Texas Transition Student-Centered Transitions Network, n.d.).

Assumptions

The purpose of this case study was to investigate how CTE teachers' attitudes and perceptions of students with disabilities influenced inclusion in CTE courses. Assumptions of the researcher were that the participants would respond to the interview questions openly and honestly. It is also assumed that the participants were certified CTE teachers and had taught at least one course where students with disabilities were included. Since the participants openly shared their experiences in teaching students with disabilities, the assumptions that participants were open and honest with interview discussions were maintained.

Limitations

According to Gay, Mills, and Airasian (2009), a limitation of a study is some aspect that the researcher cannot control but believes may negatively affect the results of the study (p. 109). One of the limitations of a qualitative case study design using interviews and focus groups is that the CTE teachers may not provide candid responses to the open-ended questions. Participants may only provide responses they think the interviewer wants to hear about teaching students with disabilities. Qualitative research methodology by nature of the design is conducted with subjectivity and potential for researcher bias when developing the interview questions and final analysis of the research data.

Delimitations

Delimitations, as described by Bloomberg and Volpe (2016), are conditions or parameters that researchers use to limit the scope of the study. In this qualitative case study, the delimitations included the fact that participants in the case study are limited to CTE teachers on one public high school campus in Texas and that interviews are limited to CTE teachers who volunteer to participate in the study. This qualitative case study was designed to explore how CTE teachers' attitudes and perceptions of students with disabilities influence their views on inclusion in CTE courses. Statistics show that students with disabilities are not accessing CTE programs at the same rate as their nondisabled peers (Texas Education Agency, 2017). Research was needed to discover how the perceptions and attitudes of CTE teachers guide their decisions to include or not include a student with a disability in their classrooms.

Summary

Students with disabilities under IDEA are entitled to a Free and Appropriate Public Education (FAPE). Elective CTE courses provide education and training opportunities for the acquiring of trade skills needed for competitive employment, but often students with disabilities are denied enrollment. The benefits of participation in CTE courses are real-life connections and opportunities for active and cooperative learning (Casale-Giannola, 2011).

If changes are to be made to the paradigm of students with disabilities' lack of opportunities to attend CTE classes, research is needed to gain a better understanding how the teachers' attitudes and perceptions of students with disabilities affect their decisions to include or exclude these students from their courses. Simply passing a law requiring inclusion does not resolve the issue of students with disabilities being denied access to the CTE curriculum.

According to Casale-Giannola (2011), “Students in CTE classes have real-world opportunities and can take pride in their work, which heightens motivation, interest, and ambition” (p. 22). Lee et al. (2016) found success in postsecondary work may be dependent on a concentrated CTE career path versus taking random, disconnected electives. Current research in the United States has not addressed how attitudes and perceptions of CTE teachers influence students with disabilities placement in CTE courses. This case study of CTE teachers’ attitudes and perceptions of students with disabilities was needed to add to the knowledge of how CTE teacher attitudes and perceptions toward students with disabilities influence inclusion in CTE courses.

Chapter 2: Literature Review

In the United States, students with disabilities are protected under IDEA, which gives them the right to access educational opportunities in general education classes such as CTE, alongside their nondisabled peers (IDEA, 2004). The focus of this qualitative case study was to investigate CTE teachers' attitudes and perceptions toward students with disabilities to increase the knowledge of how CTE teachers view inclusion. Under IDEA, students receiving special education services are provided with transition services beginning at the age of 16; the state of Texas requires postsecondary transition planning start at the age of 14 (The Legal Framework for the Child-Centered Special Education Process, 2012). Transition planning for students with disabilities is a coordinated set of activities with a result-oriented process (IDEA, 2004). As part of postsecondary transition planning, postsecondary and annual transition goals for employment, education, and independent living are developed based on student strengths, needs, and preferences. For postsecondary transition planning,

> The LEA [local education agency] must ensure that children with disabilities have access to Career and Technical Education (CTE) class. When determining placement in a CTE classroom, the ARD committee must consider the child's graduation plan, the content of the IEP, including the consideration of transition services, and classroom supports. (Texas Education Agency, n.d., p. 3)

Special education services' transition plans include the development of a course of study designed to meet goals for education and training of which CTE may be a part (Texas Education Agency, n.d.). This qualitative case study explored teachers' attitudes and perceptions toward the inclusion of students with disabilities in CTE programs.

Study Topic

Research has shown that helping students to participate in early work experiences "may be one of the most valuable connections that teachers and other adults can help facilitate" (Trainor et al., 2012, p. 17). With limited current studies on CTE teacher attitudes and perceptions toward students with disabilities, research was needed to discover how the attitudes and perceptions of CTE teachers toward students with disabilities influence their behavior and if it impacts student participation in CTE programs.

Grindal (2013) described how CTE programs offer more than a marketable trade. As academic requirements are added to programs and curriculum, students advance their academic abilities, resulting in higher achievement on state assessments, and are more likely to become 4-year graduates rather than 5-year graduates earning a high school diploma (Grindal, 2013). Despite increased accountability and compliance with federal and state laws, there continues to be a gap between the post-high school outcomes of students with disabilities and students without disabilities (Cobb, Lipscomb, Wolgemuth, & Schultze, 2013). The goal of this qualitative case study was to gain a better understanding of CTE teachers' attitudes and perceptions of students with disabilities and how these attitudes and perceptions impact the teachers' perceived ability to teach students in an inclusion classroom. *Inclusion* is a term used to describe students with disabilities' educational placement in a general education classroom with nondisabled peers (Otero, 2012).

There are two main provisions in IDEA related to LRE. One requires students to be educated in the general education setting with their nondisabled peers to the maximum extent possible with the least amount of segregation from their nondisabled peers (IDEA, 2004). The

second requirement is that students with disabilities cannot be removed from the general education settings unless education in those settings cannot be achieved satisfactorily (IDEA, 2004; Yell & Katsiyannis, 2010). When students are removed from general education classes, there must be included in the IEP a statement that provides "an explanation of the extent, if any, to which the child will not participate with nondisabled children in the regular class" (IDEA, 2004). This researcher investigated the attitudes and perceptions of CTE teachers toward students with disabilities and how those attitudes and perceptions influence inclusion in CTE courses.

Context

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 was signed into reauthorization by President Obama in 2012; the reauthorized legislation is known as Perkins IV (Dortch, 2012). One of the goals of this reauthorization was to provide a more effective alignment of CTE programs with labor market needs and high-growth industry (Dortch, 2012). Perkins IV is the primary source of specific federal funding for CTE (Dortch, 2012). The purpose of the funding is to develop the academic, and career and technical skills of secondary and postsecondary education students who elect to enroll in CTE programs that prepare students for high-skill, high-wage, or high-demand occupations (Dortch, 2012).

The reauthorization of Perkins IV recommended the CTE programs of study link to the requirements of the labor market through rigorous standards for academics as well as technical achievements (Dortch, 2012). Advance CTE, formerly the National Association of State Directors of Career Technical Education Consortium, expressed the belief that the reauthorization of Perkins IV would build upon this vision of rigorous academics and technical

skills to strengthen the law's focus on ensuring that students "have equitable access to high-quality CTE programs of studies" (Advance CTE, 2012, p. 1). If CTE courses as mandated by Perkins IV, increase academic rigors to meet the new requirements under Perkins IV, students with disabilities may be perceived as unable to meet the higher academic expectations in their classrooms and may not be allowed enrollment in the CTE class (Casale-Giannola, 2012). Research was needed to discover if the attitudes and perceptions of CTE teachers toward students with disabilities are influenced by the changes in academic rigors within the CTE courses.

Significance of the Study

Current research shows students who have participated in CTE classes acquire technical and academic skills, preparing them for postsecondary education and employment (Grindal, 2013). Grindal (2013) stated that "prior work indicates that students with disabilities who enroll in CTE are more likely to be employed as adults and once employed, earn higher wages" (p. 2). The Association for Career and Technical Education (ACTE) reported that high school students involved in CTE were more engaged, performed better, and graduated at higher rates than students not enrolled in CTE courses (Advance CTE, 2012). In this study, the researcher addressed the problem of students with disabilities either not accessing CTE classrooms or not being successful in a CTE course through the use of a qualitative case study exploring CTE teachers' attitudes and perceptions toward students with disabilities and inclusion.

Problem Statement

Students with disabilities are leaving high school unprepared for the workforce and postsecondary education (Lee et al., 2016; Trainor et al., 2012). Providing both vocational and

academic skills, CTE courses help students with preparations for work or postsecondary education (Casale-Giannola, 2012). This qualitative case study focused on the problem of how CTE teachers' attitudes and perceptions of students with disabilities influence their participation in CTE courses. Data were collected to determine the perceptions and attitudes of CTE teachers of students with disabilities.

Organization of the Study

To better understand why students with disabilities are not enrolled in the CTE classes at the same rate as their nondisabled peers, a review of literature was conducted, focusing on studies of teacher attitudes and perceptions toward students with disabilities. This literature review includes a review of research related to the conceptual framework. The discussion of the conceptual framework is followed by a discussion of the importance of CTE programs for students with disabilities that facilitates the student's movement from school to post-school activities including employment and postsecondary education. Next, teacher attitudes and perceptions about the appropriateness of inclusion for students with disabilities in CTE classes are discussed. The link between the need for students with disabilities to access CTE programs and their lack of inclusion in these programs is the final point of discussion. Methodological issues and a critique of prior research are likewise included. The conclusion of Chapter 2 provides a summary of the findings from the literature review. The purpose of this qualitative case study was to investigate the attitudes and perceptions of CTE teachers toward students with disabilities and how they influence inclusion in CTE courses.

Conceptual Framework

Miles, Huberman, and Saldaña (2014) define a conceptual framework as "the current version of the researcher's map of the territory being investigated" (p. 20). The researcher uses the map as a means of exploring, explaining, predicting, to gain an understanding the phenomena being studied. This model guides the research design and methodology. For this case study the theory of social constructivism was used as the conceptual framework. A basic tenet of social constructivism is that "reality is socially, culturally, and historically constructed" (Bloomberg & Volpe, 2016, p. 42). According to Lincoln and Guba (2000) a constructivist researcher is a "passionate participant" as a facilitator investigating the process of interactions between individuals. In social constructivism it is the researcher's role to "understand the multiple realities from the perspectives of participants" (Bloomberg & Volpe, 2016, p. 43). This researcher investigated the perspectives of CTE teachers toward students with disabilities in CTE courses.

The Individuals with Disabilities Educational Improvement Act (IDEA) of 2004 presented a conceptual framework—social constructivism—for this qualitative case study. The purpose of IDEA (2004) is "to ensure that all students with disabilities have available to them a free appropriate public education [FAPE]" (IDEA, 2004). Not only are students with disabilities entitled to FAPE; they must be educated in the LRE. A brief description of LRE is as follows:

> To the maximum extent appropriate, children with disabilities are educated with children who are nondisabled; and [that] removal of children with disabilities from the regular

> [classroom] occurs only if the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (IDEA, 2004)

As they have tried to accommodate students with disabilities' IEPs, districts developed strategies to instruct students with disabilities meeting the requirement for LRE. The practice of educating students with disabilities in a general education setting, alongside their nondisabled peers and with supports and supplementary aids, has become known as *inclusion*. Educational programming for inclusion is not specially mentioned in IDEA (2004) but is considered a best practice in the light of the requirement for students with disabilities to be educated in the LRE (Texas Classroom Teachers Association, 2018). Statutes in IDEA (2004) do not specify or define how to determine placement to meet LRE for a student with a disability, but the student's IEP team when making educational decisions always starts with LRE.

Transition services for students with disabilities must be included in the development of the IEP no later than the first IEP to be in effect when the student turns 16 years of age (IDEA, 2004). A student's IEP must include a transition plan developed to include appropriate measurable postsecondary goals, and annual transition goal(s) based upon age-appropriate transition assessments related to training, education, employment, and where appropriate, independent living skills (The Legal Framework for the Child-Centered Special Education Process, 2018). The State of Texas additionally included more specific requirements in the area of transition for students with disabilities (Texas SB1788, 2011). In 2011, the Texas legislature passed a law requiring that "appropriate state transition planning must begin for a student not later than when the student reaches 14 years of age" (Texas SB1788, 2011, para 2).

Both federal and Texas state law require IEP/ARD teams/committees as part of the students' IEP/ARD meetings to develop and approve a course of study aligned with the students' postsecondary transition goals (The Legal Framework for the Child-Centered Special Education Process, 2018). As part of the student's course of study "Career and Technical Education (CTE) often plays an important role in the secondary transition planning process" (Texas Transition Student-Centered Transitions Network, n.d., para. 4). CTE and special education teachers collaborate to develop a student's IEP to ensure students are enrolled in CTE courses preparing them for postsecondary employment, training, and independent living (Mahadevan, Grenwelge, & Peterson, 2014). Researchers have found that students who participate in CTE have a higher percentage of employment and earn a higher salary than those not participating in CTE courses (Cobb et al., 2013). The U.S. Department of Education reported that during the 2016–2017 school year, of the 1,337,230 students in Texas enrolled in CTE concentrator course, only 111,057 were students with disabilities (Dortch, 2012). Research was needed to explore how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses.

When a student with a disability enrolls in a CTE class, understanding how a CTE teacher views the student may affect the successful outcome of their participation in the course (Mahadevan et al., 2014). Brady and Woolfson (2008) found participants with a higher sense of teaching efficacy and more years of teaching experience working with students with special needs tended to attribute student failure to external factors. Teachers with lower sympathy toward students with special needs gave greater control to students over their learning, resulting in higher student success (Brady & Woolfson, 2008). Attitudes of teaching efficacy for all

teachers, depending on the content of the course and the disability of the student, may affect the learning experience of the student in any particular class (Brady & Woolfson, 2008).

Research has shown the value of CTE classes for students with disabilities when it comes to postsecondary access and success in continuing education or vocational training and employment (Gottfried, Bozick, Rose, & Moore, 2016; Trainor et al., 2012). As part of LRE, students enrolled in CTE elective courses learn job skills and training, social skills needed to maintain employment, and other soft skills needed to compete with their nondisabled peers for better-paying jobs and careers (Lee et al., 2016). According to Casale-Giannola (2011), "Students in CTE classes have real-world opportunities and can take pride in their work, which heightens motivation, interest, and ambition" (p. 21).

Despite the changes in education law in the last four decades, students with disabilities continue to face exclusion rather than inclusion in some classes (Dortch, 2012). If there is a lack of opportunities for students with disabilities to attend CTE courses, there is a need to understand how the CTE teachers' attitudes and perceptions of students with disabilities affect their expectations of teaching students with disabilities in CTE courses. According to Marshall and Oliva (2010),

> Even in many schools that claim to be inclusive, students with disabilities continue to be viewed as "special," often merely tolerated, seen as a burden, or expected to assimilate rather than supported to be active members of the classroom community. (p. 175)

A quantitative study by Satterwhite (2015) shows that special education teachers' attitudes are more favorable than general education teachers when teaching elementary students with disabilities. Considering the value of students with disabilities participating in CTE courses to

meet their postsecondary goals as part of transition services, research is needed to explore how the attitudes and perceptions of CTE teachers impact student enrollment in CTE programs.

Social constructivism served as the framework for this case study because it allows individuals to seek understanding of the world in which they live and work (Creswell & Poth, 2018). Case study research, as part of this framework, allows researchers to explore the attitudes and perceptions held by CTE teachers toward students with disabilities. Creswell and Poth (2018) noted that "rather than starting with a theory (as in postpositivism), inquirers generate or inductively develop a theory or pattern of meaning" (p. 24). Lincoln and Guba (1985) are credited with applying the basic tenet of constructivism as "reality [that] is socially, culturally, and historically constructed" (Bloomberg & Volpe, 2016, p. 42). When looking at the educational placement of a student with a disability in courses, those individuals charged with making those decisions, such as members of an ARD committee, must not make determinations of programs such as CTE courses based on a student's specific disability (U.S. Department of Education, n.d.). In this qualitative case study, the researcher explored perspectives of CTE teachers' on teaching students with disabilities based on their subjective personal experiences and how these experiences influenced their attitudes toward inclusion in CTE courses.

Review of Research Literature and Methodological Review

Students with disabilities under the IDEA (2004) are entitled to FAPE. Elective CTE courses provide education and training for the acquiring of trade skills needed for competitive employment (Cobb et al., 2013). In a qualitative study by Middleton (2012), students who had taken a CTE course reported that their participation in CTE courses led to postsecondary employment and enrollment in postsecondary education. Despite the success of students who

participate in CTE courses, students with disabilities are not enrolling in CTE courses at the same rate as nondisabled students (Texas Education Agency, 2017).

Research by Walker (2012) on teachers' attitudes and perceptions toward students with disabilities indicated positive attitudes toward inclusion, but many teachers admitted they did not have the experience or knowledge to work with students with disabilities in their classrooms effectively. Even with training in special education, some teachers felt they were not equipped to teach students with disabilities effectively (Southern, 2010). Through surveys and interviews, teachers reported they felt inclusion was only successful when teachers formed working relationships between general education and special education teachers (Allison, 2011; Casale-Giannola, 2012; Trainor et al., 2012).

Districts are mandated by the federal requirement of IDEA to ensure to the maximum extent appropriate, children with disabilities are educated with children who are not disabled (IDEA, 2004). In other words, districts are required to place students with disabilities in the LRE. While inclusion is not a mandated practice, the trend has been to place students with disabilities in educational placements with their nondisabled peers, thereby ensuring LRE is provided. Inclusion in CTE courses should be considered when it comes to placing students with disabilities in classes to meet their postsecondary goals for employment and education (Schmalzried, 2010).

Walker's (2012) mixed methods research supported Cochran's (1998) findings that "positive attitudes of teachers may directly impact the success of including students with disabilities in the regular classroom setting" (p. 59). Special education teachers tend to be more positive than general education teachers when it comes to teaching students with disabilities

(Parker, 2009; Satterwhite, 2015). Students with disabilities are not participating in CTE courses at the same rate as their nondisabled peers, prompting the need for research into CTE teachers' attitudes and perceptions and how either positive or negative attitudes are influencing the number of students with disabilities and inclusion in CTE courses.

Value of CTE Courses

As the Americans with Disabilities Act (ADA) of 1990 changed the way persons with disabilities could participate in society and the workforce, they were still not finding their way into the ranks of the employed (Office of the Texas Governor Greg Abbott, 2016). According to the Office of the Texas Governor Greg Abbott (2016), 17.1 % of individuals with disabilities were employed compared to 64.6 % of individuals without disabilities. Region One Education Service Center (2014) reported that over 25% of the 500,000 students with disabilities participated in CTE classes.

An analysis of the labor market and needed changes in CTE by Stringfield and Stone (2017) examined the market trends toward a "future increasingly dominated by robotics and artificial intelligence. New entrants to the workforce will require very strong social, employability, and work-readiness skills that reflect the behavioral, attitudinal, and character traits highly valued in the workplace and society" (p. 166). As the labor market demands increase for high-skill workers, students with disabilities should not be left behind in being provided opportunities for acquiring skills for employment (Brand & Valent, 2013).

Middleton (2012) conducted a qualitative case study exploring high school students' perceptions of the impact of CTE courses on their career goals. Using open-ended interview questions, Middleton (2012) discovered the importance students placed on taking CTE shop

courses such as auto mechanics, plumbing, and woodworking. When asked about their experiences in the CTE classes, all participants indicated they had "learned technical skills and reported that relevance in education could make a difference in student success making money with the skills they learned in CATE [CTE] classes" (Middleton, 2012, pp. 57–58). Students participating in CTE classes not only learned technical employment skills but improved interpersonal skills, intrapersonal skills along with increasing math and language arts skills (Middleton, 2012). Students with disabilities were not a part of Middleton's (2012) study but he did include at-risk students who were identified as students who had been retained one or more years, experienced low achievement in school, were a member of a family in a low socioeconomic status, and students who were over-age for their grade level and had high absenteeism and discipline problems (Middleton, 2012). Middleton's (2012) qualitative case study research showed the value students place on the CTE courses. Students with disabilities would benefit from participation in CTE programs (Region One Education Service Center, 2014).

Carl D. Perkins Career and Technical Education Act of 2006 reauthorized through 2012 known as Perkins IV, or the Blueprint supports the development of academic, career and technical skills among secondary education and postsecondary education students (Dortch, 2012). Students electing to enroll in CTE courses are being prepared for high-skill, high-wage, or high-demand occupations in current or emerging professions (Dortch, 2012; Grindal, 2013). A significant component of transition planning for students with disabilities is training and employment and CTE courses afford opportunities for students in learn those skills (Grindal, 2013; Schmalzried & Harvey, 2014).

Research has shown that counseling students to participate in early work experiences "may be one of the most valuable connections that teachers and other adults can help facilitate" (Trainor et al., 2012, p. 17). For students, the CTE career pathways offer certification or licensure opportunities which increase postsecondary outcomes for higher education and employment (Michigan Department of Education, 2009). Wagner (as cited in Lee et al., 2015) "found students with disabilities in occupationally oriented secondary vocational education had a greater likelihood of obtaining paid employment or enrolling in postsecondary vocational education after high school than peers with disabilities who had not participated in these programs" (p. 80). According to Dortch (2012), national enrollment in CTE courses by individuals with disabilities receiving special education services, or 504 services for the 2008–2009 performance year report was 14%. The advantages of participating in a class with nondisabled peers, increasing social skills and learning specific employment skills for a student with a disability taking CTE courses was evident in the research (Hudson, 2011; Wagner & Shaver, 2009; Wagner, Newman, & Javitz, 2016).

A national longitudinal transition study conducted by Wagner and Shaver (2009) was the basis for many follow-up studies showing how student participation in CTE courses resulted in increased postsecondary outcomes for employment and education advancement. According to Lee et al. (2016),

> Almost 62 percent of students with disabilities who completed three or more courses in a specific labor area (concentration) were full-time employed; only 40 to 44 percent of students with disabilities who did not complete CTE courses or did not concentrate in a specific labor market area were full-time employed. (p. 87)

Wagner et al. (2016) analyzed research from the National Longitudinal Transition Study-2 (NLTS2) to examine the relationship between CTE coursework and students with a Learning Disability (LD). Propensity score modeling (PSM) was used to determine whether either type of CTE course taking was related to higher odds of full-time employment after high school and if those results differed based on the length of time the students were out of high school. Propensity scoring evaluates the average cause and effect, but there is an issue of selection bias (Lambert, 2014).

Using the PSM approach "essentially weighted the comparison group to create balance with the treatment group on observed covariates and thus facilitates estimation of the effect of CTE course taking for participants" (Wagner et al., 2016, p. 662). Results of analyses showed students with a Learning Disability (LD) took at least one CTE course in high school. Wagner et al.'s (2016) analyses revealed the greater the rigor of CTE coursework (more than three CTE courses) the more significant the employment outcome. According to Wagner et al. (2016), "Full-time workers averaged significantly higher earnings than part-time workers ($10.51 vs. $8.34)" (p. 663). Postsecondary transition for students with disabilities under IDEA is defined as:

> A coordinated set of activities for a child with a disability that is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child's with a disability to facilitate the child's movement from school to postschool activities, including postsecondary education, vocational education, integrated employment, continuing and adult education, adult services, independent living or community participation; and is based on the individual child's needs, taking into account the child's strengths, preferences, *and* interests and includes instruction,

> related services, community experiences, the development of employment and other postschool adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation. (IDEA, 2004, para. 1)

As part of the transition planning and services developed by the IEP/ARD committee, CTE educators need to act as advocates for students participating in CTE classes to meet the employment and training goals developed by the ARD/IEP committee (Mahadevan et al., 2014). Research is needed to investigate how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses.

According to the Texas Academic Performance Report of the 2015–2016 State Attendance and Postsecondary Readiness report (Texas Education Agency, 2018), of the 2014–2015 class of graduates, a total of 74.5% of students were college and career ready compared to 50.7% of special education students. Employment and career preparation for youth with disabilities remain an issue in transition planning (Schmalzried & Harvey, 2014).

In a qualitative study of high school academic counselors in Tennessee, participants promoted the benefits of CTE classes for preparing students to be job ready when they graduate (Hudson, 2011). Academic counselors believed CTE courses help to provide a connection for students with disabilities to the community and businesses (Hudson, 2011). One counselor reported, “We always try to get our kids [students with disabilities] involved in CTE classes . . . letting our students learn not just educational pieces, but the hands-on knowledge that will serve them well even after high school” (Hudson, 2011, p. 161).

The state of Texas Commissioner’s Rules concerning CTE has provisions for special populations including students with disabilities:

> A student with a disability shall be instructed in accordance with the student's individualized education program (IEP) in the least restrictive environment, as determined by the ARD committee. If a student is unable to receive a free appropriate public education in a regular career and technical education program, using supplementary aids and services, the student may be served in separate programs designed to address the student's occupational/training needs, such as career and technical education for student with disabilities program (CTED). (Texas Education Agency, 2016)

For a student enrolled in a CTED class, an ARD committee must determine that services available through a regular CTE course are insufficient for the student to make satisfactory progress and the specialized services the student needs can only be provided in the specialized, self-contained CTED classroom (Texas Education Agency, 2016). Students in CTED courses are taught by a CTE teacher and earn state credit toward a Texas high school diploma and must serve only students receiving special education services in a self-contained educational setting (Texas Education Agency, 2016). Research on the effectiveness of CTED classes for students with disabilities in the facilitation of postsecondary transition goals career goals is not readily available or is nonexistent.

Cobb et al. (2013) reviewed three quasi-experimental studies using a quasi-experimental design, seeking evidence of a correlation between community-based learning programs and post-high school employment success. Cobb noted that,

> Despite efforts of policymakers and practitioners, a gap remains between post-high school outcomes of students with disabilities and outcomes for other students. There is

> some suggestion that work experience programs must be integrated into other program components such as regular career and technical education. (p. 23)

Results of other studies showed that students with disabilities who participated in vocational instruction while in high school were more likely to complete high school (Newman et al., 2011; Schmalzried & Harvey, 2014). Participation of students in CTE programs reduces dropouts and increases on-time graduation (Gottfried et al., 2016).

Schmalzried and Harvey (2014) found ongoing concerns dating back to Okolo and Sitlington (1988) related to the participation of students with disabilities in CTE programs. Any number of variables may affect a student's participation in appropriate CTE courses based on the student's severity of disability, postsecondary transition employment goals and CTE course offerings (Lee et al., 2016). Research is needed to determine how CTE teachers' attitudes and perceptions of students with disabilities influence inclusion in CTE courses.

Teachers' Attitudes and Perceptions

Teachers' perceptions of students with disabilities may have been shaped by the idea that**,** historically**,** underachievement and lowered expectations of students with disabilities**,** combined with lack of support from special education staff contributed to the negative teacher attitudes toward inclusion (Zigmond, Kloo, & Volonino, 2009). Even though inclusion is specifically named in the law, it is a part of IDEA (2004) and Section 504 of The Rehabilitation Act of 1973 that require students with disabilities to be placed with LRE. Consistent with the goals of No Child Left Behind (NCLB) and IDEA, inclusion furthers the goal of achieving full integration of students with disabilities into the general education classroom (Savich, 2008). Much of the research examined in this review of literature addressed the concept of inclusion in classrooms

(Brandes & Crowson, 2008; Casale-Giannola, 2012; Casci-Noethig, 2015; Cunnah, 2015; Dransfield, 2014; Otero, 2012; Parker, 2009; Pierre, 2009; Ross-Hill, 2009; Satterwhite, 2015; Shady et al., 2013; Southern, 2010; Walker, 2012; Zigmond et al., 2009).

In the context of inclusion, Zigmond et al. (2009) referenced studies showing "instructional adaptions and augmentations such as the use of content enhancement routines, advanced organizers, and cogitative strategy instruction have a positive impact on learning process for students with disabilities when thoughtfully implemented" (p. 195). Undifferentiated, whole-group instruction was the norm for reading instruction at both elementary and secondary levels (Zigmond et al., 2009). Zigmond et al. (2009) noted that "the research to practice gap here is cavernous, yet differentiated instruction is viewed as the keystone to promoting access to the general education curriculum and appropriate instruction for students with disabilities in successful full inclusion models" (p. 195).

Negative teacher attitudes are considered a more significant barrier to inclusion at the secondary level than the elementary level for students with disabilities (Casale-Giannola, 2012). Secondary students with disabilities in CTE programs may require adaptations, accommodations, and specially designed instruction to benefit from the courses for which some teachers feel unprepared to provide (Dieterich & Smith, 2015). Casale-Giannola (2012) offered examples of modifications and adaptations in a CTE classroom including charts, webs, Venn diagrams to support reading for a purpose, reteaching, vocabulary rings, charts, print sources, use of calculators, multiplication and measurement tables, and peer support using reciprocal teaching. Further research is needed to discover if CTE teachers were provided with support from special

education staff, would the attitudes and perceptions of these teachers reflect a more favorable position toward students with disabilities in CTE courses.

A study using a mixture of quantitative and qualitative research methods was conducted by Shady et al. (2013) to determine elementary educators' perceptions of inclusion. Of the teacher participants in the mixed methods study, only half were experienced with teaching in an inclusion classroom. Results indicated 52% of the participants were skeptical about students with special needs receiving a better education through inclusion, with 32% respondents feeling students would lose vital services by not being "pulled out" for separate instruction in a more restricted environment (Shady et al., 2013, p. 178). Focus group members believed inclusion is not appropriate for all students, and some students would benefit more from having two teachers in the room for differentiation and individualized instruction (Shady et al., 2013). A postinclusion survey was administered to the teachers who were asked to rate their comfort levels with inclusion. A majority of 84% of the responses disagreed with the belief that inclusion provides positive role models for students with disabilities. Compared to the preassessment survey, 74% felt that inclusion would expose the students with disabilities to positive role models (Shady et al., 2013). Additional research is needed to determine if teachers, specifically, CTE teachers' attitudes toward students with disabilities influence their perceptions about inclusion.

Several studies (Otero, 2012; Parker, 2009; Pierre, 2009) used Cochran's (1998) research tool, the Scale of Teachers' Attitudes Toward Inclusive Classrooms (STATIC) to investigate teacher attitudes toward inclusion. Using the STATIC for quantitative research, some results indicated a positive attitude by teachers toward inclusion (Otero, 2012; Parker, 2009). Special

education teachers tended to be more positive than general education teachers toward inclusion (Parker, 2009). Despite the positive attitude by both general and special education teachers, they held a negative attitude toward students with behavior disorders, mental retardation and multiple disabilities claiming they felt these students did not have the skills to complete the general education curriculum (Parker, 2009). Some general education teachers did not feel they were qualified to teach students with disabilities (Otero, 2012). General education teachers reported the need for more professional development to teach students with disabilities (Otero, 2012).

Academic support from special education staff in a general education classroom is provided when the special education teacher usually "helps out" but does not "teach" (Zigmond, et al., 2009, p. 196). The role of the special education teacher is seen as a helper circulating the room and providing prompting, cueing, or redirecting behavior (Zigmond et al., 2009). Rarely is instruction in the inclusion classroom shared by both the special education and general education teacher (Zigmond et al., 2009 p. 196). Research investigating how CTE teachers' attitudes and perceptions of students with disabilities influence inclusion in CTE courses is needed.

A quantitative study of educators enrolled in an undergraduate teachers' program, referred to as preservice teachers, reported discomfort among preservice teachers with the idea of educating students with disabilities and inclusion (Brandes & Crowson, 2008). Preservice teachers are students earning credentials to be teachers and do not yet have experience in the classroom. Participants were preservice teachers taking a class educating students with disabilities (Brandes & Crowson, 2008). Using a 10-item scale, Brandes and Crowson (2008) measured preservice teachers' opposition to the inclusion of items, describing the followin results:

> Students with disabilities have little, if anything, to offer students without disabilities when placed in the same classroom settings; if a student with a disability cannot function in the same way that students without disabilities can within the classroom, then he/she should not be there, and students with disabilities have no business being included in classrooms with students who do not have disabilities (p. 278).

Their findings indicated the higher the negative rating, the higher the level of discomfort of teachers in instruction students with disabilities (Brandes & Crowson, 2008). There is a significant gap in this research as it was limited to preservice teachers' who considered themselves to be conservative right-wing authoritarianists (Brandes & Crowson, 2008). Preservice teachers who had higher negative ratings were also more likely to be against inclusion. (Brandes & Crowson, 2008).

Schmalzried and Harvey (2014) studied perceptions of special education and CTE teachers related to collaboration and communication. Using a Likert scale paper and pencil survey, they found "many respondents did not feel regular communication took place between CTE and special education" (p. 84). Schmalzried and Harvey also found that "even though secondary special education and CTE are designed to assist students in preparing for life after high school, gaps exist in communication and collaboration between CTE and special education" (p. 85). Teachers had concerns about not getting IEPs promptly or feeling as if they were not a part of the IEP process (p. 85). Dieterich and Smith (2015) found that "when students with disabilities are included in CTE [courses], educators are legally required to provide an appropriate program that meets each student's unique needs" (p. 60). Casale-Giannola (2012)

noted, “CTE educators need not only to develop skills to support the curricular needs of students with disabilities but also to become familiar with special education laws” (p. 61).

In consideration of legal requirements of IDEA, if a student is receiving special education services in a CTE class, the school district is required to follow “appropriate federal requirements within the context of providing a free appropriate public education (FAPE)” (Dieterich & Smith, 2015, p. 62). Some CTE teachers felt their classrooms were being used as dumping grounds for special education students while other studies indicated the opposite, that students with disabilities were not being allowed to take certain CTE classes (Cunnah, 2015). The results of the studies of the attitudes and perceptions of teachers from the review of literature revealed a need for further in-depth research of CTE teachers and how their experiences beliefs, and values have shaped their attitudes and perceptions toward students with disabilities in their classrooms.

Satterwhite’s (2015) research consisted of a mixed method using quantitative and qualitative data to complete analyses on the relationship between special education teachers, administrators, and inclusion. Satterwhite (2015) probed the attitudes of teachers and administrators in making decisions related to the inclusion of special education students in elementary classrooms. Even though this study looked at inclusion at the elementary level, the findings still reflected attitudes of administrators as well as teachers related to students with disabilities placed in general education classrooms. Teacher attitudes measured in Satterwhite’s (2015) study were based on a level of agreement using a Likert scale. Teacher and administrator attitudes were based on the level of agreement or disagreement of items associated with “four concepts of inclusion: Planning, instruction/classroom/school environment, collaborative/team

partners, and resources/support/professional development (Satterwhite, 2015, p.112). One of the significant findings of this study was that general education teachers disagreed with the statement that "most general education teachers have the skills necessary to teach students with disabilities" (p. 114).

A few general education teachers felt students with disabilities should be included in general education classes for social experiences, but not academic reasons (Satterwhite, 2015). Other attitudes some general education teachers reported were that if they had wanted to teach special education, they would have majored and received the specialized training needed to work with students with disabilities (Satterwhite, 2015). Overall, the findings of Satterwhite's (2015) qualitative study indicated special education teachers were more positive about inclusion than general education teachers.

Research showed helping students to participate in early work experiences "may be one of the most valuable connections that teachers and other adults can help facilitate" (Trainor et al., 2012, p. 17). Students who receive instruction in noninclusive settings such as a self-contained classroom for students with severe behavior problems are likely to have fewer opportunities to connect with their typical peers, teachers, or other school staff (Trainor et al., 2012). Trainor et al. (2012) suggested that teachers have opportunities to support the student's development of "social capital" by strengthening "personal connections between and among peers, parents, employers, and other community members" (p. 19).

In a mixed methods study of elementary general education teacher attitudes, teachers felt the lack of principal and professional development support negatively influenced their attitudes toward students with disabilities and inclusion (Walker, 2012). Another factor impacting teacher

attitudes toward students with disabilities was a lack of efficacy to effectively teach students with behavior disorders (Walker, 2012). As general education teachers gain experience in teaching students with disabilities their attitudes became more positive toward students with disabilities in their classrooms (Walker, 2012).

Dawson-Body (2012) conducted a mixed methods research on general education teacher attitudes in classrooms with students with disabilities taking modified state assessments and general educations teachers in classrooms containing students with disabilities taking regular state assessments. Results of this study indicated positive attitudes among general education teachers in both types of classrooms (Dawson-Body, 2012). Teachers reported through focus-group interviews in the qualitative portion of this study that they held positive attitudes towards students with disabilities (Dawson-Body, 2012). General education teachers said students performed well on state assessments in their classrooms and felt the inclusion model had helped to increase student scores on the state assessments (Dawson-Body, 2012).

Hall (2007) conducted quantitative research on the effectiveness of facilitating workshops on disability awareness to career and technical education teachers in rural school districts who have direct contact with students with disabilities in their vocational classes. Two questions were asked: "Will four 3-hour disability awareness workshops, offered throughout the academic year, positively affect teachers' knowledge of students with disabilities" and "Did this knowledge affect career and technical education teachers' attitude toward students with disabilities?" (p. 17). A pretest-posttest score was obtained through the use of a Facts About Disability (FAD) scale. The conclusion from this research was that the "disability awareness workshop had an impact on enhancing the knowledge of individuals with disabilities" (p. 22). A follow-up conversation with

several of the vocational education teachers revealed they felt they had a better understanding of how to treat all people with disabilities, not just students (Hall, 2007). Hall (2007) noted that "increasing the career and vocational teachers' knowledge of disabilities by helping them to understand the strengths and weaknesses of all types of people will make them more effective teachers who open up new options for the students with disabilities with whom they work" (p. 23).

In a mixed methods study using The Teachers' Attitudes Toward Inclusion Survey (TATIS-P), assessment instrument, Dransfield (2014) studied pre-service teachers before and after taking a special education class on teaching students with disabilities. Dransfield's (2014) research showed the importance of professional development before teachers enter the classroom where they will teach students with disabilities. Both special education and general education pre-service teachers' attitudes significantly improved after taking a special education course as part of the requirements for earning a degree in education (Dransfield, 2014). Pierre (2009) also used the Scale of Teachers' Attitudes Toward Inclusion (STATIC) instrument in a quantitative study and found similar results of teacher confidence for teaching students with disabilities when having had special education professional development. General education teachers are more confident in teaching students with disabilities when provided adequate training (Pierre, 2009). Research is needed to examine how the attitudes and perceptions of CTE teachers influence students with disabilities enrollment in CTE courses.

Review of Methodological Issues

Some quantitative research studies reviewed used Cochran's (1997, 1998) STATIC 20-question survey instrument (Dawson-Body, 2012; Otero, 2012; Parker, 2009; Walker, 2012). The

STATIC survey instrument used in quantitative research (Pierre, 2009) was useful in learning the attitudes of teachers but lacked the in-depth exploration of open-ended questionnaires or interviews that would explain why some teachers felt they were unprepared to instruct students with disabilities effectively.

Kight (2008) used a five-point Likert Scale survey instrument developed by Carter and Hughes (2006) to conduct a quantitative study on the attitudes of teachers in four areas: (a) classroom instructional priorities, (b) barriers to inclusion, (c) risks associated with inclusion, and (d) benefits of inclusion. A correlation between these four areas and how they related to variables such as years of teaching, experience in teaching students with disabilities, and the number of professional developments or classes in special education was analyzed (Kight, 2008). Schmalzried (2010) also used a Likert Scale to measure teachers' attitudes toward students with disabilities in separate CTE centers (schools).

Many qualitative research studies included focus groups that were observed discussing the issue of students with disabilities and participation in their general education classes (Dawson–Body, 2012). Other studies conducted research using a mixed method of quantitative and qualitative assessment tools to determine the attitudes and perceptions of teachers and inclusion and teaching students with disabilities (Brandes & Crowson, 2008; Kahn & Lewis, 2014; Walker, 2012).

Several researchers used the National Longitudinal Transition Study 2 that followed students receiving special education services from ages 13 to 16 between the years of 2000 and 2010. Joshi, Bouck, and Maeda (2012) used portions of the study to track the success of students with disabilities in postsecondary education settings. Wagner et al. (2016) used the NLTS2 to

study students identified as students with a learning disability (LD) and their success in CTE classes. Lee et al. (2016) used the data from the NLTS2 to research the causal effects of CTE on postsecondary outcomes of students with high incidence disabilities.

Based on the methodologies studied in this literature review, in order to gain a richer, in-depth understanding of CTE teachers' attitudes and perceptions of students with disabilities and how these attitudes and perceptions influence their behavior toward inclusion in CTE courses, a qualitative research case study is needed.

Synthesis of Research Findings

Qualitative studies provided insight into how teachers responded to having students with disabilities in their classrooms (Schmalzried, 2010). Focus groups gave researchers the opportunity to ask questions and gain understanding into how an individual's attitude toward a person with a disability is shaped by personal experiences either by having taught students with special needs or having a friend or relative with a disability (Dawson-Body, 2012). Teachers' attitudes toward students with disabilities were more favorable when they had had positive experiences with someone with a disability (Markova, Cate, Krokak-Schwordt, & Glock, 2015; Parker, 2009). The use of open-ended questionnaires or interviews in focus groups allowed for a deeper understanding of particular events or situations (Dawson–Body, 2012; Yin, 2014).

Both general and special education teachers reported positive attitudes toward students with disabilities, but their perceptions were that some students with more significant disabilities or behavior issues would be more difficult to instruct (Dransfield, 2014). General education teachers were not comfortable with having students with disabilities in their classrooms if they did not have special education support or professional development to learn strategies for

teaching students with disabilities (Casale-Giannola, 2012; Otero, 2012; Pierre, 2009; Southern, 2010). Some researchers, such as Otero (2012), found a significant difference in attitudes toward inclusion between general education and special education teachers. In one mixed method study, both special and general education agreed that students with more significant disabilities should be in self-contained classrooms (Dransfield, 2014).

Middleton (2012) conducted a qualitative study and interviewed students after they graduated high school, showing the importance students placed on participation in the CTE programs of study. Students who obtained employment felt they were better able to sustain employment with increased social and employment skills learned through the CTE coursework (Middleton, 2012). An in-depth qualitative case study is needed to gain a deeper understanding of CTE teachers' attitudes and perceptions of students with disabilities and inclusion in CTE courses.

Critique of Previous Research

Research focused on CTE and inclusion of special education students is scarce, but there is data on the number of persons with disabilities who are unemployed, underemployed, and not enrolled in postsecondary education (Office of the Texas Governor Greg Abbott, 2016). Mixed methods studies have been conducted to determine if preservice teachers' attitudes toward inclusion could be changed with an introductory course in special education (Dransfield, 2014). Brandes and Crowson (2008) conducted a quantitative field study with a small group of pre-service teachers. Data from small groups may have overriding variables such as the location of the school, diversity of group providing data, and experiences related to past experiences with individuals with disabilities (Brandes & Crowson, 2008).

The use of the STATIC instrument in quantitative studies to measure teachers' attitudes toward inclusion does not provide an in-depth understanding of how beliefs and values shape the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in CTE courses (Otero, 2012; Parker, 2009; Southern, 2010; Walker, 2012). Findings from quantitative research indicated studying teachers' attitudes toward inclusion does not go far enough in attempting to explain underlying reasons for teachers' negative attitudes and perceptions of inclusion.

Other studies of both general and special education teachers showed teachers believe inclusion is a positive experience for students with disabilities, but that they do not feel it would be successful without special education support and training (Allison, 2011; Dransfield, 2014; Parker, 2009; Satterwhite, 2015; Schmalzried, 2010; Walker, 2012). Further research is needed to explore if CTE teachers' attitudes and perceptions toward students with disabilities influences inclusion in CTE courses.

Summary

This review of the literature explored a conceptual framework based on social constructivism (Creswell & Poth, 2018), a framework of legal compliance through IDEA (2004), and the published research on teachers' attitudes and perceptions of students with disabilities for special education services and CTE to understand why students with disabilities are leaving high school unprepared for future employment and postsecondary education. Based on my review of the literature, I have deteremined that an investigation examining the impact of attitudes and perceptions of teachers regarding student participation in CTE classes has the potential to yield socially significant findings. The literature provides strong support for pursuing a qualitative

case study project to answer the following multipart research question: What is the nature of the attitudes and perceptions of CTE teachers toward students with disabilities and how does this influence inclusion in CTE courses?

Chapter 3: Methodology

Students with disabilities are leaving public education unprepared for employment and higher education (Wagner et al., 2016). According to the Texas Education Agency's State Performance Plan Indicator 14 (SPP–14) persons with disabilities are still living at home, are unemployed and are not enrolled in any postsecondary education setting within one year of graduating from high school at a higher rate compared to their nondisabled peers (Texas Education Agency, 2018). Data shows students who participate in CTE programs are more likely to be successfully employed or advance to postsecondary education and training than students who have not accessed CTE courses (Wagner et al., 2016). This researcher of the study reviewed qualitative, quantitative, and mixed studies and determined that the most appropriate method to investigate teachers' attitudes and perceptions is the qualitative method.

Qualitative studies have been conducted exploring teacher attitudes toward inclusion of students with disabilities (Allison, 2011; Rollins, 2014). Findings from these studies indicate that teachers felt their lived experiences with inclusion impacted their attitudes, beliefs, and perceptions of the inclusion model (Allison, 2011; Rollins, 2014). Another qualitative study reported teachers feeling unsupported by the Special Education Department staff leading to negative attitudes toward inclusion (Cadeña, 2013).

Quantitative studies of secondary general education teachers' attitudes toward inclusion were conducted with reported findings that special education teachers were more positive than general education teachers toward inclusion (Otero, 2012; Parker, 2009; Satterwhite, 2015; Southern, 2010). Kight (2008) and Pierre (2009) investigated the attitudes of general and special education teachers toward inclusion in both elementary and secondary levels. In these two

studies (Kight, 2008; Pierre, 2009), results of the quantitative studies supported other research findings that the more years of experience in educating students with disabilities the greater the positive attitudes. Pierre's (2009) study also reported no difference in teacher attitudes from rural or suburban schools. Schmalzried (2010) researched CTE and special education teachers' attitudes and perceptions of students with disabilities within the context of creating a collaborative learning environment for students with disabilities. This quantitative study by Schmalzried (2010) revealed a disconnect between special education and CTE teachers in meeting the needs of students with disabilities in CTE courses. Both special education and CTE teachers hoped "the other side was doing their job" (Schmalzried, 2010, p. 162). In a follow-up quantitative study (Schmalzried & Harvey, 2014) surveyed CTE teachers in career centers in Indiana and discovered over 75% of CTE teachers felt they had responsibility for understanding how to instruct students with disabilities but lacked an understanding of their role in the delivery of services. The researcher for this study investigated, using a qualitative case study of CTE teacher participants, through interviews and a focus group to gain further knowledge on how the experiences of CTE teachers educating students with disabilities shape the attitudes and perceptions of inclusion in CTE courses.

Studies using a mixed method of research investigated elementary and general education teachers' attitudes toward inclusion (Dransfield, 2014; Townsend, 2009; Walker, 2012). In another mixed methods study Dawson-Body (2012) investigated general education teachers' attitudes toward inclusion at the secondary level. A conclusion from mixed-methods research by Walker (2012) revealed that general education teachers preferred Professional Development be conducted within the classroom with hands-on Professional Development in learning learn

strategies to educate students with disabilities in an inclusion setting rather than traditional Professional Development sessions held in a separate room. Walker (2012) also discovered that general education teachers who taught inclusion classrooms had more positive attitudes towards students with disabilities than general education teachers in a non-inclusion classroom.

Findings from research studies thus far have not adequately explained how teachers' attitudes and perceptions of students with disabilities influence inclusion in CTE courses. Further research is needed to explain how attitudes and perceptions of CTE teachers toward students with disabilities impact inclusion in CTE courses. Research is needed to explain why CTE teachers hold both positive and negative views and what experiences of those teachers shaped the attitudes and perceptions toward inclusion.

The purpose of this case study is to explain how the attitudes and perceptions of CTE teacher participants toward students with disabilities and how they influence inclusion in CTE courses. Qualitative researchers want to know what participants in a study are thinking and "why they think what they do" (Fraenkel & Wallen, 2003). The case study investigated with interviews and focus groups how the teachers felt about inclusion and teaching students with disabilities in CTE courses. Evidence gathered from this case study provided insight into assumptions and an explanation how the attitudes and perceptions of CTE teachers influence inclusion in CTE courses.

Research Questions

The purpose of this qualitative case study was to explain how CTE teachers' attitudes and perceptions influence the level of inclusion in CTE classes for students with disabilities. The research questions used to guide the research were as follows:

RQ1: How have the experiences of CTE teachers with students with disabilities in or outside of the classroom shaped their attitudes and perceptions of students with disabilities and inclusion in CTE courses?

RQ2: How do the attitudes and perceptions of CTE teachers as part of an ARD committee influence their decisions and recommendations for placement of students with disabilities in CTE courses?

RQ3: How do the increased academic rigors of CTE courses to meet the Texas standards for college and career readiness for all students influence the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in their CTE courses?

Purpose and Design of the Study

Using an explanatory qualitative case study design, this researcher investigated how CTE teachers' attitudes and perceptions toward students with disabilities influence the inclusion of special education students in high school CTE courses. The purpose of a case study explaining how or why some condition came to be is known as explanatory (Creswell & Poth, 2018). Qualitative case study researchers seek to investigate and develop an in-depth understanding of a particular issue within a real-world setting (Creswell & Poth, 2018). In this study, the researcher applied the theory of social constructivism as a guide to investigate and explain how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses. Social constructivism aims to focus on the "specific contexts in which people live and work in order to understand the historical and cultural settings of the participants" (Creswell & Poth, 2018, p. 24). Data collection using interviews and a focus group of participating CTE

teachers' attitudes, and perceptions of students with disabilities were used to provide insight into how those attitudes and perceptions influence those students' inclusion in CTE courses. Gaining insight into how CTE teachers view the capacity for students with disabilities to complete coursework in a CTE course helps to explain why students with disabilities are not accessing CTE courses at the same rate as their nondisabled peers.

Quantitative research is used to collect data and explain phenomena through statistics (Creswell & Poth, 2018). In a quantitative study, "research is most often conducted in researcher-controlled environments under research-controlled conditions and the activities of data collection, analysis, and writing are separate, discrete activities" (Gay et al., 2009, p. 7). Quantitative methods of inquiry do not provide comprehensive narrative and visual data collection to gain insights leading to explanations of how CTE teachers' attitudes and perceptions influence their acceptance of students with disabilities in their classes. When a problem or issue needs deeper exploration to understand a variable not easily measured, qualitative research is more appropriate (Creswell & Poth, 2018). Statistics in quantitative research reporting negative attitudes (Kahn & Lewis, 2014; Schmalzried, 2010) by general education teachers of students with disabilities do not explain why these teachers hold either positive or negative attitudes, only that that they do hold certain attitudes towards educating students with disabilities in an inclusion setting.

With some forms of quantitative data collection constructed of close-ended questions in surveys and based on science theories, there is little interaction between researcher and participants (Gay et al., 2009). Quantitative research is concerned with gathering large amounts of data from large groups of participants and interpreted through numerical analysis (Fraenkel &

Wallen, 2003). A quantitative study using a multiple-choice or closed-ended question surveys do not offer the researcher the freedom to further explore the participants' responses for why or how they chose a particular answer to the survey questions (Gay et al., 2009).

Qualitative methods of studies require the researcher and participants to interact in a natural setting without controlling the variables as in a quantitative study (Gay et al., 2009). A natural setting such as a classroom, where the researcher observes the activities or behavior as it occurs within the context, allows the researcher to acquire a better understanding of the problem being studied (Fraenkel & Wallen, 2003). Qualitative researchers want to know what participants in a study are thinking and "why they think what they do" (Fraenkel & Wallen, 2003, p. 432). In a qualitative study, the researcher reports what the participants say from the participants' perspectives as accurately as possible (Fraenkel & Wallen, 2003). "All meaning is situated in a particular perspective or context, and because different people and groups have different perspectives and contexts, the world has many different meanings, none of which is necessarily more valid or true than another" (Gay et al., 2009, p. 7). They use open-ended question for the interviews and focus groups. This qualitative case study allowed the opportunity for the participants to expand their responses on the initial question providing the researcher with the latitude to pursue in-depth exploration of participants' attitudes and perceptions of students with disabilities and inclusion in CTE courses.

Case study research is a qualitative approach to conducting research on a unit of study or bounded system (e.g., an individual teacher, a classroom, or a school can be a case: Gay et al., 2009, p. 14). The problem of students with disabilities not accessing CTE courses at the same rate as nondisabled peers can best be studied through a qualitative case study. The case study

method of research was conducted in a high school in Texas where CTE teacher participants are educators in CTE courses. Expected findings from the case study research enhanced the knowledge of CTE teachers and how they feel and act toward students with disabilities and inclusion in CTE courses.

A review of the literature indicated studies using a quantitative research design of closed-ended survey questions, multiple choice questions, or questions based on a Likert–style scale to study teacher attitudes toward inclusion left researchers recommending further studies to explain how teacher attitudes directly impacted students and their access to general education classes (Otero, 2012; Parker, 2009; Southern, 2010). Quantitative methods of research would not allow the researcher of this case study to explain what was shaping the attitudes of participants (Kahn & Lewis, 2014; Schmalzried, 2010). The research questions posed by this researcher were best answered through a qualitative explanatory case study using interviews, and a focus group to examine how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses.

A qualitative case study using open-ended questions during interviews and a focus group allowed for the gathering of in-depth information about the attitudes of study participants (Creswell & Poth, 2018; Fraenkel & Wallen, 2003). The qualitative study design is used when explanation is needed to study a group or population to identify variables that cannot be easily measured (Creswell & Poth, 2018). Qualitative researchers are interested in discovering how interactions take place between individuals (Fraenkel & Wallen, 2003). Studying how CTE teachers' attitudes and perceptions of students with disabilities influence inclusion in CTE courses was the purpose of this study.

Research Population and Sampling Method

The research population for this study was CTE teachers from a high school in Texas. High school CTE teachers are certified to teach a specific content area from a variety of career and technical courses with some courses leading to an industry certificate or license by students (Texas Education Agency, 2018). The areas of CTE course program concentration are one of nine areas: agriculture; business and finance; family and consumer sciences; human development and family studies; hospitality, nutrition food sciences; health science; marketing education; technology education; and trade and industrial education (Texas Education Agency, 2018).

Sampling is used when the target population is too large to include everyone in the study (Creswell & Poth, 2018). In this qualitative case study, the sample population of CTE teachers throughout the state of Texas was reduced to 21 certified CTE teachers in a school district in Texas. In this qualitative case study, participants were selected using purposive or purposeful sampling strategy. Purposeful sampling is not a probability sample used to provide statistical inferences but an intentional sampling of a population that provided the researcher with information on the topic being researched (Creswell & Poth, 2018). The sample selected best represented the population with the most considerable knowledge of the topic being studied (Fraenkel & Wallen, 2003; Gay et al., 2009). Of the sampling of 21 certified CTE high school teachers, 15 participated in the open-ended question interviews, leaving 6 additional CTE teachers to participate in a focus group. The participants in the focus group were not the same participants as those in the one-on-one interviews.

The 21 certified CTE teacher participants selected met the sampling criteria for subject knowledge and experience teaching students with disabilities in a CTE course. Of the 21 CTE

teacher participants, 13 were female and eight were male. Three of the female participants and one male participants held a master degree. One female and two male participants had five or fewer years of experience teaching CTE courses. Six female and three male participants had teaching CTE experience of 10 to 20 years and six females and three male participants had between 21 and 38 years' experience with CTE courses.

Instrumentation

Instrumentation is the "entire process of collecting data in a research investigation" (Fraenkel & Wallen, 2003, p. 150). Instrumentation not only includes the tool or device used to collect data but the procedures and the conditions under which the instruments was administered (Fraenkel & Wallen, 2003). Surveys, questionnaires, observations, interviews, member checks, and focus groups are instruments used by researchers to collect data (Fraenkel & Wallen, 2003). In educational research, an instrument is a tool used to measure a variable or attribute (Gay et al., 2009). Before choosing an instrument for collecting data a researcher needs to consider where the data were collected, when the data were collected, how often to collect data and who is to collect the data or administer the instrument (Fraenkel & Wallen, 2003). Using interviews, focus groups, and member checking as instruments of data collection in this qualitative case study provided multiple ways of assessing CTE teachers' attitudes and perceptions in different settings to gather an in-depth understanding of what factors contribute to the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in CTE course.

Demographics of CTE teachers participants such as gender, number of years teaching, amount of participation in professional development related to working with students with disabilities, and which CTE courses they teach or have taught, were included as part of the

interview process providing data used as part of the explanatory analysis of this study. Information gathered from this case study research provided insight into the thoughts, feelings, attitudes, beliefs, and perceptions of CTE teachers towards students with disabilities and inclusion in CTE courses.

Interviews

One of the most important sources for data collection is the use of interviews (Yin, 2014). Interviews are essential as they provide more of a guided conversation to gather data than the use of structured questions (Yin, 2014). Researchers agree that conventional methods for data collection in a qualitative study are in-depth interviews and focus groups (Tong et al. 2007). With interviews as an instrument for data collection, opportunities exist for participants to ask clarifying questions of the interviewer (Bloomberg & Volpe, 2016; Fraenkel & Wallen, 2003). Another advantage to the interview format is the researcher can expand on the topic as needed to explore areas not previously considered in the original guiding questions (Fraenkel & Wallen, 2003). Interviews provided a deeper, richer understanding of how CTE teachers' beliefs, values, and experiences with students with disabilities influence the attitudes and perceptions of CTE teachers towards students with disabilities and inclusion in CTE courses.

This case study used the interview guide approach for the 18 CTE teacher participants' interviews. In the interview guide approach, the protocol questions are developed before the interview (Johnson & Christensen, 2008). The interviewer did not have to follow the sequence or wording of the questions (Johnson & Christensen, 2008). The advantage to using this approach to interviews is that it allowed the interviewer the flexibility to expand on any questions and gather more information while ensuring the questions covering the study problem are being

addressed by all participants (Johnson & Christensen, 2008). The major weakness of the interview guide approach to interviewing is that the interviewer could inadvertently change the wording of the questions to the degree that a participant provides a response that is not comparable to other responses to the same question from the other participants (Patton, 1990).

Open-ended questions. Open-ended questions in interviews are a personal way to gain insight into respondents' viewpoints of an issue through expanding the conversation and gaining in-depth information on the topic (Trochim, 2001). Interviews using open-ended questions indicate an area or topic for discussion giving the respondent the freedom to provide information on his or her inner world (Johnson & Christensen, 2008). Open-ended questions are considered an unstructured form of gathering information allowing for more individualized responses (Fraenkel & Wallen, 2003).

Field test and field experts. Before the facilitation of the open-ended question interviews, a field test was conducted to decrease potential bias and gain feedback on the appropriateness of the interview questions (University of Phoenix, 2015). This field test ensured that the interview questions are a reliable instrument to collect data answering the research questions in this case study (University of Phoenix, 2015). To ensure interview questions were designed to address the purpose of the researcher's case study, experts in the field of education were used to provide feedback on the open-ended questions used in the interviews (University of Phoenix, 2015). These experts who reviewed the interview protocols had the background, credentials, and knowledge to provide feedback to the researcher to recommend any necessary adjustments to the open-ended questions to ensure reliability and validity of the questions used in both the one-on-one interviews and the focus groups. Feedback from three experts was used to

make any adjustments to the questions used in the interviews and focus groups to reduce researcher bias and ambiguity (University of Phoenix, 2015).

The experts selected to conduct the field test were from school districts in Texas. The first expert was a CTE Director of eight years, was a Master's level educator, and also held a CTE certificate with six years of CTE classroom experience. The second expert was an Executive Director of Student Support Services who held a Ph.D. in Child Psychology and had worked as a Licensed Specialist in School Psychology (LSSP) for 20 years. As part of her leadership role the Executive Director of Student Support Services, she was responsible for the supervision of all general and special education counselors for the school district as well as the Special Education Department. The third expert was a CTE counselor whose credentials included a Texas teaching certificate, CTE certification, counseling certificate, and special education certificate. Before her current role as a CTE counselor for 10 years, she was a special education teacher, CTE teacher, and case manager. Because data were not being collected, an Institutional Review Board (IRB) approval or exemption was not required before the field test of the interview questions (University of Phoenix, 2015).

Focus Group

Another method of instrumentation was the use of a focus group. A focus group is a group interview in which a researcher "leads a discussion with a small group of individuals to explain, in detail how the group members think and feel about a topic" (Johnson & Christensen, 2008, p. 209). The use of focus groups leads to a shared understanding of the research problem (Gay et al., 2009). A focus group is a valuable research instrument in providing data when one-on-one interviews may be intimidating to participants (Gay et al., 2009). Open-ended questions

in a focus group allow participants to expand the conversation when ideas or thoughts are shared (Gay et al., 2009). The shared understanding in a focus group adds to the data collected in the individual interviews (Gay et al., 2009).

Participants of the focus groups were CTE teachers who have students with disabilities in their CTE courses. The diversity in the focus group of teachers and their experiences teaching students with disabilities added to the knowledge base acquired in the individual interviews of certified CTE teachers. The 6 focus group participants were selected from the CTE teachers on a high school campus in Texas to share their attitudes and perceptions of students with disabilities and inclusion in CTE courses.

Member Checking

Member checking is critical to the credibility of the research findings (Creswell & Poth, 2018). Member checking provides feedback to the researcher affirming that the findings are consistent with the intent of the information shared by the participants (Bloomberg & Volpe, 2016). Before sharing research findings in their final form, member checking was completed in compliance with recommendations in Gay et al. (2009). Member checking helped identify inaccuracies, missing data, or other relevant information from participant members to ensure the validity of the research findings (Gay et al., 2009). After the collected data were analyzed and the study concluded with findings, a face-to-face follow-up meeting with each participant from the interviews and focus groups was arranged to review the results of the research. Participants were provided with copies of the original open-ended questions, transcribed audio/video recording of the interview. During that meeting, an additional set of three follow-up questions

were given to each participant requesting feedback on the findings. The researcher reviewed how the data were collected, recorded, and interpreted.

Each face-to-face meeting lasted approximately 30 minutes. Member checking meetings were audio recorded to maintain standards outlined in the original interviews. In addition to the audio recording of the meeting, field notes were taken by the researcher. It is crucial to ensure that the study's interview findings accurately represent the attitudes and perceptions of the participants (Creswell & Poth, 2018).

Data Collection

In a qualitative case study, the purpose is to understand a phenomenon within a real-life setting (Creswell & Poth, 2018). In this qualitative case study to investigate the attitudes and perceptions of CTE teachers toward students with disabilities, methods of data collation included interviews, focus groups, and member checking. I drafted a letter of recruitment describing the study and expectations for participation in the case study including a timeframe of 30 days for the completion of the interviews and focus group discussions. I also contacted the director of the CTE department for the school district for the purpose of obtaining a list of all CTE teachers and their contact information. Before any research convened for interviews and focus group, I made sure I had received signed informed consent forms granting permission for the researcher to audio/videotape a portion or all of the interviews and focus group (Fraenkel & Wallen, 2003).

Interviews

One-on-one interviews of 12 CTE teacher participants from a high school in Texas were the primary form of data collection for this case study. For participants who returned signed consent forms, interviews dates were scheduled based upon their availability outside of contract

school hours and for an expectation of 90 minutes in length. An interview length of 90 minutes allowed me to give the participant time to respond to the interview questions adequately and feel they are being heard (Seidman, 2006). Giving the participants a scheduled time allowed them the flexibility to organize their calendars to accommodate the 90-minute interview. The setting for the scheduled interviews was mutually agreed on the participants and me (i.e., campus classroom, campus conference room, coffee shop, or a participant's home). Dates, times and places were entered on a master schedule for all 12 interviews. A reminder email of the interview was sent to the participant three days before the scheduled interview.

Using the interview guide approach, I entered the interview session with a protocol set of open-ended questions and topics for discussion (Johnson & Christensen, 2008). In this approach, topics and questions do not have to be followed in chronological or specific order, but the interviewer must ensure the interview covers the topics based on his/her research questions and not does waiver into irrelevant issues (Johnson & Christensen, 2008). The use of the interview protocol in the interview guide approach method of interviewing helped to keep the discussion on track and redirected when discussions stray from relevancy of the research topic (Johnson & Christensen, 2008).

The use of a video/audio recording device to document the discussion in the interview is an "indispensable part of any qualitative researcher's equipment" (Fraenkel & Wallen, 2003, p. 462). Recording the interviewee's responses to the interview questions helps to eliminate the loss of relevant information (Johnson & Christensen, 2008). The use of audio/video recording of the interviews does not eliminate the need for the interviewer to take field notes during and after the interview (Fraenkel & Wallen, 2003).

Fraenkel and Wallen (2003) described field notes as the "researchers' written account of what they hear, see, experience, and think in the course of collecting and reflecting on the data" (p. 517). Field notes taken during the interviews were kept in a notebook specifically used only for recording data collected from the interviews. The notebooks used exclusively for field notes were locked in a filing cabinet in my home office.

Focus Group

The use of focus groups in research is a valuable technique to gather shared information leading to a shared understanding of the questions posed by the researcher (Gay et al., 2009). Interactions among participants in a focus group yield the best information when interviewees are similar and cooperate (Krueger & Casey, 2014). Focus groups allow individuals who may be hesitant to provide information in one-on-one interviews comfortable enough to share responses to the open-ended questions (Creswell & Poth, 2018) about attitudes and perceptions of CTE teachers toward students with disabilities and inclusion.

Two focus groups, each with six secondary CTE teacher participants, discussed questions using a semi structured questionnaire format during a 90-minute session. Focus groups are most effective when the number of participants is smaller rather than larger (Yin, 2014). There were eight open-ended questions related to attitudes about teaching students with disabilities and their views on inclusion. The interviewer must take precautions to ensure all participants in a focus group feel comfortable enough to respond to the open-ended questions honestly and have equal opportunities to talk (Gay et al., 2009). It was important for me as an interviewer to "monitor individuals who may dominate the conversation" (Gay et al., 2009, p. 164).

Identification of Attributes

Identifying the attributes or characteristics of participants is vital to the study where social constructivism is used as a conceptual framework (Creswell & Poth, 2018). A pattern of meaning is developed when interactions between individuals are studied, and interpretation is based on similar attributes (Creswell & Poth, 2018). Attributes "represent how an individual or individuals in an organization feel, behave, or think" (Creswell, 2012, p. 113). The attributes in this qualitative case study of CTE teachers were characteristics defined by gender, number of years of teaching, CTE subject courses taught, and experiences in teaching students with disabilities. The purpose of this case study was to explain how the academic experiences of CTE teachers with students with disabilities have influenced their attitudes and perceptions toward inclusion in CTE courses.

Some of the experiences shaping the attitudes of participant teachers were (a) their expectations regarding students' abilities to complete coursework in a CTE course, and (b) their views on the inclusion of students with disabilities in all classes, including CTE courses. The number of years teaching may affect a CTE teacher's level of efficacy in teaching students with disabilities. The experiences of CTE teachers with students with disabilities may influence positively or negatively their perceptions of inclusion. Through this case study, I sought to gain insight into how these attributes shape the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in CTE courses.

Data Analysis Procedures

According to Gay et al. (2009), "Qualitative data analysis is a process of breaking down data into smaller units, determining their import, and putting the pertinent units together in a

more general, analytical form" (p. 453). Qualitative case study analysis involves looking at the data by sorting into categories and through interpretation develops meaning for themes in the relationships within the categories. (Creswell & Poth, 2018). In this case study, I analyzed themes for attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in CTE courses.

Interviews

Once the data were completed, the audio recordings from the interviews using open-ended questions were transcribed using a transcription service called Rev.com. Once transcribed, the data were read and reread for describing, classifying, and interpreting the data (Creswell & Poth, 2018). As I read through the transcribed texts, I took notes in the form of memos. This form of memoing is used to assist the researcher in determining key ideas or themes emerging from the raw data (Creswell & Poth, 2018; Lincoln & Guba, 1985). The transcribed interviews, memos, and field notes were entered into the software program Dedoose for coding into categories for analysis and interpretation.

Focus Group

Once the data collection was complete, the audio recordings from the focus group were transcribed into text, again using the transcription service Rev.com. Once transcribed, the data were read and reread for describing, classifying, and interpreting the data (Creswell & Poth, 2018). As I read through the transcribed texts, I took notes in the form of memos. This form of memoing is used to assist the researcher in determining key ideas or themes emerging from the raw data (Creswell & Poth, 2018). The transcribed interviews, memos, and field notes were

entered into the software program Dedoose for coding into categories for analysis and interpretation.

Coding

Coding is a process used to assign either label of meaning to the information gathered in words, phrases, sentences or paragraphs (Johnson & Christensen, 2008). The responses from participants to the open-ended questions in both interviews and the focus groups were organized in this qualitative case study using the coding software program Dedoose. The use of a coding software program provides a way for the data to be organized, filed, and maintained for easy retrieval (Creswell & Poth, 2018).

The use of Dedoose software was not intended to complete the analysis of the data collected but to assist with putting the data into categories and themes set by the researcher based on the words of the participants (Yin, 2014). Saldaña (2016) did not recommend the use of descriptive coding for a small group interview transcripts because the "noun-based codes of this method will not reveal very much insight into participants' minds" (p. 102). The Dedoose coding software coded units of data by the using participant's actual words (Saldaña, 2016). The use of the participant's actual words reflects the culture of the educational setting, the attitudes of participants toward students with disabilities and how those attitudes influence their viewpoints on inclusion. Creswell and Poth (2018) encouraged researchers to expect the information they hope to find, surprising information they did not expect to find and conceptually interesting or unusual information to the researcher. I looked for themes related to attitudes based on experiences of participants or preconceived ideas of a student with a disability's capacity to learn in an inclusion CTE course.

Using values coding, I grouped or categorized coded data into terms attributed to ourselves, another person, thing or idea (Saldaña, 2016). Values coding is "the application of codes to qualitative data that reflect a participant's values, attitudes, and beliefs, representing his or her perspectives or worldview" (Saldaña, 2016, p. 131). Values coding applies to categorize data obtained through participant interviews and focus groups where personal beliefs and value based on personal experiences shape the perceptions of the individuals and their worldview (Saldaña, 2016). My goal was to explore the attitudes and perceptions of CTE teacher participants toward students with disabilities and inclusion.

Using multiple sources such as interviews and a focus group corroborated the coding and "enhances the trustworthiness of the findings" (Saldaña, 2016, p. 132). After the first cycle of coding used to summarize the units of data initially, I completed a second coding. This second coding assembled material from the first coding and extended it into more meaningful and concise units of analysis (Saldaña, 2016). While the initial coding process developed the themes and categories, the second coding reorganized and recoded data allowing the researcher to view the data from other perspectives (Saldaña, 2016). The use of second coding allowed me greater latitude in interpreting the data of CTE teacher attitudes and perceptions of students with disabilities and inclusion in CTE courses. Using axial coding as the second coding extended the analytic work from the initial coding by reorganizing the data by prioritizing dominant and less important codes (Saldaña, 2016). By organizing characteristics or attributes, I gained a better understanding by eliminating redundant themes and focusing analysis on themes that allowed me to draw conclusions (Saldaña, 2016).

Limitations and Delimitations of the Research Design

According to Gay et al. (2009), a limitation of a case study is some aspect that the researcher cannot control but believes it negatively affects the results of the study (p. 109). Qualitative research methodology by nature of the design is conducted with subjectivity and potential for researcher bias when developing the interview questions and final analysis of the research data (Fraenkel & Wallen, 2003). For the researcher, there may be limitations with time and finances to effectively conduct a case study and gain reliable data (Creswell & Poth, 2018).

Limitations

One of the limitations of this qualitative case study design using interviews and a focus group was that the CTE teachers may not provide candid responses to the open-ended questions. Due to the sensitive nature of discussing students with disabilities, it is possible some participants provided responses they felt would make them appear socially correct. There may have been feelings of embarrassment as CTE teachers were asked to share sensitive information about experiences with students with disabilities. To avoid the possibility of a deceptive response or discussion the researcher planned carefully to ensure the comfort of the participants and built rapport by beginning the interviews and focus groups with general questions putting the participants at ease (Seidman, 2006).

Another limitation of this case study was the use of only CTE teacher participants as a source for teacher attitudes and perceptions toward inclusion from only one high school in Texas. “Qualitative research samples are generally different, smaller, and less representative compared to samples selected for quantitative research because the two approaches have

different aims and needs" (Gay et al., 2009, p. 135). The use of interviews and a focus group in this qualitative study provided multiple methods of data collection to ensure internal validity.

Delimitations

Delimitations, as described by Bloomberg and Volpe (2016), are conditions or parameters that researchers use to limit the scope of the study. Recognizing the limitation of the small sample size of participants, in efforts to add to the in-depth gathering of data, triangulation is being used to provide a clarification of meaning (Bloomberg & Volpe, 2016). Interviews were limited to CTE teachers who volunteer to participate in the study. In this qualitative case study, I examined how CTE teachers' attitudes and perceptions of students with disabilities influence their views on inclusion.

In this qualitative case study, one delimitation was that participants being studied were limited to CTE teachers from one public high school campus in Texas. To avoid researcher bias, the researcher conducted the study with participants from a school district where the researcher was not known to anyone participating in the study. Participants were more likely to respond candidly to interview and focus group questions when they did not know the researcher's expectations for responses (Gay et al. 2009).

Validation

The trustworthiness or validity of the research in a qualitative case study depends on how well the researcher has provided evidence in the descriptions and analysis of the real-world phenomenon explaining the "reality of the situations, and persons studied" (Bloomberg & Volpe, 2016 p. 162). The researcher needs to be clear enough so anyone reading the report of the case study can understand how the research was conducted and how the conclusions were reached

(Gay et al., 2009). In this qualitative case study, I used strategies used by other researchers to ensure the validity and dependability of the of CTE teachers' attitudes and perceptions of students with disabilities and inclusion (Gay et al., 2009; Yin, 2014). Strategies included audit trail, member checking, and triangulation (Gay et al., 2009). Credibility and dependability were criteria used to determine the validity of the research findings. Credibility in a qualitative study refers to the ability of the participant's perceptions to match with the researcher's interpretations (Bloomberg & Volpe, 2016). Dependability in a qualitative study measures how well the processes to collect the data are trackable (Bloomberg & Volpe, 2016). The qualitative researcher needs to be knowledgeable about the criteria for trustworthiness and how to address those criteria (Bloomberg & Volpe, 2016).

In a qualitative study, researcher bias may taint the trustworthiness of the findings (Johnson & Christensen, 2008). I practiced reflexivity through self-reflection at all points of the study including the development of interview questions, taking of field notes, analyzing data and final report of findings. Reflexivity helps the researcher become more aware of how background experiences may affect the study (Johnson & Christensen, 2008). Keeping field notes in a daily journal helped me self-reflect on the direction of the research and maintain the validity of the data and methods of collection.

Credibility

Bloomberg and Volpe (2016) describe credibility in a qualitative research study as the ability of the researcher to accurately represent what the participants in the study think, feel and about the topic being studied. To ensure that the CTE teachers' attitudes, feelings, experiences and perceptions of students with disabilities were accurately portrayed, the practice of

triangulation and member checking was used. Triangulation is the process of using multiple methods of data collection to corroborate the conclusions made from the analysis (Bloomberg & Volpe, 2016). By using one-on-one interviews and a focus group to collect data, the evidence was cross-referenced for themes and patterns and provides validity to the findings (Creswell & Poth, 2018). One-on-one interviews with CTE teacher participants and focus group questions about their attitudes and perceptions of students with disabilities on a single high school campus provided a logical connection of the data among the different methods of data collection.

To ensure I accurately reported the responses of the participants, they were given an opportunity to review the transcription of the audio recordings before a final report was issued as member checking. Through member checking the one-on-one participants were provided through email copies of their individual transcribed audio recording of the interview. The focus group participants were provided a copy of the transcribed audio/video recording of the group discussion responses to the researcher's questions to obtain feedback. Participants provided feedback through phone conversations and email correspondence. The feedback from member checking provided me with additional data on how accurately the transcriptions reflected the actual interview discussions. Additional data provided through participants' feedback is reflected in the researcher's field notes.

Dependability

To ensure the validity of the findings, content-related evidence ensures the items measured represent the content measured and that the intent of the measurement is based on the topic being studied (Johnson & Christensen, 2008). According to Bloomberg and Volpe (2016), *dependability* parallels *reliability*. Reliability in a traditional study means the findings of the

research can be duplicated by other researchers in similar settings (Bloomberg & Volpe, 2016; Lincoln & Guba, 1985). In a qualitative study, the findings must be consistent and dependable (Bloomberg & Volpe, 2016).

Another strategy for increasing the dependability of the case study is to keep an *audit trail* (Bloomberg & Volpe, 2016; Lincoln & Guba, 1985). Maintaining an audit trail provides a way to track as much of the details as possible in the field notes and journal. Journaling is a way for the researcher, the main instrument of data collection, to track self-reflection and personal insights when concluding from data collected (Bloomberg & Volpe, 2016).

Expected Findings

I expected findings from this research and data gathered from the one-on-one interviews and one focus group to result in insight into how the attitudes and perceptions of CTE teachers toward students with disabilities impact inclusion in CTE courses. I expected to see how the experiences of CTE teachers in teaching students with disabilities have shaped those attitudes and perceptions of inclusion of students with disabilities in CTE courses. Research has shown that general education teachers acquire a more positive attitude the longer they teach students with disabilities in an inclusion setting (Kight, 2008). The higher the confidence and efficacy of the teachers working with students with disabilities, the higher the chance inclusion was best practice (Townsend, 2009).

Expectations included data on how CTE teachers felt about special education department support and their views on inclusion for CTE courses (i.e., their beliefs in inclusion as a viable educational setting for students with disabilities). A qualitative study by Cadeña (2013) discovered the importance of CTE teachers building relationships with students and how those

positive relationships resulted in success for those students with disabilities. Teachers reported in research how assistance and support from the Special Education Department enhance student success (Cadeña, 2013). I expected to hear through interviews and focus groups from CTE teachers how they viewed students with disabilities and the students' abilities to be successful in CTE courses.

Ethical Issues

Ethics refers to questions of right and wrong (Fraenkel & Wallen, 2003). Before deciding on a study topic or procedure, the researcher needs to consider if it is *right* or *wrong* to pursue the study especially when the research involves human subjects (Fraenkel & Wallen, 2003). When conducting qualitative research ethical concerns must be considered during the planning and execution of the study (Creswell & Poth, 2018). Ethical issues may arise at any time during the research process, and not just during the data collection or reporting phase of the study (Creswell & Poth, 2018).

In a qualitative research study using interviews and focus groups to discuss beliefs, values, and attitudes, relationships between researcher and participant may become close (Gay et al., 2009). This closeness between researcher and participant may lead to unintended influences on data interpretation (Gay et al., 2009). The participant may request to see and compare notes about another participant's responses to questions. Gay et al. (2009) noted that "considering ethics before commencing qualitative research is one way to ensure that you will be prepared to respond in an ethical, caring manner if difficult situations arise" (p. 22). To avoid the potential possibility of being in a situation where data may be compromised due to the familiarity of CTE

and special education staff, I did not conduct research in the same district or area where I am employed.

Conflict of Interest Assessment

Per the American Psychological Association (2010), researchers may be required to submit a verification of compliance with ethical standards. Information used for justifying research in this study is cited in the reference section.

Based on the research design of a qualitative case study using interviews and focus group I was the primary instrument for data collection and data analysis. As the primary instrument for developing the survey and guiding questions for the interviews as well as conducting the interviews, there was a potential for bias. Researcher bias was reduced by having another colleague preview the interpretations of the results and offer feedback allowing the research to reevaluate the data for bias interpretation (Gay et al., 2009).

Researcher's Position

A characteristic of qualitative research known as *reflexivity* describes how the researcher positions himself relative to the topic of research (Creswell & Poth, 2018). Researchers have described how their background (work experiences, cultural experiences, and history) "informs their interpretation of the information in a study, and what they have to gain from the study" (Creswell & Poth, 2018, p. 44). For the past 12 years, I have been a Special Education Transition Coordinator responsible for federal and state compliance for postsecondary transition and vocational programs. Before my current assignment, I was a Special Education vocational classroom teacher for 10 years.

I am familiar with CTE programs with increased rigorous academic standards designed to meet the needs of 21st-century market demands for skilled labor with additional skills in leadership, management, and academics needed for employment and advancement to postsecondary education opportunities. Being able to meet the postsecondary transition needs of students with disabilities preparing them for postsecondary college and career readiness is an area of expertise for me.

From 2013 to 2016 in collaboration with CTE teachers and the Special Education Department, the researcher as Program Coordinator for a school district in Texas developed a summer enrichment program where CTE teachers taught side-by-side with special education teachers to instruct students with disabilities in job readiness skills. At the conclusion of the three-week summer session, a debriefing held after the end of summer revealing CTE teachers' willingness to teach students with disabilities in CTE courses during the regular school year. The debriefing was informal and unstructured with all teachers and the Directors of Special Education and CTE discussing career exploration sessions that generated the highest student engagement and success and ways to implement additional career courses for the next school year's summer school enrichment program. Comments from CTE teachers as to the success of the students with disabilities in the summer classes were all positive.

In qualitative studies, a researcher must be aware of potential bias (Gay et al., 2009). Bias is present when the research data becomes distorted due to the application of the characteristics of the researcher (Gay et al., 2009). The researcher must be aware of how experiences shape attitudes and a strategy to help avoid researcher bias is to be sensitive to contrary evidence (Yin, 2014).

Ethical Issues in the Study

There are three ethical issues every researcher should address: (a) protection of participants from harm, (b) ensuring the confidentiality of research data, and (c) questions of deception of subjects of research (Fraenkel & Wallen, 2003). An additional ethical issue considered before conducting research in a district in Texas was an IRB requesting permission to conduct research was completed. Once approval was received from Concordia University's IRB, school districts in Texas were contacted and district IRB application completed. The district IRB application included details on how the district, as well as the researcher, would protect the privacy and confidentiality of the study participants.

It is also essential to disclose the purpose of the study to participants (Creswell & Poth, 2018). Informed consent was obtained by all participants in the case study. Steps were taken to ensure student names or any identifying information were removed from the data collected. Pseudonyms were used for all participants. The list of assigned identification numbers was stored in a locked cabinet in my home office. After publication of the study, any field notes, transcriptions, memos, and audio/video recordings of the interviews and focus group were destroyed. Any student names mentioned by a participant were removed from the transcript to protect the identity of the student.

Johnson and Christensen (2008) advised the researcher to be prepared to address any issues that may arise outside the confines of the study such as a participant needing to exit the study before completion of the interview or focus group. This case study addressed the attitudes of teachers towards students with disabilities in CTE courses and had the potential for teachers to

divulge information about child abuse or neglect of a student with a disability. Being prepared for such a revelation ensured ethically sound research (Johnson & Christensen, 2008).

Summary

Research has shown that students with disabilities are not accessing CTE courses at the same rate as their nondisabled peers (Texas Education Agency, 2017). Research was needed to determine how the attitudes and perceptions of CTE teachers' toward students with disabilities influence inclusion in CTE courses. A qualitative case study was used to explain how the attitudes and perceptions of CTE teachers influence decisions made in ARD/IEP meetings to accept or deny a student with a disability access to CTE courses as part of the student's course of study. Data were collected for analysis from 21 study participants, 15 of which were on-site interviews with one focus group of another six CTE teachers at a high school in Texas.

The analysis began with the coding and categorizing of data collected from the interviews and focus group. A second coding further developed a sense of thematic and conceptual organization with the use of Dedoose coding software program to further categorize the data (Saldaña, 2016). Interpretation of the themes to find meaning can be difficult for a novice researcher, but with strategies in place, a quality report was developed (Gay et al., 2009). The use of multiple methods of data collection and triangulation of data analysis ensured the credibility and dependability of the research case study.

The ethical considerations for this case study were addressed through informed consent, assurances of privacy and the protection of the participants from harm through the use of a numerical identification system replacing the names of the respondents. All field notes, transcripts of interviews and focus group along with any audio/video recording of interviews and

focus groups were kept securely locked in a cabinet in my office. A review of the literature was used to develop the conceptual framework guiding this case study. It was anticipated that the findings from this research would provide insight into how the attitudes and perceptions of CTE teachers influence inclusion in CTE courses.

Chapter 4: Data Analysis and Results

Introduction

This single-case study explored how the perceptions and attitudes of CTE teachers toward students with disabilities influenced inclusion in CTE courses. The researcher's intent was to examine how either positive or negative experiences in teaching students with disabilities would influence decisions made in ARD committees to include students with disabilities in CTE courses. Interview and focus group participant responses to research questions provided data on attributes impacting the attitudes and perceptions of students with disabilities and inclusion in CTE courses. This study contributed to research by adding to the knowledge of how the experiences of CTE teachers in educating students with disabilities influence inclusion in CTE courses. The research study results may help educators, not only CTE but special education, in providing better support for inclusion of students with disabilities in CTE courses.

Problems were encountered at the recruitment stage to obtain participants due to teachers being on summer break, and despite IRB approval from a school district, the researcher was not allowed to directly contact the CTE teachers. The researcher waited for the director

This chapter will detail how the research sample was chosen, and descriptions of the participants for both the one-on-one interviews and the focus group. The researcher will review how the data were collected using 15 one-on-one interviews and a focus group. This chapter will also explain how the data collected was analyzed using coding. The themes that emerged from the coded transcripts of collected data will be explained and show connection and how it answers the three research questions.

Description of the Sample

There were 15 participants for one-on-one interviews. Participants in this single-case study consisted of certified CTE teachers from Texas. There were 15 participants who completed one-on-one interviews. The interviews were conducted in person and via telephone. Interviews were recorded on an iPad with the use of a backup micro-recorder. All participants taught CTE courses where at least one CTE course had students with disabilities as part of the class.

Six participants made up the focus group. There were three female and three male participants who participated in the focus group discussion. To protect their privacy and confidentiality, each participant was provided with an identification number. The list of participants with names and alternate identification was secured in a locked cabinet in the researcher's home office. Table 1 describes the interview and focus group participants' level of education, and CTE courses taught.

Table 1

Participants by Education Level and CTE Courses

Participant	Education level	CTE Courses
AD01	Bachelor, Master	Computer Education, International Business, Sports Marketing, Career Education
AD02	Bachelor	Graphic Design
AD03	Bachelor, Master	CNA, Nursing
AD04	Bachelor	Residential Wiring
AD05	Bachelor	Career Prep, Career Practicum
AD06	Bachelor	Business System Management
AD07	Bachelor	Business Information Systems
AD08	Bachelor	Auto Tech, Small Engine Repair
AD09	Bachelor, Master	BIM, Keyboarding, Entrepreneurship, Career Connections
AD10	Bachelor, Master, Principalship	BIM, Keyboarding, CTE Department Chair
AD11	Bachelor	Accounting, Keyboarding, Principals of Technology
AD12	Bachelor	Career Prep, Career Practicum
AD13	Bachelor	Family Consumer Science, Culinary Arts, Child Development, Psychology
AD14	Bachelor	Criminal Justice, Law Enforcement, Forensic Science, Forensic Psychology
AD15	Bachelor	Auto Tech, Small Engine Repair, Welding
FG01	Bachelor	Secondary Business Composite
FG02	Bachelor	Vocational Supervisor, Secondary Industrial Arts, Vocational Trades and Industry
FG03	Bachelor	Secondary Industrial Arts
FG04	Bachelor	Family and Consumer Science
FG05	Bachelor	Technology Applications, Business Admiration, Secondary Business Composite
FG06	Bachelor	Business Information Systems

Race and Gender Demographics

A total of 21 participants took part in the study. Concerning ethnicity/race, approximately 80.95% of participants were White, 9.52% identified as Hispanic, and 9.52% identified as African American. Approximately 38.10% of participants identified as male and 61.90% identified as female. Table 2 shows the race and gender of the study participants.

Table 2

Teacher Participants by Ethnicity and Gender

Frequency	Ethnicity	Gender
10	White	Female
7	White	Male
2	Hispanic	Female
1	African American	Female
1	African American	Male

Years of Teaching Experience

Average years of teaching experience shows the majority of the CTE teacher participants had between 10 and 20 years of classroom teaching experience. Of the sample population of 21 CTE high school teachers, 19.05% of the teachers had 30 or more years of teaching experience, 14.29% of teachers had between 21–30 years of teaching experience, 61.90% of teachers had 10–20 years of teaching experience, and 4.76% of teachers had 5–9 years of teaching experience. Data on years of teaching experience were self-reported by participants. Table 3 shows years of classroom teaching experience completed for each of the case study's participants.

Table 3

Participants' Years of Teaching Experience

Years in the classroom	Frequency
30+	4
21–30	3
10–20	13
5–9	1

Grade Level and Discipline

Participants were not chosen based on individual grade level, but a requirement that the teachers be CTE certified teaching CTE courses in high school. All participants were CTE certified teachers and had experience in teaching students with disabilities in a CTE course. The high school in Texas, where the participants taught CTE courses included grades 9, 10, 11, and 12. To gain insight into the participants' attitudes and perceptions of teaching students with disabilities, a brief description of each participant is included.

Interview Participants

For this study, interview participants were assigned identification numbers to protect their identity. The one–on–one interviews were held on separate days and times to ensure privacy and confidentiality. According to TEA reporting for 2017–2018 school year there were 298,199 CTE teachers. With 21 CTE study participants of the 298,199 CTE teachers in Texas, it is very unlikely that any participant would be easily identified thereby breeching confidentiality of participants.

Participant AD01 is a White male CTE teacher who has taught for CTE courses for 10 years and is leaving the field of education to work for a company providing educational products. AD01 taught CTE computer applications and career preparation courses. He provided vocational support as well as co-sponsoring the DECA club for students with employment in high school.

Participant AD02 is a White female who has been teaching CTE Graphic Arts, Keyboarding, Business Information Management (BIMM), and Intro to Business classes for 20 years. She believes students with severe anxiety disorders may not be appropriate for her CTE courses.

Participant AD03 has been teaching CTE nursing for 21 years. AD03 is a White female with a bachelor and master degree. Along with her high school CTE course, she works with a nursing program in the Criminal Justice System. Training students to earn their Certified Nursing Certificates (CNA) is a passion for AD03. She is interested in helping students with disabilities find a job within the nursing filed if they are interested but cannot pass state medical board exams.

Participant AD04 is a White male CTE teacher who has been teaching for five years. AD04 teaches residential wiring at a high school vocational campus. He has a history of working with students with disabilities in learning skills to work as an electrician's helper. AD04 has a journeyman's electrician certification along with his CTE certification. The CTE courses he teaches are part of a 2-year pre-apprenticeship program preparing students to enter an apprenticeship program.

Participant AD05 is a Hispanic female who has been teaching for 28 years. She has taught CTE business and computer courses. For one year, she was a special education co-teacher

in a CTE business course. Currently, AD05 works as the district's Vocational Adjustment Coordinator (VAC) for special education students' with competitive employment in the community. AD05 is dual-certified in CTE and Special Education.

Participant AD06 taught CTE courses for 36 years and retired at the end of this school year. AD06 is a White female teacher who taught Keyboarding, Intro to Business, and Business Information Systems (BIM). AD06 participated in ARD meetings as a CTE representative and required a member of the ARD committee. Her experience with teaching CTE and CTED courses was shared with the ARD committee and assisted with making placements for special education students in CTE courses.

Participant AD07 is a White female who is dual-certified in CTE and Special Education. AD07 has been teaching for 10 years. She entered the field of education after working in the private sector as a business manager. She teaches CTE and CTED business courses, Keyboarding, Principals of Business, Marketing, and Finance. She attends ARD meetings as a CTE representative to provide information on CTE courses and prerequisites to ensure the students with disabilities are being appropriately placed in CTE courses. AD06 obtained her Special Education Certification five years ago so she could better serve students with disabilities in CTE courses.

Participant AD08 is a White male CTE teacher with five years of teaching experience. AD08 teaches CTE auto mechanics. Before becoming a teacher, AD08 worked as a service manager for a large car dealership. AD08 worked with students enrolled in high school work programs at the dealership. It was not part of his duties or responsibilities to help individuals with obtaining employment or helping to train them, but he felt with support these individuals

could be successful. His wife suggested to him since he had a talent for helping others and was doing his form of teaching, he should think about becoming a teacher. So, he decided to get his teaching certificate to maximize his ability to help students get the training they needed to get jobs in the automotive industry. During the first year of his teaching experience, he taught a summer vocational class for students with disabilities as part of a CTE and Special Education collaborative enrichment program. He taught students to use a tire-changing machine resulting in students earning a certificate showing they were trained to use a tire-changing machine. One student obtained a job at a local tire retail store changing tires.

Participant AD09 is a White female who taught CTE courses for 10 years. She taught at the four high schools in the district before transferring to the career center campus. She taught CTE BIMM, Keyboarding (CTE and CTED), and Intro to Business, and Career Connections. AD09 has left the field of education to pursue a career in the private sector.

Participant AD10 is an African American CTE teacher and assistant principal over the CTE department and CTE department chair. AD10 has never taught CTED courses. As an assistant principal, department chair, and teacher, AD10 is a dedicated educator to the success of her students. This school year, D10 was transferred to a campus where CTE courses are not being taught.

Participant AD11 is a White female who, after teaching CTE courses for 37 years, retired at the end of this school year. In her first years of teaching, AD11 taught typing and shorthand. As the need for technology skills became part of the CTE course, AD11 taught Business Accounting and Principals of Technology. AD11 was also CTE department chair until her retirement this year.

Participant AD12 is a White male who has been teaching CTE and Special Education for 20 years. He grew up in the same community where he works and has no problem obtaining employment for his students. AD12 is the CTE Career Prep teacher and works with students in postsecondary transition planning.

Participant AD013 is a White female CTE teacher who has been teaching for 15 years. She has taught or currently teaches Family Consumer Science, Culinary Arts, Child Development, and Psychology. This is the first year she has not had special education students in her courses. She feels frustrated by the large classes and no support from the administration.

Participant AD14 is an African American female who has been teaching CTE courses for 15 years. AD14 was employed in law enforcement before leaving to obtain her CTE certification and begin teaching. AD14 teaches Criminal Justice, Law Enforcement, Forensic Science.

Participant AD15 is an African American male CTE teacher with 24 years of teaching experience. He has either taught or teaches auto mechanics, small engine repair and welding. He currently teachers the CTED version of welding and small engine repair courses. AD15's teaching philosophy is one of all students can learn when treated with respect. His passion for teaching is apparent in his commitment to working with struggling students on his lunch break.

Focus Group Participants

To protect the identity of the study focus group participants, they were each assigned a coded number. For privacy, the focus group was conducted after school contract hours. As with the interview participants, of the 298,199 CTE teachers in Texas, the six focus group participants would not be easily identified or recognized.

Participant FG01, a White female, has been teaching CTE courses for 36 years. She is close to retirement and teaching both CTE and CTED classes. FG01 enjoys teaching keyboarding and business courses.

Focus Group participant FG02 is a White male who taught construction systems (shop) for 20 years and taught driver's education for 17 years. He worked in the construction business before obtaining his CTE teaching certificate and has always had students with disabilities in his CTE courses. FG02 has taught CTED along with CTE courses for most of his teaching career. FG02 has taught driver's education for 17 years, which is a class outside of public education.

Focus Group participant FG03 is a White male who has taught both CTE and CTED courses in Construction Trades. FG03 is dual certified in both CTE and Special Education, giving him an additional background for educating students with disabilities. FG03 has also taught the basics of architecture.

Focus group participant FG04, a Hispanic female has taught Family and Consumer Science (formerly called Home Economics) for almost 38 years. She taught CTE courses with students with disabilities as well as CTED courses. She referred to her CTE courses as the "sewing" classes. Even after teaching for 38 years, FG04 maintains her enthusiasm for teaching all students, not just students with disabilities, and believes all students can learn.

Focus group participant FG05, a White female has been teaching CTE courses for 20 years. FG05 taught both CTE and CTED courses at the high school in her previous district. FG05 teaches CTE business courses and always finds a strategy to assist struggling learners.

Focus group participant FG06, a White male, worked in the industry before obtaining his teaching and certification to teach CTE courses. He has been teaching for 10 years and brings industry-based experience to the CTE classroom.

Summary of the Sample

Participants were selected based on a requirement to hold a CTE certification and have taught students with disabilities in a CTE course. Fifteen CTE teacher participants completed one-on-one interviews with six additional CTE teachers who participated in a focus group. The participants in the focus group were not the same participants who completed the one-on-one interviews. Table 4 shows an overview of participant demographics.

Table 4

Summary of CTE Teacher Participants

Teacher Demographics	Frequency
Ethnicity	
White	17
African American	2
Hispanic	2
Gender	
Male	13
Female	8
Years of teaching	
31+	4
21–30	3
10–20	13
5–9	1
Level of education	
Bachelor	21
Master	4

Research Methodology and Analysis

The purpose of this case study was to explain how the attitudes and perceptions of CTE teacher participants toward students with disabilities influence inclusion in CTE courses. Qualitative researchers want to know what participants in a study are thinking and "why they think what they do" (Fraenkel & Wallen, 2003). This case study investigated CTE teacher attitudes and perceptions using interviews and a focus group to understand better how the teachers feel about inclusion and teaching students with disabilities in CTE courses. Evidence gathered from this case study provided insight into assumptions and an explanation of how the attitudes and perceptions of CTE teachers influence inclusion in CTE courses.

Using an explanatory qualitative case study design, the researcher investigated how CTE teachers' attitudes and perceptions toward students with disabilities influence the inclusion of special education students in high school CTE courses. The purpose of a case study explaining how or why some conditions came to be is known as explanatory (Creswell & Poth, 2018). Qualitative case study researchers seek to investigate and develop an in-depth understanding of a particular issue within a real-world setting (Creswell & Poth, 2018). In this study, the researcher applied the theory of social constructivism as a guide to investigate and explain how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses. Social constructivism aims to focus on the "specific contexts in which people live and work in order to understand the historical and cultural settings of the participants" (Creswell & Poth, 2018, p. 24). Data collection using interviews, a focus group, and member checking of participating CTE teachers' attitudes and perceptions of students with disabilities was used to provide insight into how those attitudes and perceptions influence student inclusion in CTE

courses. Gaining insight into how CTE teachers view the capacity for students with disabilities to complete coursework in a CTE course may help to explain why students with disabilities are not accessing CTE courses at the same rate as their nondisabled peers. Interview and focus group questions were designed to answer the following research questions:

RQ1: How have the experiences of CTE teachers with students with disabilities in or outside of the classroom shaped their attitudes and perceptions of students with disabilities and inclusion in CTE courses?

RQ2: How do the attitudes and perceptions of CTE teachers as part of an ARD committee influence their decisions and recommendations for placement of students with disabilities in CTE courses?

RQ3: How do the increased academic rigors of CTE courses to meet the Texas standards for college and career readiness for all students influence the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in their CTE courses?

Data Collection Review

Interviews

Before requesting IRB approval from school districts, an internet search was conducted looking for school districts in Texas. Using the search bar on the school districts' websites, the department for requesting permission to conduct research was located and contacted for information on the district IRB approval process.

Methodology in Chapter 3 called for 30 one-on-one interviews. Several factors led to the number of participants completing one-on-one interviews reduced to 15. One major factor was

the number of school districts denying approval for research. An unanticipated issue in obtaining participants was that teachers were on summer break and not accessing their district emails where the requests for volunteers were being made. A false assumption made was that teachers would be more readily available to participate since they were off-contract for the summer. Teachers may have been on vacation and not in town or even in the country. Of these 21 CTE teachers, 15 signed informed consent forms and participated in the one-on-one interviews. Informed consent forms were signed and scanned back or were signed before the start of the interview. Participants were provided with a copy of the signed consent form. All signed consent forms were filed in a locked cabinet in the home office of this researcher.

In order to obtain participants for the single case study, six school districts were initially contacted for IRB approval for conducting research. It took an average of 10 days for receipt of notification of approval or denial of the application requesting IRB approval. All districts, as part of the application process, required the researcher's attending university's IRB approval before the application would be processed. This researcher provided the signed IRB approval from Concordia University to districts as part of the application requirements for districts' IRB approval.

In preparation for the recruitment of participants in School District #1, business cards were made with the contact information of the researcher and on the back of the business card, a place to list the location, date, and time of the interview. School district #1 contacted for IRB approval required an application with attachments of documents consisting of the applicant signature page, adult informed consent form, data collection form, Concordia University–Portland's IRB approval statement, Interview Protocol Questions, and Research Recruitment

Flyer. The completed application for Conducting Research in School District #1 and supporting documents was sent to the School District Department of School Improvement. Because this research is part of a university requirement for completion of a degree program, the supervising professor needed to complete and sign a form acknowledging student applying for IRB approval was under the supervision of a university program.

After 10 days without notification of approval or denial, an email was sent to the Director of School District Department of School Improvement inquiring as to the status of the Application to Conduct Research. The next day a letter of approval from the Director was received with instructions on conducting research in School District #1. The Director sent emails to the CTE teachers with the Recruitment Flyer and Informed Consent Form with instructions to return the signed forms to her office. After receiving the signed consent forms, the Director would then forward them to the researcher. The researcher was instructed not to directly contact teachers for recruitment purposes, but only after receiving the signed consent forms.

After three weeks without receiving confirmation of any participants in School District #1, a phone call was made to the Director requesting a second request for volunteers be sent to the CTE teachers. That same day the Director resent the email with the same attachments citing updated timelines to the CTE teachers. While waiting for responses from School District #1, other districts were contacted for their application process for IRB approval to conduct research. School District #2 returned the application for IRB approval claiming it was too late in the school year (April) and denied IRB approval for conducting research in their district. School District #3 forwarded the researcher's request to a second person for approval. After two more email attempts to contact the second individual responsible for approving the conducting of

research in the school district, there was not a reply. Application for IRB approval was submitted in School District #4, and this researcher was not granted permission to conduct research in the school district. This researcher was instructed to reapply in the fall at the beginning of the new school year. Districts #5 and #6 never responded to inquiries about any IRB approval needed to conduct research in their districts.

This researcher made the decision not to conduct research in the district where employed. Participants may be reluctant to provide candid answers to questions. Participants may feel the need to provide answers to the interview questions that the researcher wants to hear. Some administrators may feel that research by a district employee is a conflict of interest.

Interviews with participants still on the contract were conducted after contract hours and on weekends and did not interfere with assigned duties on their campuses. Interviews over the summer with off-contract participants were conducted in locations and times at the convenience of the participants. Once the interview was completed, the field notes were filed in the office in a folder identified by the participant's assigned identification number. The audio file of the interview was backed up to a flash drive on the home office computer under the alternate identification number of the participant. The audio file was sent to Rev.com for transcription with the speaker's names provided as the researcher and the participant's alternate identification number. All field notes and audio recordings of the interviews were kept securely locked in the home office of the researcher.

Focus Groups

In the methodology from Chapter 3, there were to be two focus groups. Due to the same issues in obtaining one-on-one interviews, the focus group instrument was changed from two

focus groups to one focus group. Six volunteers agreed to participate in the focus group. The focus group met at a mutually agreed upon time and location. One participant had retired two weeks before the focus group discussion. Once participants returned consent forms to the director of District #1, participants were contacted and emailed a recruitment flyer explaining the details of the research including the purpose and timelines. Signed copies of consent forms were kept in a folder in possession of this researcher until locked in the home office of this researcher. The recording of the focus group was backed up on a flash drive and locked in the home office of the researcher.

Member Checking

Once the interviews were transcribed by Rev.com, the audio recording was played and matched to the written transcriptions. The second set of field notes were taken, noting the tone and body language of the participants during the interview. The transcription was edited for content and accuracy of translation from audio to text. Any true identity of the school, students, and parents were deleted. Topics not relevant to the interview questions were also deleted. An example of a topic removed from the transcribed text was a reference to the participant's dog barking and chasing a squirrel in the back yard.

Participants were contacted by phone and secure email with the attached copy of the edited transcripts was emailed to them. Within the body of the email were the three questions to consider when reviewing the transcript:

1. Do you agree with the findings and do you fell the conclusions accurately reflect your views discussed in the interview?
2. Is there anything you would like to add to the information shared in the interview?

3. Is there anything you would like to change or feel is an inaccurate interpretation of the information shared in the interview?

Participants either emailed their responses or telephoned to ask questions about the process for member checking. Participant AD07 called to ask questions about the exact wording in the transcript. AD07 was assured that the transcript itself was not a part of the documentation provided in the final report but a way to ensure statements made by her were accurately interpreted by the researcher. For clarification, AD07 was asked an additional question regarding her participation in ARD meetings. Were her recommendations for placement of a student with a disability in a specific CTE course followed and accepted as an ARD committee decision? AD07 reported that she provided information to the ARD committee about the CTE courses that would facilitate the movement of the student toward his or her postsecondary career goals. The case manager or counselor is responsible for scheduling the student into any CTE course. AD07 reported that the understanding among CTE teachers that there was an unwritten rule that no more than 20% of students with disabilities could be scheduled into any CTE course.

If there were any changes to be made to the transcript, they were noted in the field notes and the transcript changed to reflect any feedback from participants on the three member checking questions. The field notes remain secured and locked in the researcher's home office.

The focus group discussion included six participants. The audio and visual recordings from the hour and 20-minute discussion were sent to Rev.com for transcription but were returned without being transcribed with an explanation from Rev.com that due to some inaudible portions of the discussion. The focus group discussion was manually transcribed by the researcher and matched against the audio and visual recording of the focus group discussion. Field notes were

also matched against the recording and manual transcription to ensure discussion was thoroughly documented. The transcription was edited to remove the true identities of participants, students, name of the school and other teachers. Irrelevant content was also deleted. Topics or sidebar conversations containing events or experiences not related to the research questions were deleted.

Focus group participants were contacted by telephone and email requesting to set a date and time to meet and discuss the member checking questions to ensure data collected and reported in this study accurately portrays the attitudes and perceptions of the participants in the focus group. Focus group participants preferred to respond to the member checking through personal emails or phone calls. Focus group participant FG02 met with the researcher to review the transcript and field notes from the focus group discussion. Participant FG02 stated he hoped this research would help get more special education support in CTE classrooms. All focus group participants agreed with the transcription of the discussion. Any discussion in phone conversations was not related to making any changes with the researcher's interpretation of the data collected during the focus group discussion. Focus group participants were asked the following member checking questions:

1. Do you think the interpretation of the information shared in the focus group is accurate?
2. Do you feel you were allowed to participate in the discussion in the focus group and were treated fairly and your views respected?
3. Do you think the topic was adequately discussed, and all points of view shared?
4. Is there anything you would like to add to the information shared in the focus group to increase the accuracy of the findings?

5. Is there anything you feel needs changing?

6. Would you like a follow-up discussion with the members of the focus group to discuss the findings?

Data Analysis

During the analysis of the data collected through one-on-one interviews and the focus group, several methods were used. Using the online transcription service, Rev.com, the data were transcribed and compared against the audio recording of the interviews and focus group discussion. A second review of the transcriptions were matched against the field notes taken during the interview, along with any notes taken in prior discussion to the actual interview. Data from feedback obtained during member checking through email and phone conversations were also reviewed. The data were then initially coded according to the three research questions using values coding in one, two, or three order and color-coded. The data were then entered into the online program Dedoose. The coded transcriptions were reviewed a second time for any additional coding, and mapping procedures were used to keep the focus on emerging themes related to the research questions. The researcher will present the emergent themes discovered within the data after describing the coding and theming analysis procedures.

Interviews

After the audio recording of the interviews were transcribed, and any changes made to the transcriptions through member checking, the use of initial coding was used to align the data to the research questions. The data were color-coded into three main topics matching the research questions.

Table 5

Developed Codes

Code	Color code
Experiences of CTE teachers	Yellow
Participation in the ARD meetings	Blue
Rigors of CTE academics	Green

The researcher used the color yellow to identify the experiences of CTE teachers with students with disabilities in their CTE courses. Any information provided by the participants in the interviews related to classroom experiences, either positive or negative, and their attitudes and perceptions of the cause. Positive experiences included students who worked hard, and teachers felt they made a difference in the lives of the students with disabilities. Participant AD15 told the researcher he "teaches all students as if they do not have a disability." A factor contributing to the positive attitudes of the CTE teachers was that they felt supported by the special education department. AD15 reported he feels "much supported by the special education department."

Negative experiences by CTE teachers were evident in data provided by participants that the CTE teachers felt overwhelmed and unsupported by the special education department. The lack of support from the special education department included not getting the IEP documentation before the start of the school year for students with disabilities on their rosters, lack of communication about students' disabilities and how best to instruct them, and not responding to requests from CTE teachers for assistance with student issues in their classrooms. The negative attitudes of CTE teachers toward students with disabilities were minimal when it came to the students' functioning in the CTE course. If a CTE teacher had a student with a more

significant disability, a special education paraprofessional usually accompanied the student and provided one-on-one support, as reported by participant AD09.

The color blue was used to code data related to the participation of CTE teachers in ARD meetings. Several participants reported they do not attend ARD meetings, and participants who reported they attended ARD meetings did not feel they had a role in students with disabilities being scheduled in CTE courses. Participants reported that counselors usually decide to place students with disabilities in CTE courses and not necessarily in the course the student chose. Participants in the focus group felt very strongly that too many students with disabilities were being placed in their courses that were already overcrowded. Many participants reported CTE courses were being used as a dumping ground by counselors scheduling students with disabilities into CTE courses.

Green was the color the researcher used to identify and code data related to the rigors of academics in CTE courses and the capability of students with disabilities to complete the coursework. Participants discussed grading expectations of teachers for students with disabilities. It is the perceptions of all interview participants that teachers that they cannot fail a student with a disability in a CTE course. Participant AD11 reported, “There is just so much required now, there are lots of the ’70s, nobody wants to get sued [for failing a student with a disability].” It is also the perceptions of some participants that teachers can modify the content of a course to enable a student with a disability to receive a passing grade, even when the student only has accommodations.

To organize the codes into themes, the researcher used Dedoose. The use of Dedoose increased the validity of the data into themes from the initial coded data. The emergent themes

allowed the researcher to develop a summary detailing the themes analyzed from the participant interviews.

Focus Groups

As with the interviews, the discussion in the focus group was audio-recorded. The focus group was also video-recorded. The addition of the video-recording was to ensure the written transcript correlated with the participants' audio transcriptions. After the audio recording of the interviews were transcribed, and any changes made to the transcriptions through member checking, the use of initial coding was used to align the data to the research questions. The data were color-coded into three main topics matching the research questions.

Table 6

Focus Group Developed Codes

Code	Color code
Experiences of CTE teachers	Yellow
Participation in the ARD meetings	Blue
Rigors of CTE academics	Green

The researcher used the color yellow to identify the experiences of CTE teachers with students with disabilities in their CTE courses. Any information provided by the participants in the focus group discussion related to classroom experiences, either positive or negative, and their attitudes and perceptions of the cause. Positive experiences included students who worked hard and did learn the basics in a sewing class, as reported by FG04. The participants in the focus group reported more negative experiences teaching students with disabilities than the participants in the one-on-one interviews. The researcher allowed the discussion to expand on individual participant stories of incidents with students with disabilities in their classrooms. Participant FG02 relayed

information about a student who threw a chisel at him during class. Another participant, FG03, remembered a time when a principal had to remove a student who was in danger of being hurt around a band saw that was being used as part of the construction class.

As with the one-on-one interviews, the negative experiences by CTE teachers were evident in data provided by participants that the CTE teachers felt overwhelmed and unsupported by the special education department. The lack of support from the special education department included not getting the IEP documentation before the start of the school year for students with disabilities on their rosters. Participant FG05 reported in the focus group that sometimes the teachers did not get their accommodations for students until the third of the six weeks. FG05 also reported a lack of communication about students' disabilities and how best to instruct them.

The color blue was used to code data related to the participation of CTE teachers in ARD meetings. Unlike the participants in the one-on-one interviews, all six focus group participants reported attending ARD meetings. Focus group participant FG05 felt that CTE teachers should take more of a role, ensuring the ARD committee places the student with a disability in the correct CTE course. Participants in the focus group felt very strongly that too many students with disabilities were being placed in their courses that were already overcrowded. Many participants reported that CTE courses were being used as a dumping ground.

Green was the color the researcher used to identify and code data related to the rigors of academics in CTE courses and the capability of students with disabilities to complete the coursework. The focus group was conducted before the individual interviews were conducted, and the issue of grading and not failing special education students was not a consideration for discussion. The focus group participants felt that the emphasis among administration was that a

shift from college readiness only to college and career readiness was increasing the number of students with disabilities being as FB06 stated, “When principals began pushing technology CTE became a dumping ground for special ed.” Students with disabilities were not prepared for the rigors of the English and math in the CTE courses.

To organize the codes into themes, the researcher used Dedoose. The use of Dedoose increased the validity of the data into themes from the initial coded data. The emergent themes allowed the researcher to develop a summary detailing the themes analyzed from the participant interviews.

Summary of the Findings

The 21 CTE teacher participants were from one high school in Texas and taught a variety of CTE courses. All participants had taught at least one course where students with disabilities were a part of the class. One–on–one interviews and a focus group provided the platform for participants to share their experiences in teaching students with disabilities.

Participants from both the individual interviews and focus group held positive attitudes toward inclusion of students with disabilities in CTE courses. Despite the positive attitudes toward inclusion participants had reservations about every student with certain disabilities being appropriate for enrollment in CTE courses. Participants expressed concerns about safety in a course such as automotive where a student could be injured if not following safety procedures. Students unable to pass the safety test as required in certain CTE courses, would not be allowed to remain in the course.

The lack of special education support for CTE teachers was voiced among both individual and focus group participants. Participants reported they did not always know that a

student with a disability was in their class, until sometimes weeks after the beginning of the course. The lack of professional development was viewed by participants as an important factor in learning how to instruct students with disabilities and how to provide accommodations or modifications. At least two participants reported the need for special education co–teachers in CTE courses the same way co–teachers are provided in core academics course to support the CTE teachers.

One prominent theme among the participants was that they believed CTE courses were being used as a dumping ground by counselors to fill vacant spots in students with disabilities' schedules. Students were not being scheduled in CTE courses based on student selection, but rather to accommodate open seats in other CTE courses. When a CTE teacher attended an ARD meeting and made recommendation for a course based on student interest and career path, the student's schedule of services reflected the course "elective." One participant in an individual interview offered the suggestion that there needed to be a system of follow up by special education to ensure the student selection for a CTE course as discussed in the ARD meeting was placed on the student's schedule.

All participants in both individual interviews and focus group reported providing students with disabilities in CTE courses passing grades even if they were not earned. One participant stated being reprimanded by administration for not failing a student for not doing his work. In the focus group all participants agreed it was better to pass a student with a disability than to deal with any behavior issues. Students with behavior issues would receive passing grades to avoid the students returning to retake the course. All of these issues reported by participants could be improved through special education support, communication and collaboration.

The following section will explain in greater detail the themes that emerged as a result of the data collected from the interviews and focus group. Data collected were reviewed multiple times and after analysis this researcher gained a greater insight into how CTE teachers' perceptions and attitudes influence inclusion of students with disabilities in CTE courses.

Presentation of Data and Results

This section of the chapter presents the analysis information from the data collected through one-on-one interviews and a focus group. The information is organized by the three research questions in which coded themes emerged. The answers to the three research questions will be supported by the identification of themes and data collected through participants' responses to interview questions and a focus group discussion. The themes presented in the data and results include positive experiences teaching students with disabilities, negative experiences teaching students with disabilities, both support and lack of support by the special education department, participation and lack of participation by CTE in ARD meetings, scheduling of students in CTE courses and grading practices of CTE teachers toward students with disabilities in CTE courses. The following themes emerged to support the research questions.

Table 7

Developed Themes

Research Question	Theme
RQ1	Positive Experiences
	Negative Experiences
	Special Education Support
	Professional Development
RQ2	CTE Participation
	Counselors Make CTE Placement Decisions
	CTE as Dumping Ground
RQ3	Grading Policies for Special Education Students

Four themes emerged to support Research Question 1: (a) positive experiences, (b) negative experiences, (c) special education support, and (d) professional development. Each of the four themes is explained in detail below.

Positive Experiences

The first theme to emerge was that CTE teachers felt their overall experiences in teaching students with disabilities in CTE courses were positive. Interview participant AD04, who taught CTE industrial, wiring, has the attitude that he "saw nothing but positive experiences." Participant AD01 as a CTE career prep and the vocational teacher went beyond the boundaries of the classroom of inclusion to the social settings of the vocational club.

> A lot of what we did, I mean in the club, is a lot of the monthly meetings were more socially dense anyway, to get them to interact with one another and do things. We taught the students to get ready for competitions and things like that. However, other things, a lot of the time for the special education students, it was having feel a sense of inclusion with social groups and getting out there and doing fun school-related activities with their peers.

AD12, another participant has a similar attitude toward special education and general education students obtaining employment. His relationships in the community with businesses helped his students with disabilities find competitive employment. AD12 experiences with students with disabilities in his CTE classrooms have been very positive.

Participant AD15, teaches welding and small engine repair for students with disabilities. He is passionate about helping all students be successful in his class. AD15 stated he looks beyond the disability to the ability of the student and builds on the skills the students bring to the class. He believes in 100% inclusion as long as the student wants to be in the class, he will work with the student on his lunch time, before and after school to help the student be successful in his class and learn a skill. Participant AD15 felt his experiences teaching students with disabilities in CTE courses were positive, any negative experiences were few and due to students placed in his course without any interest in learning about small engine repair or welding.

Negative Experiences

The second theme to emerge was negative experiences having taught students with disabilities in CTE courses. Focus group participants shared more negative experiences teaching students with disabilities than the one-on-one interview participants. Focus group participant FG01 felt that students with dyslexia were more challenging to teach. In the state of Texas, dyslexia is not considered a disability under special education services, but a student with dyslexia receives accommodations as a 504 student with a disability.

Focus group participant FG02, an industry trades teacher, felt very strongly about having students with behavior issues, “Bad behavior kids, they do not want to learn, they do not want to pay attention or follow directions. They keep dumping those [students with emotional

disturbance eligibility] in my class. I had one kid throw a chisel at me." Participant FG04 had the perception she was teaching skills that a parent should be teaching to students with disabilities.

Despite these negative experiences with students in CTE courses, teachers remained optimistic that students could be successful in CTE courses if they were placed in the appropriate courses. "All students should be allowed to participate in any CTE course based on their postsecondary goal," as stated by the AD05 interview participant.

Special Education Support

The third theme that emerged was that of special education support. Participants reported that the special education department was reducing the amount of in-class support such as co-teachers and paraprofessional aides in CTE courses. Despite the increase in class sizes, along with the increase in the number of students with disabilities in CTE courses, there has not been an increase in support from the special education department. Participant AD02 thinks "many people, other teachers, were complaining about losing aides that used to come with some of the students." Interview participant AD05 agreed with her comment that "without SPED [special education] support, the students do not learn anything in the class.

The special education department was not always providing student IEP accommodations to the CTE teachers promptly. The CTE teachers were receiving student accommodations as late as the end of the first semester. Focus group participant FG05 comments are in agreement that she sometimes does not get student accommodations until close to the end of the first six weeks. Interview participant AD10 reported that she received an email from the special education secretary telling her tht some of the students [special education] had schedule changes and she should look up any new students in her class to see if they were listed in the student information

system as special education. If the incoming students were special education, the CTE teacher was to contact the secretary and have her send any accommodations or BIP needed for the teachers to implement those services. Participant AD10 stated she felt it was the special education department's responsibility to contact the CTE teachers and provide the accommodations and any other information the CTE teacher needed to support the student in the CTE course. The lack of face-to-face communication from the special education department to CTE teachers regarding special education students negatively influenced CTE attitudes toward special education.

Along with the overcrowding of CTE courses, participants expressed frustration with a lack of support from both the special education department and administration in meeting the needs of all the students in their courses. AD01 would like to see special education teachers introduce themselves to the teachers of students with disabilities. He believes it is a 2–way street for CTE teachers and special education teachers to communicate with each other. Interview participant AD09 believes the campus determines the support of the special education department. In her experience on one campus, she felt fully supported by the special education department while on another campus she had no support when a student with behavior issues was placed in her class.

One participant, AD12, suggested a return to resources classes. Resource classes were made up of students with disabilities who were taught by special education teachers. Districts began eliminating resources classes to improve inclusion compliance. Resource teachers were reassigned to be co-teachers in regular education classes. AD12 stated his CTE course was used

to provide a break for the aides who work with the developmental students, rather than accompany them to his class and provide support.

Interview participant AD04 reported teaching students with disabilities was "actually quite a gratifying job." AD04 stated he owed a lot of his positive experience with teaching students with disabilities to a special education teacher who taught life skills classes but would go into his classroom and show him strategies for teaching students with low performance in math skills. Students in AD04's electrical wiring course needed to have strong math skills, and he cited an example of a student that needed an understanding of Ohm's law or resistance when bending conduit. When AD04 showed the student how the math was used in an application, he grabbed on to it and was able to complete the project. AD04 is a firm believer in teaching vocational hands-on skills to students with disabilities and the support from the special education teacher working in collaboration showed him how students with disabilities could be successful in his CTE electrical wiring course, even with limited math skills. The special education teacher was not assigned to work with AD04, but she was willing to help the CTE teacher on her own time and made for a positive teaching experience for AD04.

Participants such as AD12 felt special education should be providing the same support in CTE courses as they do for core academics. Many of the academic courses like English, math, science, or social studies have co-teachers or paraprofessionals to assist the general education teacher. Either co-teachers or paraprofessionals in the CTE classroom would help the CTE teachers to better instruct the students with disabilities. Both the interview and focus group participants expressed concern over the lack of special education support when more students are being added to their CTE course rosters.

Professional Development

The emergent theme of professional development was viewed by most participants as lacking by the special education department. Participant AD07 stated, “CTE teachers need more training in teaching students with ADHD.” AD07 suggested the following topics for Professional Development by Special Education Department, workshops for teaching students with learning disabilities, autism, and emotional disturbance, along with explaining the difference between accommodations and modifications. Participant AD08 added needed Professional Development in the area of dyslexia and how to apply accommodations.

Participant AD10, a CTE criminal justice teacher recommended the special education department provide more than a quick overview of special education at the beginning of the school year. Participant AD10 stated she would like to see more professional development on how to best serve students with specific disabilities. Students with disabilities at the high school grade level do not like to be singled out and made to look different. According to AD10, nondisabled peers of students with disabilities view teachers providing accommodations as showing favoritism. When a special education co-teacher or paraprofessional assists the CTE teacher in the CTE classroom, they tend to work only with the students with disabilities. AD10 stated “they [students with disabilities] are very aware of being different and they don’t want tests read to them, even of it is an accommodation.” A question was asked by Participant AD10, “Is it really inclusion because they are still being set apart?”

Participant AD 12 would like to see Professional Development learn better how to teach students with different disabilities. More than one participant referred to the need for more special education courses as part of general education teaching certificate program in colleges

and universities. AD01 believes Professional Development should be based on the needs of the teachers and the students they are teaching. Professional Development needs for teachers change year to year based the students and their needs. It is always a different class each year.

Participant AD02 believes special education staff should spend a day with CTE to understand what goes on in a CTE course. Special education staff making decisions on CTE course placement need to understand any safety issues and how any physical or cognitive limitations will impact student success in the CTE course. AD02 reported the need for more professional development for both special education and CTE staff in order to best serve students with disabilities in a CTE course.

One interview participant, AD08 related his unusual experience regarding professional development. Participant AD08 who teaches auto shop reported that since there are no other shop teachers in the district, they were sent to another district who had several shop teachers for professional development. AD08 stated they were all put in a room to watch a safety video for students with low reading ability. If you had a student with a low reading disability, you would sit them in a room and have them watch a video on how to pass a safety test, which is a requirement for the auto shop course. The video would read the material to the student and they would take an online test which was also read to them. There was not a special education staff person to answer questions or provide additional information outside of the video or the professional development class.

Three themes emerged to support research question 2, (a) CTE participation, (b) counselors make CTE placement decisions, and (c) CTE as a dumping ground. Each of the themes is explained in detail below.

CTE Participation

The first emergent theme answering Research Question 2 is that not all CTE teachers attend ARD meetings to provide information about CTE course content, prerequisites, and any application process to the ARD committee. In one district, a CTE certified teacher attends the ARD meetings for the CTE teachers. This teacher, who is both CTE and Special Education Certified provides the ARD Committee with recommendations for appropriate CTE courses for the student along with any prerequisites, such as passing a safety test, needed for the student to be placed into the CTE course.

Interview participant AD01 reported he "rarely attends ARD meetings" due to a busy schedule and has no time to attend the meetings, but does provide information to ARD committee members before the ARD meeting. If the student was enrolled in his class, AD01 made arrangements to meet with the students' case manager prior to the ARD meeting and provide updates on the student's progress and grades in his CTE course. If the ARD meeting was to discuss possible placement of a student in AD01's class for the next school year, he would provide course description and any prerequisites needed for the student to be eligible for enrollment in the course recommended by the case manager.

One participant believes in inclusion, but not 100% of all students with disabilities are appropriate for all CTE courses. Participant AD03 teaches students a CTE course designed to help students earn their Certified Nursing Assistant (CNA) license and cited an experience where a student in a wheelchair wanted to pursue a nursing career. AD03 explained to the ARD committee that a requirement for passing the state board exams is to move a patient from one medical bed to another. Being in a wheelchair would not make that possible. The CTE teacher

advised the student of other careers within the medical field that would not require physical abilities for which the student did not possess.

One participant, AD06, reported:

> In the ARD's, they always say 'Well, you can go to [community] college because you know [community] college has tons of stuff now.' Too little things, whether they do not leave high school with any certificate. The hardest thing to get into [CTE course in high school] is cosmetology; they always say like $500.00 a semester in high school, where when they go out even to [community] college it is quite pricey.

AD06 is referring to the difference in cost between a student taking the class in high school and taking the class at the community college level. She implies that counselors in ARD committee meetings are encouraging students with disabilities to attend community college rather than take the CTE course while in high school.

Counselors Make CTE Placement Decisions

A second emerging theme is that the ARD committee does not decide that a student will be scheduled for a CTE course despite the course being a part of the student with a disability's postsecondary transition goal. Participant, AD06 talked about the unwritten rule that no more than 20% of special education students could be enrolled in one CTE course. For example, if there were 35 students in a CTE business class, there could be no more than seven special education students. Some participants reported 10 to 12 special education students placed in a CTE class of 35. In many of the classes there is not any special education support such as a co-teacher or paraprofessional to assist the teacher ensuring the students with disabilities'

accommodations and modifications are being followed. Some students have a Behavior Intervention Plan (BIP) IEP with instructions for addressing any behavior issues in the class.

Participants reported that some students with disabilities are not placed appropriately in CTE courses. AD02 believes:

> Having special education students go to the teachers before the students are placed in CTE courses is a good idea. If they would do that for all students, maybe the special education department would go and staff with not just the CTE teachers, but all teachers and let them know the students they are getting and how best to teach them.

In the focus group, the participants felt the ARD committee did not have scheduling authority for course placement, and the counselors would place students into classes that fit the student's schedule. The CTE teachers may offer recommendations to the ARD committee for student placement in the CTE course, but until the students' names appeared on their rosters, they did not have a part in the decision-making process for placing a student in their CTE courses.

CTE as Dumping Ground

The experiences that shaped the CTE teachers' attitudes and perceptions toward inclusion in CTE courses were based on interactions with the special education department and staff more than with students with disabilities. Many of the participants felt that CTE courses were being used as a dumping ground for students with disabilities. Several participants made similar comments.

AD02: I do not like to see CTE used as a dumping ground. I'd rather see them try and hire more teachers, and maybe some of the teachers can be a little bit more flexible and accepting the students with disabilities in their classrooms.

FG06: CTE became a dumping ground for special education

FG03: It was a double dump. A disproportionate number of children of color were going into special education, and they were being placed CTE courses.

When counselors make schedules for students with disabilities, the following perceptions were reported by both one-on-one interviews and focus group participants. Students with disabilities were placed in CTE courses to fit their schedules and not their postsecondary goals. A student wanting to take a culinary art class may be placed in a horticulture class because the student's schedule only had an open fourth period, and the culinary arts class was either full or not available during the fourth period. The counselor's lack of knowledge about a student with a disability and their skill level would place that student in a CTE course too rigorous or a CTE course that a student would need to pass a safety test. Some students with disabilities are placed in CTE courses with a reading level too far from being on grade level and even with modifications struggle to complete even modified course content.

One theme emerged to support the answer to Research Question 3: (a) grading policies for special education students. This theme is described in detail below.

Grading Policies for Special Education Students

The emergent theme for Research Question 3 was the grading practices for CTE teachers of students with disabilities in CTE courses. When the legislature passed HB 5, it changed the landscape of graduation for students in Texas. Students need to declare an Endorsement in one of

five Career Pathways. More CTE electives were needed, and CTE courses were to include more rigorous curriculum for language arts and mathematics. This study investigated if this new mandate for graduation requirements from Texas lawmakers would influence CTE teacher attitudes and perceptions toward inclusion in CTE courses.

In this emergent theme, participants shared the perception that students with disabilities given accommodations and modifications based on their IEP were provided passing grades even when the students did not fulfill the requirements of the class. The CTE teachers believe they cannot give students with disabilities a failing grade. Some teachers provided modified content when accommodations were not working to ensure the student passed the CTE course. Some participants stated that due to overcrowded classes with high numbers of special education students, there was not the time to complete all the documentation needed to fail a student with disabilities.

Participant AD02:

> I do know some teachers who passed students because they did not want them back. They just passed them to help them move on, and they didn't have the time to do the paperwork or to go to a failure ARD.

Participant AD12 shared AD02's attitude that there was not enough time to do the documentation if a teacher wanted to fail a student with a disability:

> When you throw them [students with disabilities] in a regular education setting, they may pass, but they may not have gotten anything out of it because they are being passed along because the teacher doesn't have the time to document everything.

Not all teachers gave the student a passing grade in a CTE course, participant AD03, developed accommodations to assist struggling students in helping them grasp the content needed to pass her CTE nursing course. Participant AD09:

> I never just passed the kid [student] to pass them. I made sure if the student was having issues, that communication was made between the case manager, between the parent, and those in ARD meetings for sure. You could not fail a kid unless you had the documentation that there had been parent contact.

Participant, AD02, reported, "It was common practice to make deals with students to do their work" so they could pass her CTE business course. Participant AD07 spoke about how she feels CTE teachers cannot fail special education students:

> Teachers do not want to get into trouble. I'm like he [the student] did not do anything. He did not come to class. He skipped. It was not like he was in the hospital.
>
> I've seen teachers, I'm like, 'Your kid [student] has been absent 48 days and has done nothing, why did you give him a 70?'
>
> [Other teacher's response] 'He is special ed, and I am not messing with special ed. I'm giving him a 70.'

Participant AD11 relayed her experience with having failed a student with a disability, "You got called in and preached to. That is why there are a lot of 70s" [grades for students with disabilities in CTE courses]. One participant, AD13, explained how students with disabilities were not a priority in her CTE course:

> If your student is the one who is at the top, who finishes every assignment within 20 minutes and then have nothing to do or for that middle of the road kid, you want me to

> focus on your kid? Not the kid, who no matter what I do with them, they are not going to grasp anything I am teaching. You're (student with a disability] going to end up with a passing grade because the money [Carl Perkins CTE funding] is coming in.

Participants' perceptions are that students with disabilities, with some exceptions, are not functioning academically on grade-level and would be unable to complete the curriculum at a more rigorous level. If CTE courses are to help in providing college-ready students, responses from participants in interviews indicate CTE teachers may not be providing the amount of academic support necessary for students with disabilities to have successful postsecondary outcomes.

The focus group participants felt that education policy is shifting from an emphasis on college only to college and career readiness. As more students enroll in CTE courses and special education support diminishes, CTE teachers will modify coursework allowing the students to pass CTE courses. FG05 commented, "20 years ago it was college readiness, not every kid is going to go to college, and we need to provide for those kids that are going to go into the workforce. I've seen a shift back; we're coming back to that." Focus group participant FG02 agreed, "I think they need to do away with this philosophy that all kids are going to college situation." As the focus group discussed the functioning level of students with disabilities in CTE courses, FG02 did not hesitate to explain his frustration at students unable or unwilling to complete the coursework in his CTE course, "They want to play games, you know I think it is their attitude. They cannot handle the work. My opinion is because it is too rigorous."

Chapter 4 Summary

The findings from this research study provided the researcher with a new perspective on inclusion in CTE courses. The purpose of this qualitative single-case study was to explain how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion in CTE courses. Data collected from one-on-one interviews and a focus group of CTE teacher participants showed teacher attitudes toward inclusion were positive; however, the lack of support from the special education department and staff made their jobs teaching students with varying disabilities a challenge. The CTE teachers' perceptions were that CTE courses had become a dumping ground for students needing elective credit and not because of the students with disabilities needed to learn job skills. In Chapter 5, the researcher will provide a discussion of the analysis, interpret results, and draw conclusions and recommendations for the study.

Chapter 5: Discussion and Conclusion

Introduction

This study investigated how the attitudes and perceptions of CTE teachers influenced inclusion of students with disabilities in CTE courses. A combination of individual interviews and a focus group investigated the experiences of high school CTE teachers who teach students with disabilities and how those experiences influenced their beliefs for inclusion in CTE courses. The research findings help to fill in the limited gap from recent studies concerning how the attitudes and perceptions of CTE impact the number of students with disabilities enrolled in CTE courses.

Furthermore, the study focused on developing transferability showing how it is possible for the reader to relate to the context of CTE teachers and inclusion ion CTE courses. The results of this study can help instructional leadership gain a deeper understanding of what experiences have shaped the attitudes and perceptions of CTE teachers toward inclusion of students with disabilities in CTE courses. Understanding the challenges CTE teachers face when educating students with disabilities can assist in developing strategies for better special education support of CTE teachers and inclusion. This chapter includes a summary and discussion of their relationship with the literature. The limitations of the study and the implications for practice, policy and theory are also discussed with the recommendations for further research and the conclusion.

Summary of the Results

The experiences of CTE teachers toward inclusion of students with disabilities in CTE courses were investigated using a qualitative single-case study in Texas. This section presents the

summary of study and the results of CTE teacher experiences in teaching students with disabilities in CTE courses and how they shaped their attitudes and perceptions toward inclusion of students with disabilities in CTE courses.

According to the U.S. Department of Education (2018), in Texas for the 2016–2017 school year, of the 1,337,230 students in secondary high school CTE concentrator programs, only 111,057 were students with disabilities. A review of the literature lacked studies explaining why more students with disabilities were not enrolled in CTE courses. The researcher's experience as a transition specialist responsible for developing postsecondary plans for students with disabilities encountered CTE teachers unwilling to allow some students with disabilities into their CTE classrooms. In one incidence the teacher of a fine arts class course locked the door to the classroom while the case manager was attempting to escort a newly enrolled student with a visual impairment and introduce her to the class. The administrator on the campus directed the counselor to switch the student's schedule to another fine arts teacher because of the teacher's refusal to allow the student with a visual impairment access to her class. If a teacher of a course required for high school graduation locked her door to a student with a disability, perhaps teachers of elective CTE courses held similar negative attitudes and perceptions of students with disabilities leading to denial of admittance into CTE courses.

Findings from this case study of CTE teachers' attitudes and perceptions of students with disabilities in CTE courses indicate CTE teachers tend to be open to inclusion of students with disabilities in their CTE classrooms as long as the students have the capability for completing the coursework. A frequent theme among the CTE teachers was a lack of support from Special Education Department. Core academics such as English, mathematics, science, and social studies

typically have a co-teacher or a paraprofessional to assist the general education teacher. Rarely, would one find co-teacher support in an elective course like CTE courses.

Attitudes and perceptions of the CTE teachers toward inclusion included a negative perception that many students were not placed in CTE courses because they had an interest in the subject but because the counselor enrolled the student in a CTE course that "fit" the students' schedule. Another theme to emerge was the lack of student learning in the CTE course. Many students with disabilities were given a passing grade despite the lack of completion of coursework to the standard for a passing grade.

Implications concerning the results of this study are two-fold. The first implication being CTE leaders need to address the issue of students with disabilities not being educated to the same degree as their nondisabled peers. The second implication is that special education leadership needs to improve communication with CTE teachers about disabled students' accommodations and modifications that are a necessary component of a students' IEP. Along with communication, CTE teachers need more professional development to increase their efficacy in teaching students with disabilities in CTE coursework and to look at ways to provide additional in-class support to CTE teachers in their classroom.

Discussion of the Results

The findings indicate that the experiences of CTE teachers with students with disabilities do not influence inclusion in CTE courses, but does influence student learning in CTE courses. Counselors placing students in courses for convenience and overcrowded classrooms without special education support accounted for the overwhelming perceptions of CTE courses used a

dumping ground for students with disabilities. The data collected through triangulation and analyzed was sufficient to answer the research questions.

Research Question 1

Research question 1 was as follows: How have the experiences of CTE teachers with students with disabilities in or outside of the classroom shaped their attitudes and perceptions of students with disabilities and inclusion in CTE courses? The attitudes of participants toward inclusion were predominately positive. As the discussions continued through the course of the individual interviews and focus group, the participants began describing exceptions to their viewpoints that students with disabilities should be allowed to enroll in CTE courses. Participants reported students with certain disabilities would not be appropriate for certain CTE courses. An example was provided by participant AD02, a nursing instructor, who described a student in a wheelchair who would not be successful in the nursing program. A state board requirement for certification is that the student must be able to lift and move a patient from one bed to another.

One exception to the participants' attitude of 100% inclusion was the CTE nursing courses teacher who believed the physical and mental requirements of the state board exams for which the curriculum was based would present an issue for the student with a cognitive or physical disability placed in nursing CTE courses. One participant who teaches electrical wiring as a pre-apprenticeship CTE course felt a student who was color-blind would not be able to differentiate between the color-coded wires which are necessary to ensure proper installation of electrical schematics. Professional development provided by the Special Education staff addressing individual student disability and how to differentiate instruction may have helped to

improve the perceptions of the teacher and student outcome. The lack of training of CTE teachers to learn how to teach students of varying disabilities fueled the level of frustration among the CTE teachers.

A major theme of the individual interviews was the lack of support from Special Education leadership. Various subthemes presented through participant findings were a lack of in-class support, lack of communication, lack of professional development and too many students with disabilities in CTE courses. Participants reported they were willing to practice inclusion if the Special Education department would provide more support. Participants who reported they felt supported by special education also reported positive experiences with teaching students with disabilities in CTE courses. Participants felt strongly about the need for professional development for CTE teachers. Participants stated CTE teachers needed more understanding of how students with certain disabilities like autism and emotional disturbance learn and how to address behavior issues in the CTE classrooms.

The six focus group participants in the focus group were more vocal in their exceptions to inclusion of students with disabilities in CTE courses than the one-on-one interview participants. Students with behavior problems were a significant issue in CTE courses where power tools are being used and presented a safety issue if students could not control their behavior. Students with low or nonexistent reading levels were placed into classes without special education providing in-class support with either a special education teacher or a paraprofessional. As one participant related her experience of a student with a visual impairment in the classroom, it seemed to prompt the memory of another participant to describe his experience with a similar student who was also visually impaired. Both participants stated the experiences were positive and reinforced

their attitude that students with disabilities when given the opportunity can be successful in CTE courses.

Research Question 2

Research question 2 was as follows: How do the attitudes and perceptions of CTE teachers as part of an ARD committee influence their decisions and recommendations for placement of students with disabilities in CTE courses?

Not all interview participants attend ARD meetings. The overall perception of the participants is that even though they provided information to the ARD committees about CTE course requirements, the actual placement of a student with a disability into a CTE course was determined by the school counselor, who is not always a member of the ARD committee. Participants described the process for developing the students' schedule of services, or class schedule. When the students' transition plans are reviewed, the Course of Study for transition services includes recommendations for elective and CTE courses based on the students' postsecondary employment, education/training and independent goals.

On the schedule of services page of the ARD document, recommended courses are listed as "elective." When the counselor, who is usually not at the ARD meeting, creates the student schedule, core academics based on the ARDed classes' availability are scheduled first and electives are then scheduled. Nondisabled students chose their electives and list them on a schedule request, in the spring usually during their English class. Students with disabilities also complete a course-selection sheet with their peers. The special education students' course requests are sent to their case managers and then passed on to the general education counselors for students' final schedule. Since the ARD document shows "elective" rather than a specific

course, there is no need to go back to ARD for a Change of Placement ARD. It is the perception of the participants that CTE is often used as a dumping ground for students with disabilities for a variety of reasons. One reason is the students with disabilities may have schedules with limited open class period for which to schedule a course. Even though a student may have an interest in working as an auto mechanic, the class is not available at the time the student has an open class period. The counselor then chooses a class that fits the student's open schedule that may be horticulture or floral design, a course the student has no interest in pursuing as a career. Participants reported when students are placed in courses for which they have no interest, they can become behavior problems or refuse to do the coursework; hence the term *dumping ground*.

Despite recommended class sizes for CTE courses, counselors are placing more general education as well as more students with disabilities in CTE courses. Participants reported in some of their courses, half of the 30 to 35 students were students with disabilities. Increases in student rosters did not mean CTE teachers were receiving additional support from Special Education personnel. These increases of students with disabilities in CTE courses without Special Education department support increased CTE teacher negativity toward inclusion in CTE courses.

All participants in the focus group reported they were required to attend ARD meetings and provide input to the committee regarding CTE courses and requirements. However, participants felt the ARD committee did not attempt to follow up on the recommended CTE course selection for the student made in the ARD. The perception of the participants was that when the counselor went against the ARD committee decision and scheduled the student in a different course, the student was being set up for failure. The only ARD committee member who

receives a copy of the ARD document is the parent. The CTE representative attending the ARD committee assumes since the discussion included which CTE courses the student should take based on his transition postsecondary career goals, the student would have a schedule reflecting recommended courses. The ARD document does not specify any course other than those in English Language Arts, science, mathematics and social studies. For example, a student's schedule of services in the ARD document may list English III, Algebra 2, U.S. History, Aquatic Science and three "electives." Despite their attendance at the ARD meeting, participants believed their input to appropriately place a student with a disability in a CTE course was negligent. As with the interview participants, focus group participants also had the perceptions that CTE courses were being used as a dumping ground for students with disabilities. The focus group participants provided more examples of how they felt CTE was being used by counselors to dump students with disabilities into CTE courses than did the individual interview participants. The focus group participants provided examples of how individual students with autism, visual impairment, emotional disturbance, and ADHD were inappropriately placed in CTE courses without special education support. Participants' frame of reference regarding all students with disabilities was influenced by their experiences with students with specific disabilities and was not meant to be interpreted that all students with those specific disabilities were inappropriate for CTE courses, but that student interest in the course be taken into consideration along with Special Education department support. In some cases, the CTE teachers were not made aware of students with disabilities placed in their class until weeks of instruction had passed.

Research Question 3

Research question 3 was as follows: How do the increased academic rigors of CTE courses to meet Texas standards for college and career readiness for all students influence the attitudes and perceptions of CTE teachers toward students with disabilities and inclusion in their CTE courses? Inclusion may on outward appearances show that compared with their general education peers, students with disabilities are accessing CTE courses at the same rate. According to the State Performance Plan 2017–2018 report, 48.3% of special education students in Texas have completed a CTE course sequence compared to 50.5% of general education students (Texas Education Agency, 2019). Despite increase rigor for academics in CTE courses, special education students' assessment scores for reading and math fall short from the same assessment scores for general education students. As reported in the State Performance Plan 2017–2018, results for the Texas Success Initiative Assessment indicate 5.3% of special education students passed the reading portion of the assessment compared to 23.4% of general education students passing the reading portion (Texas Education Agency, 2019). In the same report, passing scores for general education students taking the math portion of the TSIA were 19.8% compared with special education passing scores of 2.9%.

The TSIA is an assessment used by colleges and universities to see if a student is ready for entry-level college courses. This assessment measures the grade-level functioning for reading, writing, and math aptitude. For students not meeting the minimum scores of 351 for reading and 350 for mathematics, the higher-education institution will recommend they take developmental classes designed to assist the students with below college-level ability to bridge the gap and prepare them for college-level courses. The developmental courses do not count

toward requirements needed to earn a degree or certification. The Texas Higher Education Coordinating Board urges all students to avoid the cost of taking courses not counting toward a degree or certification by becoming college-ready in high school (College for All Texans, 2019).

Responses from interview participants indicate CTE teachers may not be providing the same rigorous academics preparing students with disabilities for college and career readiness as the nondisabled students in their classes. During the focus group a part of the discussion related to increased academic requirements in CTE courses and the practice of grading special education students was brought up. Many CTE teachers do not believe they have the latitude to fail a student with a disability, even when grades earned are not at the passing standard. Interview participants reported in some cases when it was apparent the student was unable to complete the coursework, a request was made by the teacher to move the student to a different course. An ARD was held to change the student's schedule to another elective course. A schedule change from a CTE course to another elective was not a common practice, but was an option for CTE teachers when a student could not pass a safety test or with accommodations or modifications the student was not being successful.

As with the individual interview participants, the focus group participants' perceptions were that students with disabilities were doing good to maintain a passing grade of 70 in their courses. Students with learning disabilities struggling with reading and math were not given the same advanced or rigorous level of academic expectations. All students with disabilities would have accommodations allowing access to the curriculum, but many students had modifications that modify or drastically reduce the amount of work required to be completed in the student's IEP. The focus group participants were not against the inclusion of students with disabilities in

their classes, and the increased rigors of the curriculum content were not a deterrent allowing the student in the CTE courses.

Discussion of the Results in Relation to the Literature

Findings from this case study investigating the perceptions and attitudes of CTE teachers toward inclusion contribute to the knowledge of how experiences of CTE teachers influence inclusion of students with disabilities in CTE courses. A review of the literature indicates the importance of CTE courses for students with disabilities in the acquisition of vocational skills. Discussion of the following topics will detail how this research confirmed CTE teachers' encounters with educating students with disabilities in CTE courses shaping their positive or negative attitudes and perceptions toward inclusion. Along with the discussion of previous research and the importance of professional development and support of the Special Education department, the results of this study reinforce the need for further research on how to increase the number of students with disabilities' participation in CTE courses, thereby, gaining the needed vocational and social skills to improve postsecondary outcomes.

Value of CTE Courses

The value of CTE courses for students was addressed in a study by Middleton (2012) who discovered students participating in CTE courses not only learned technical employment skills, but they improved interpersonal skills, intrapersonal skills along with increasing math and language skills. A National Longitudinal Transition Study (Wagner & Shaver, 2009) was the basis for many follow-up studies showing how student participation in CTE courses resulted in increased postsecondary outcomes for employment and education advancement. Participants in the focus group unanimously agreed with the importance of CTE for students with disabilities;

however, taking it a step further reported that students with disabilities should be appropriately placed in CTE courses. Perceptions are that students with disabilities are being placed in courses at the convenience of the counselors and scheduling issues and not based on their interest or level of ability.

Findings from this study indicate the value of CTE courses for students with disabilities is being jeopardized by the grading practice of CTE teachers to give passing grades avoiding the perceived enormous amount of documentation required before a teacher fails a student with a disability. If students fail to meet the passing standards for a CTE course but are graded as if they earned the grade by learning the curriculum, the teacher has hindered the potential outcomes for students by neglecting to provide the student an opportunity to acquire the skills and making the student appear successful when in reality they are not career–ready. Further research is needed to investigate how many students in CTE courses are exiting the course with a passing grade without having learned the content of the CTE course. “New entrants into the workforce will require very strong social, employability, and work-readiness skills that reflect the behavioral, attitudinal, and character traits highly valued in the workplace and society” (Stringfield & Stone, 2017, p. 166). With the increased academic rigors in CTE courses for English and math along with the work-readiness skills, student with disabilities would benefit from enrollment in these courses as part of their postsecondary employment and education/training career goals.

The findings from this study are significant as it may explain why the employment numbers as reported by The Office of the Texas Governor Greg Abbott (2016) for adults with disabilities in 2016 were 17.1% compared to 64.6% of individuals without disabilities. A report by the Region One Education Service Center (2014) indicates that in 2014 only 25% of the

500,000 students enrolled in CTE courses were students with disabilities. This researcher investigated how the experiences of CTE teachers influenced their attitudes and perceptions toward students with disabilities and inclusion in CTE courses. The findings of this study indicate CTE teachers recognize the importance of CTE courses for students with disabilities but have reservations when students are placed in their CTE courses without special education support.

Teachers' Attitudes and Perceptions

Teachers' attitudes and perceptions toward students with disabilities and inclusion has been studied by numerous researchers. The results of this study support the findings by Zigmond et al. (2009). Zigmond et al. (2009) claimed teachers' perceptions of students with disabilities may have been shaped by the idea that historically underachievement and lowered expectations of students with disabilities combined with a lack of support from special education staff contributed to negative attitudes toward inclusion.

Lack of special education support. Both the focus group and interview participants reported the lack of special education support a barrier to successful inclusion in CTE courses. Schmalzried and Harvey (2014) studied perceptions of special education and CTE related to collaboration and communication and concluded that regular communication was not taking place between special education and CTE. Participants' responses from this study aligned with Schmalzried and Harvey's (2014) findings that a gap exists between secondary special education and CTE despite a common goal to assist students in preparing for life after high school. Participants in this study had similar experiences with respondents in the study by Schmalzried

and Harvey (2014) with concerns over not getting appropriate documentation for students with disabilities in their courses such as accommodations, or Behavior Intervention Plans.

CTE teacher attitudes. The results of this study support the views of inclusion as reported in studies by Brandes and Crowson (2008), Casci-Noethig (2015), Otero (2012), and Zigmond et al. (2009). The majority of results showed positive attitudes by teachers toward the inclusion of students with disabilities in their classes. In contrast, the results of a study by Casale-Giannola (2012) indicate negative teacher attitudes are considered a more significant barrier to inclusion at the secondary level for students with disabilities. The study results by this researcher show even with a negative attitude by CTE teachers toward inclusion, counselors are placing students with disabilities into CTE courses providing inclusion. Results of researchers Otero (2012) and Parker (2009) using the STATIC instrument for quantitative studies showed attitudes by teachers toward inclusion were positive. Despite the overall positive attitudes there were negative attitudes toward students with behavior disorders, IDD and those students with multiple disabilities. The results from this study show participants are closely related to the findings of Otero (2012) and Parker (2009), showing negative attitudes toward disabilities such as autism and emotional disturbance.

Dumping grounds. The perceptions of CTE teachers that their courses are a dumping ground for students with disabilities was also mentioned in the finding of a study by Cunnah (2105). Some CTE teachers in Cunnah's (2015) study reported that students with disabilities are not being allowed to take specific CTE courses. Participants, in this case, reported students with disabilities, depending on the disability may not be appropriate for nursing, cosmetology or courses with a requirement to pass a safety test. Despite study participants reporting they held

positive attitudes toward inclusion, they did report that students should have the capability to complete as least part of the course requirements of the CTE course for which they were enrolled. For inclusion to work, students with disabilities need to be placed in CTE courses based on their career interest with special education support and trained CTE teachers to ensure the students are learning the skills as part of the course. Trained CTE teachers would know how to differentiate instruction, and work with students diagnosed with specific disabilities and the Special Education staff to ensure students with disabilities are learning the skills outlined in CTE courses.

CTE courses and workforce. Stringfield and Stone (2017) completed an analysis of the labor market and needed changes in CTE courses to meet the growing market trend toward the increasing domination of robotics and artificial intelligence. Findings from this analysis (Stringfield & Stone, 2017) indicated that workers entering the workforce would need to be prepared with strong social, employability, and work-readiness skills reflecting the traits valued in the workplace and society. Participants in this study's attitudes and perceptions aligned with Strinfield and Stone's (2017) analysis findings that in today's increasing technology-based workplace, not only are vocational skills but social skills needed for students with disabilities to compete against nondisabled peers for jobs. When CTE teachers modify curriculum to eliminate or reduce content from a CTE course, they effectively limit the possibility for successful postsecondary outcomes for students with disabilities. Brand and Valent (2013) warned that students with disabilities should not be left behind when opportunities for acquiring skills for competitive employment offered through CTE courses are available.

Social skills. A few general education teachers felt that students with disabilities should be included in general education classes for social experiences but not academic reasons (Satterwhite, 2015). Two participants in this study held similar attitudes describing how students with disabilities could learn social skills despite lacking the ability to complete the skills needed to pass the course.

CTE teachers and professional development. Other attitudes some general education teachers reported were that if they had wanted to teach special education, they would have majored and received the specialized training needed to work with students with disabilities (Satterwhite, 2015). Three of the focus group and four of interview participants were both special education and CTE certified. The dual-certified participants reported they felt better able to teach students with disabilities as they had received more professional development training through special education. Pierre's (2009) research findings support this study's results that general education teachers are more confident in teaching students with disabilities when provided adequate training. Even though CTE teachers are a separate classification of teachers, they are still general education teachers, not special education trained teachers unless dual-certified. Results of this study indicated CTE teachers would like more professional development and in the past received training and where face-to-face staffing took place, now communication is through email. Participants complained about the numerous meetings they are required to attend that are irrelevant to their CTE courses and would prefer to have more professional development by special education. With the number of students with disabilities increasing in CTE courses, the higher the need to have appropriately trained staff to educate students with an IEP.

Limitations

Study Design

The study was designed to investigate the attitudes and perceptions of CTE teachers toward inclusion. The use of a case study with interviews and a focus group provided the researcher with evidence of the participant's own "sense of reality" (Yin, 2014, p. 112) about instructing students with disabilities in a CTE course. A limitation for using interviews and a focus group for data collection is that the interviewees' responses may be tainted by bias, poor recall, and poor or inaccurate articulation" (Yin, 2014, p. 113). In the focus group discussion with six participants, a limitation was that all participants knew each other, with the exception of FG04, who joined the focus group within a few minutes. One participant may suggest a response to a question and the other participants would agree. One participant, FG04, suggested that students with disabilities need to have separate classes so students with disabilities could be with students with similar issues like low reading levels. Another participant FG03 agreed that maybe schools needed to go back to having resources classes as students learned more than in a co-teach setting where the curriculum was at a grade-level beyond the capability of the student. The use of more than one focus group made up of participants who did know each other may reduce the level of bias and reflexivity. The subtle influence of a group of participants in a focus group upon each other to maintain developed friendships from the past could be reduced by having more than one focus group.

Participants

One limitation of participants for this study was that there was only one teacher with less than 10 years of teaching experience. Further research is needed to include teachers with less

experience to investigate if their experiences were the same as CTE teachers having taught for 20 or more years. Younger teachers may have different attitudes and perceptions than reported in the interviews and focus group. The average number of years of participants teaching was 17. Some of the CTE teachers began teaching when students with disabilities were segregated to resources and life skills classrooms. As laws and policies changed over the years forcing school districts to restructure their continuum of services, more students with disabilities were being scheduled into mainstream courses, both academics, and electives. As one participant, AD07 stated, “20 years ago we went kicking and screaming into classrooms” where students with disabilities were enrolled. Teachers having taught before changes in current law may have a different mindset than newly certified CTE teachers with exposure to total inclusion for students with disabilities.

Another limitation of the participants in this study was that not all career pathways were represented. Nine of the 21 participants were teachers of CTE business and technology courses. There were two participants from auto tech, two from career prep, three industrial trades, one from each of the following career paths family and consumer science, graphic arts, criminal justice, auto tech and the nursing program. A participant representing cosmetology may have provided insight into a course requiring the passing of state boards for certification and how the attitudes and perceptions of that teacher would impact students' future placement in a cosmetology course even when the student’s postsecondary goal is to be employed as a cosmetologist. The CTE teacher, with 60 students in the nursing career pathway of which only two are students with disabilities, shows a skewed enrollment. The average number of students

with disabilities enrolled in CTE courses may be higher than in previous years but placed in business classes rather than certification programs like nursing or cosmetology.

Research Method

The use of a case study as a research method had a limitation on the sample size of the participants. Volunteer participants are more likely to complete a survey then take the time to participate in an interview, thereby, increasing the sample size. Future research to increase the knowledge about how the attitudes and perceptions of CTE teachers toward inclusion of students with disabilities in CTE courses could include a more detailed closed-ended questionnaire about specific experiences with students and different disabilities and appropriateness in CTE courses, even those courses requiring the passing of a safety test or state board exams for certification.

Data Collection

The timing of the data collection process was a limitation to obtaining the 30 one-on-interviews and a second focus group as proposed in Chapter 3. Recruiting earlier in the school year may have made for more volunteers thereby, expanding the sample and strengthening the arguments for results and conclusions. Another limitation of data collection was the denial of IRB approval from school districts. Even with IRB approval to conduct research in a large school district of more than 10 high schools the researcher was not allowed to contact teachers directly and limited the number of potential participants. Participants recruited through networking by the researcher are limited to the scope of the researcher's network.

Implications of the Results for Practice, Policy, and Theory

Practice

One implication for students failing a CTE course but given a passing grade is that it limits the students' potential for postsecondary success. When a student is given a passing grade without meeting the course standards, the assumption a person reading a transcript for college entrance or work opportunities may have is that the individual, despite a disability has completed the requirements of the course. The value of CTE courses for students and postsecondary outcomes has been documented. The reality of the results of this study is that students with disabilities are included in CTE course but not included in the learning process.

Based on the current practice as indicated by the findings in this case study, the first recommendation for a change in the practice of grading is to eliminate awarding students with a disability a passing grade of 70 despite the student's lack of completion of TEKS required for successful completion of the course. Findings from this case study indicted CTE teachers need the support of Special Education to provide professional development in the areas if instruction, behavior management, accommodations and modifications. Casale-Giannola (2012) offered a suggestion that Special Education provide strategies on how CTE teachers could improve student performance in CTE courses through accommodations such as extended time, oral instructions replacing written instructions and simple assessments to check for understanding.

Another implication for students with disabilities is the counselor scheduling students in classes other than CTE courses for which an ARD committee made the decision based on the students' postsecondary goals. The CTE teachers are providing input and making course selection recommendations, but due to courses being full and students' schedules open

availability not matching the open CTE course times, students are being scheduled into courses not appropriate to their goals or capabilities. Participants viewed this practice as *dumping* students with disabilities into overcrowded classrooms without special education providing in-class support as with core academics.

A recommendation for addressing the scheduling of counselors enrolling students with disabilities in CTE courses other than areas of interest for convenience is to implement a practice of having the counselor attend the ARD meeting. The counselor would attend the ARD meeting to provide input in courses available in the student's area of career interest. The CTE course would be selected by the student and listed on the schedule of services page. The counselor would be able to track the courses selected by the special education students and provide input to administration when preparing the master schedule for CTE staff requirements, thereby, reducing the number of students with disabilities unable to attend closed CTE courses.

Policy

The results from this study support changes to policies. The first policy needing review for change is the policy of placing students with disabilities in CTE courses as a convenience due to scheduling conflicts. Under IDEA, students with disabilities are provided with an IEP. The Individual Education Program (IEP) is the word "individualized," and when a student is placed in a CTE course because there is an opening in a different course other than the ARD committee recommendation to fit the student's schedule, the student's IEP is not being followed. To avoid CTE courses becoming a "dumping" ground for students with disabilities, a policy and procedure needs to be put in place by district administration to address the lack of consistency among the scheduling of students with disabilities by counselors. A system needs to be put in place to track

the students' postsecondary goals for training, education and employment and ensure students' course of study as stated in their transition plan corresponds to their schedule of courses. Even with a policy in place to ensure students with disabilities' needs are being met, there remains a gap between policy and implementation (Alter, Gottlieb, and Gottlieb, 2018).

A second implication for policy change with the intention of improving students with disabilities postsecondary outcomes is to consider changing the way CTE teachers grade students with disabilities in CTE courses. A policy where students with disabilities are not held accountable for earning a grade through completion of coursework is not preparing students for the competitive world they will face for employment and postsecondary education. Changing a policy on how teachers grade students will be difficult to implement but is necessary to improve the postsecondary outcomes for students with disabilities. As the number of students with disabilities accessing CTE courses increases, the need for guidance on grading becomes a priority. For students in special education courses the special education teacher provides the grades, but in CTE courses the CTE teachers determines the grade. When grading a student with a disability in a CTE course, the CTE teacher has to consider several factors. The CTE teacher has to evaluate the capability of the student, whether or not the ARD committee has modified TEKS of the course, and how the law is interpreted through IDEA 2004 in regards to progress (Guskey & Jung, 2009). Findings of this researcher indicate such a convoluted problem regarding grading students with disabilities in CTE courses require the collaboration of Special Education and CTE. A policy developed to include a system of data collection along with professional development and ongoing partnership between CTE and special education teachers will help to improve the students with disabilities in a CTE course are learning the curriculum as

intended by law. “It is essential that administrators make available appropriate special education training and professional development to support general education teachers in developing the confidence and skills required to teach students with severe disabilities in the inclusive general education classroom setting” (Southern, 2010, p. 94).

Theory

As the results of the study indicate the theoretical social phenomena of CTE teachers’ experiences with inclusion for students with disabilities are consistent with social constructivism. **“**Social constructivism attempts to understand social phenomena from a context-specific perspective” (Bloomberg & Volpe, 2016, pp. 42–43). The reality of CTE teachers in a classroom where students with disabilities are included and experiences have shaped their attitudes and perceptions of inclusion. “It is the responsibility of the researcher to understand the multiple realities from the perspective of participants” (Bloomberg & Volpe, 2016, p. 43). The multiple realities of the participants for this study were teaching students with disabilities in a CTE course could be either positive or negative. The support or lack of support of special education influenced a CTE teacher’s attitude that a student had the capability of completing the coursework. Simply agreeing that inclusion works for students in CTE courses by looking at the enrollment numbers in CTE courses for students with disabilities does not account for the number of students exiting a course with a passing grade of 70 but lacking the skills intended for all students in the course to learn.

Recommendations for Further Research

This study investigated how the attitudes and perceptions of CTE teachers toward students with disabilities influence inclusion of students with disabilities in CTE courses. One

topic for investigation is to look at the students with disabilities who participated in CTE courses and their postsecondary outcomes. A longitudinal study to track student progress once they exit public education would provide data on the effectiveness of participation of students with disabilities in CTE courses and how to provide better career readiness through CTE courses.

A limitation of this case study was the availability of volunteer participants due to the research being conducted over the summer break when teachers were off-contract. With the participants' average number of years teaching at 17, perhaps teachers with fewer years of teaching may have different experiences in teaching students with disabilities. Conducting research with CTE teachers in all career pathways and across more districts would provide a more considerable base for understanding if conditions for inclusion are improving.

Even though study participants described the importance and value of students accessing CTE courses through their rich descriptions of teaching experiences with students with disabilities, there is a gap in research on why these students are not accessing the CTE courses at the same rate as their nondisabled peers.

Conclusion

In conclusion, this study has provided evidence that CTE teachers have positive experiences in teaching students with disabilities in an inclusion setting. With additional support from special education through communication, in-class support, and professional development, the students with disabilities could exit a CTE course with the skills needed for postsecondary success. Further research is needed to determine if districts providing additional support from special education improves student postsecondary outcomes.

The first research question was related to how the experiences of CTE teachers shaped the attitudes and perceptions toward students with disabilities and inclusion in CTE courses. The overarching experiences had been positive, resulting in CTE teachers accepting of the practice of inclusion for students with disabilities in CTE courses. However, the findings from the case study illustrated that CTE teachers are frustrated with special education's lack of support for students with disabilities in the CTE courses. Students with disabilities such as autism or emotional disturbance were the most difficult to teach. Rather than teaching the students without support or training to best serve the students with disabilities, CTE teachers gave the students a passing grade of 70, allowing them to move on to the next course of their graduation plan lacking the employment and social skills for positive postsecondary outcomes.

The second research question investigated how the attitudes and perceptions of CTE teachers as part of an ARD committee influenced the decisions and recommendations for placement of students with disabilities in CTE courses. In Texas, the ARD committee reviews and updates the student's IEP. As part of this process, postsecondary transition planning drives the decision-making for developing goals and a coordinated set of activities to ensure the students' movement toward the postsecondary goals for employment, education/training, and independent living. A course of study is developed based on the graduation requirements and courses to facilitate the movement toward fulfillment of the goals which generally includes a CTE course. Participants acknowledged providing information to the ARD committee with recommendations for placement of the student in specific CTE courses. Many times the students' schedules did not reflect the course agreed upon in the ARD committee. Counselors were placing students in CTE courses that fit students' schedules and not per the ARD committee decision.

The third and final research question was related to the increased academic rigors of CTE courses and how the attitudes and perceptions of CTE teachers may impact inclusion in CTE courses for students with disabilities. The perceptions of the study participants were that students with disabilities should be allowed to participate in CTE courses, but they would not necessarily be held to the standards needed to complete the coursework. Participants would not fail a student with a disability and would modify content if needed to ensure the student earned a passing grade.

Overall, the experiences of CTE teachers shaped their attitudes and perceptions of students with disabilities in a positive way, where 20 years ago they were not so open to accepting students with disabilities into their CTE courses. Special Education and CTE need to increase the collaboration to effect change in teaching methods to ensure students are leaving a career and technical course with skills and not merely a grade of 70 and another credit counting toward high school graduation. It is a hollow claim to say inclusion is being practiced when students are only earning a grade and not learning a skill. If individuals with disabilities are to enter the workforce prepared with both soft skills and career-ready skills, there must a better effort on the special education side of educational leadership to improve CTE teacher efficacy, thereby leading to students with disabilities improved postsecondary outcomes.

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Appendix A: Interview Questions with Member Checking Questions

One-on-One Interviews

Guiding questions for the one-on-one interviews with participants:

1) What are your experiences related to teaching?
    a. Positive experience
    b. Negative experience
2) What are your experiences teaching students with disabilities
3) What are your views related to inclusion?
    a. Do you believe students with disabilities can be successful in a CTE class
    b. If so, are there classes you do not think students with disabilities should be enrolled?
4) What supports and from whom do you believe would help build efficacy in educating students with disabilities in a CTE course?

Member Checking Questions

4. Do you agree with the findings and do you fell the conclusions accurately reflect your views discussed in the interview?
5. Is there anything you would like to add to the information shared in the interview?
6. Is there anything you would like to change or feel is an inaccurate interpretation of the information shared in the interview?

Appendix B: Focus Group Interview Questions with Member Checking Questions

Focus Group Participants

Guiding question for participants in the focus groups:

1) What do you like about teaching CTE courses?
2) What are your experiences in working with students in your CTE courses?
3) Do you think inclusion works?
    a. If yes, why?
    b. If not, why not?
4) Do you believe students with particular disabilities are more difficult to teach?
5) Do you think you are prepared to teach students with disabilities?
6) What supports and from whom would increase your efficacy in working with students with disabilities?

Member checking questions:

6. Do you think the interpretation of the information shared in the focus group is accurate?
7. Do you feel you were allowed to participate in the discussion in the focus group and were treated fairly and your views respected?
8. Do you think the topic was adequately discussed and all points of views shared?
9. Is there anything you would like to add to the information shared in the focus group to increase the accuracy of the findings?
10. Is there anything you feel needs changing?
11. Would you like a follow up discussion with the members of the focus group to discuss the findings?

Appendix C: Adult Informed Consent

Research Study Title: *How Career and Technical Education Teachers' Attitudes and Perceptions of Students with Disabilities Influence Inclusion in Career and Technical Education Courses*
Principal Investigator: Theresa Cortney, M.Ed.
Research Institution: Concordia University–Portland
Faculty Advisor: Dr. Leslie Loughmiller, Concordia University-Portland

Purpose and what you will be doing:
The purpose of this study is to investigate how the experiences of teachers working with students with disabilities have shaped the attitudes and perceptions of Career and Technical teachers toward students with disabilities and influence decisions made to include these students in Career and Technical Education (CTE) courses.

To be in the study, you will participate in either a one-on-one interview with the investigator or a focus group of six participants. The interviews and focus groups are expected to conclude between 60 and 90 minutes, allowing enough time for participants to adequately respond to the questions within the interview setting. The investigator will set up a time and place convenient for you to meet and complete the interview or focus group interview.

After completion of the study, a 30-minute follow-up interview will be conducted to ensure the investigator's interpretation of your responses is accurate.

Interview and focus group sessions will be audio-recorded. Recordings will be deleted immediately following transcription and member checking. All other study-related materials will be kept three years from the close of the study, and then will be destroyed.

Risks:
There are no risks to participating in this study other than providing information through responses in the interviews. Participants will be protected in the study by the assignment of alternative identities before participation in the interviews or focus group. Once the alternative identifying codes have been assigned, any name or identifying information you give will be kept secure via electronic encryption or locked inside the home office of the investigator. The information you provide in the study cannot be linked to you. When looking at the data for analysis, none of the data will have your name or identifying information. We will only use the alternative assigned identity coded to analyze the data. We will not identify you in any publication or report. Your information will be kept private at all times, and then all study documents will be destroyed three years after the conclusion of this study.

Benefits:
Information gathered through this research study will help educators and administrators understand how the experiences of CTE teachers with students with disabilities influence inclusion in CTE courses. Gaining a better understanding of the experiences of CTE teachers will facilitate how administrators and educators may provide support to CTE teachers and students with disabilities in CTE courses. It cannot be guaranteed, however, that participants will receive any benefit from participation in this study.

Confidentiality:
This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell us of abuse or neglect that makes us seriously concerned for your immediate health and safety.

Right to Withdraw:
Participation in this study is voluntary. Your participation is greatly appreciated, but we acknowledge that the questions we are asking are personal in nature. You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required, and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, we will stop asking you questions.

Statement of Assurance:

Participants in this study will be protected from any physical or psychological harm (including loss of dignity, loss of autonomy, and loss of self-esteem). Prior to the conducting of the interviews and focus group discussion, informed consent will be obtained from all volunteer participants in this research study. To protect participant privacy and confidentiality, they will be assigned an alternative identity used in the documentation of information provided by them. No participant's personal information will be shared with anyone. The final report of findings from this research study will not contain information traceable to actual identities of the participants.

Contact Information:
You will receive a copy of this consent form. If you have questions, you can talk to or write the principal investigator, Theresa Cortney, at [redacted]. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch (email obranch@cu-portland.edu or call 503-493-6390).

Your Statement of Consent:
I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study and my signature indicates I agree to participate in the study and have been told that I can change my mind and withdraw consent to participate in this study at any time.at any time

Please select one:

One-on-one Interview_____ or Focus Group _____

_____
Participant Name

_____
Participant Contact Phone Number

_____
Participant email address

_____ _____
Participant Signature Date

_____ _____
Investigator Name Date

_____ _____
Investigator Signature Date

Investigator: Theresa Cortney [contact information redacted]
c/o: Professor Dr. Leslie Loughmiller
Concordia University–Portland
2811 NE Holman Street
Portland, Oregon 97221

Appendix D: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously- researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does "fraudulent" mean?

"Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.

What is "unauthorized" assistance?

"Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another's work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work

Statement of Original Work (continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.

2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly references and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association.*

*Theresa Cortney*_____
Digital Signature

Theresa Cortney_____
Name (Typed)

February 7, 2020_____
Date