DISABILITY IN CAREER AND TECHNICAL EDUCATION:
PERCEPTIONS OF NOVICE TEACHERS IN CAREER AND
TECHNICAL EDUCATION REGARDING STUDENTS WITH DISABILITIES

by

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A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Education

Spring 2016

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ACKNOWLEDGMENTS

First and foremost, this research was made possible because of the tireless support and facilitation of Dr. Laura Eisenman. Your mentorship extends far beyond this study – thank you for your time and thoughtful guidance. There is a gifted professional community within the College of Education at the University of Delaware that I would like to acknowledge as I have grown tremendously professionally and philosophically as a result of their instruction and research. I am deeply appreciative of my committee members for your assistance in translating previously broad ideas into a line of structured and applicable research.

I am also indebted to the educators who graciously gave their time and perspective over the course of this study. They have demonstrated bravery in changing careers and deep commitment to teaching all students. Their participation was made possible through CTE leaders and administrators who have demonstrated a clear commitment to collaborative efforts between their field and the special education field. My thanks go out to these professionals for their vision of how to make the CTE experience even more meaningful and successful for students with disabilities.

I would like to conclude my acknowledgements with a heartfelt thank you to my family, friends and colleagues who provided the space and encouragement to start and conclude this study. Thank you for your encouragement and our discussions regarding how to make educational experiences more meaningful for students and teachers – both contributed greatly in shaping this study. Carlos, Pablo and Hugo, you have been my inspiration throughout the completion of this study.
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ABSTRACT

For secondary students with disabilities, career and technical education (CTE) teachers represent a pivotal group of educators in their transition process between school and workplace. Although uniquely positioned between schools and the workplace, little is known about novice CTE teachers who enter the classroom directly from the workplace. This study explored three research questions. First, what observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services? Second, what continuities and discontinuities do they perceive across the two cultures in relationship to how disabilities are defined and addressed? Lastly, in what ways, if any, does the induction into teaching influence the observations and perceptions of these novice teachers? Nine novice CTE teachers participated in an exploratory snapshot case study. Through semi-structured interviews, they offered perspectives on previous work environments, current teaching environments, students with disabilities, and the transition process of those students. Constant comparative methods were used to analyze teacher perspectives. A final wave of data analysis considered the applicability of constructs from a theoretical framework of self-determination. Findings indicated that these CTE teachers had limited background knowledge related to disabilities in the workplaces and limited abilities and opportunities within their new teaching positions to meaningfully engage in the transition processes of their students with disabilities. Meeting the instructional needs of
their students with disabilities and understanding special education structures in general were the priority for these teachers.
Chapter 1

INTRODUCTION

The following chapter begins with a brief background about the role of special education transition services and career and technical education (CTE) in educational outcomes of youth with disabilities. The need for increased understanding of pivotal personnel involved in both types of programming, namely the novice second-career CTE teacher, will then be presented. After which, the study’s research questions, methodological approach, researcher assumptions and background are outlined. The chapter concludes with discussion of the significance of the study.

Background and Context

The National Longitudinal Transition Studies 1 and 2 (NLTS-1; NLTS-2; Wagner, Blackorby, Cameto, & Newman, 1993; Newman, Wagner, Cameto, & Knokey, 2009) provide evidence that young adults who receive special education services in school experience postsecondary unemployment and underemployment at higher rates than their peers who did not receive special education. Figures from the Bureau of Labor Statistics (U.S. Department of Labor, 2010) also indicate that individuals with disabilities, 16 years or older, have higher rates of unemployment than their peers without disabilities and higher rates of part-time employment than their peers. These poor employment outcomes persist despite educational programming made specifically available to prepare secondary students with and without disabilities for postsecondary employment.
This educational programming includes transition services, which are mandated for secondary students with disabilities who receive special education services, and career and technical education (CTE, formally known as vocational education), which is generally available to all secondary students. Both types of programming are viewed as protective factors for improving the postsecondary employment outcomes (Blackorby & Wagner, 1996; Wagner, Newman & Javitz, 2015). In the broadest view, special education transition services are concerned with supporting students to become self-determined adults who engage in education, employment, and independent living after exiting high school (Field, Martin, Miller, Ward & Wehmeyer, 1998). Researchers provide evidence of a positive correlation between student self-determination and positive postsecondary outcomes (Chambers, et al., 2007; Wehmeyer, Abery, Mithaug & Stancliffe, 2003; Wehmeyer and Bolding, 1999; Wehmeyer and Palmer, 2003) and researchers have provided evidence supporting of a socio-ecological relationship between transition and self-determination (Deci & Ryan, 1985; Deci, Eghrari, Patrick, Leone, 1994; Reeve, Deci & Ryan, 2004; Wehmeyer & Field, 2007). Test et al. (2009) also found evidence that certain environments in which self-determination can be practiced, including inclusion in general education settings, occupational courses and paid employment experiences, have a strong effect on the positive student postsecondary outcomes of students with disabilities.

Because vocational course-taking and work experiences during high school by students with disabilities has been identified as one of the strongest predictors of adult employment (Wagner, 1991; Wagner et al., 2015), there is support for the enrollment of these students in CTE (Bangser, 2008). However, Valentine et al. (2009) note that even after an extensive review of research related to student transitions from CTE into
postsecondary settings, including employment, researchers were still “unable to shed additional light on important questions such as the mechanisms by which some CTE interventions exert influence… and whether transition programs seem to be especially effective for students with certain characteristics” (p.53).

**Problem Statement**

At the intersection of special education transition services and CTE programming are a group of personnel who conceivably play a pivotal role in the transition process. Students in CTE, including those with disabilities, are engaged by design in classes that put them in close and constant proximity to particular CTE instructors. Most CTE students work with one or two CTE teachers for the duration of their CTE course-taking related to a specific career cluster.

CTE teachers bring a different dynamic to the teaching profession than other secondary general educators. First, their content area expertise lies in vocation-specific skills and knowledge whereas most general education teachers have expertise in traditional academic knowledge (e.g., math, English, science and social studies). Most have held jobs in professions other than education prior to entering teaching. When individuals enter the teaching profession in this manner, having had a previous professional career, they are referred to as “second career” (SC) teachers (Resta, Huling, & Rainwater, 2001). Novice CTE teachers are a compelling group of educators, leaving the traditional workforce and re-entering schools during a time of unprecedented inclusion of students with disabilities. How these teachers perceive their work with these students in relation to their previous experiences in workforce culture environments might inform our understanding of school to work transitions. In other words, these teachers, especially those who have recently left the workplace may
provide more authentic perspectives regarding how the general workforce perceives and includes individuals with disabilities; such knowledge could be used in discussions with students with disabilities who must learn to navigate from school to work.

Unfortunately, there is no research literature that explores how novice CTE teachers specifically impact or even view the educational programming for CTE students with disabilities. Likewise, there is no research regarding how these teachers impact or view transition programming for their CTE students with disabilities. This void in the literature is surprising given the historical relationship between vocational education and school-age students with disabilities since the early 20th century (Keesecker, 1929), which was formalized under amendments to the 1976 Vocational Education Act (Public Law 94-482, Hatlen, 2000).

A second dynamic of interest is that these teachers enter the teaching profession through alternative routes to certification (ARTC) at higher rates than other general education teachers. Typically ARTC teachers, including second-career CTE teachers, begin teaching before or while receiving the professional development coursework required for their teaching certification (Rosenberg & Sindelar, 2005). It could be argued, therefore, that ARTC teachers have a particularly complex induction into teaching and have more professional responsibilities than other novice teachers who are coming from traditional pre-professional teacher education programs. ARTC teachers become socialized via classroom and academic experiences happening simultaneously.

Researchers are still learning about ARTC teachers. In terms of the induction process, existing research often focuses on the wide variability in the professional development these teachers receive (e.g., Adelman, 1986; Rosenberg et al., 2005). The retention rates of these teachers overall has also been explored (e.g., Ingersoll, Merrill,
The information available about the impact of these teachers on students in general is limited, however (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006; Henry et al., 2014; Quigney, 2010). Further, the literature regarding the impact of ARTC teachers on students with disabilities specifically appears limited to ARTC teachers in special education (e.g., Nougaret, Scruggs, & Mastropieri, 2005; Quigney, 2010). There is teacher induction research into how new secondary teachers from traditional pre-professional and ARTC pathways perceive special education and students with disabilities (e.g., Duncan, Cannon, & Kitchel, 2013). That research, however, has rarely focused on novice CTE teachers, and has not considered how they perceive their students with disabilities and the specific special education services, such as transition services, that these students receive.

The research related to ARTC-trained CTE teachers specifically and special education discusses the teachers in broad demographic categories (e.g., novice ARTC-CTE teachers vs. experienced ARTC-CTE teachers; Duncan et al., 2013) and fails to specify if the ARTC-CTE teachers being discussed are actually second career teachers. Existing research also focuses on new teachers’ perceptions of academic demands in the classroom (e.g., classroom management or teaching diverse students; Casale-Giannola, 2012; Ruhland & Bremer, 2003) and does not include their perceptions regarding the transition process needs of students, including those with disabilities.

In summary, novice CTE teachers have not been studied in detail in the CTE or special education literature although they have unique characteristics that make them valuable to study in regard to transitioning CTE students with disabilities. Fundamentally, across all CTE teachers, these teachers have arguably the most immediate first-hand experiences from the current workplace that could be shared with
students. These experiences could relate to current hiring processes, certification testing, as well as general workplace expectations and cultural norms. As such, these teachers may offer fresh perspectives on how the current workforce is (or is not) addressing employees with disabilities across these domains.

Because little attention has been paid to this subset of novice teachers, it is unclear as to whether or not novice CTE teachers recognize the value of sharing their experiences in relationship to transition planning for students with disabilities and/or have the capacity during the induction process to apply them to their work with CTE students with disabilities. This research took steps toward addressing Valentine et al.’s (2009) concern that CTE has not yet identified the specific mechanisms that encourage the most positive postsecondary outcomes for CTE students; novice CTE teachers may be one of those mechanisms.

**Statement of Purpose**

The purpose of this research was to broaden the existing research related to novice CTE teachers’ voice and perspectives pertaining to students with disabilities and the transition process. These teachers have arguably the most timely and authentic experiences in the workforce to share with their CTE students with disabilities. Based on experiences as both a secondary teacher (8 years) and an investigator for previous special education-related research (Eisenman, Pleet, Pell & Poudel, 2010), the researcher recognized that numerous mechanisms were at play in the transition process of CTE students with disabilities, but proposed that novice CTE teachers had a pivotal role within this process. To better understand that role, however, more exploratory research into these teachers was needed. This research not only sought to investigate these teachers’ perspectives regarding the transition services of students with
disabilities, it also explored how those perspectives may have been influenced by the induction process of the novice CTE teachers.

**Research Questions**

Based on this reasoning, this study was intended to answer three related research questions. First, from their unique vantage point, what observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services? Secondly, what continuities and discontinuities do they perceive across the two cultures in relationship to how disabilities are defined and addressed? Lastly, in what ways, if any, does the induction process influence these observations and perceptions?

**Research Approach**

The study was designed as a *snapshot case study* (Jensen and Rodgers, 2001) using qualitative research methods. Mann (2006) defines this type of study as an “investigation of one research entity at one point in time” (p. 83). In this study, the personal and professional perceptions of nine novice CTE teachers’ toward CTE students with disabilities and these students’ transition from school to workplace settings was investigated during the teachers’ own induction into the CTE classroom from industry. Feiman-Nemser, Schwille, Carver, and Yusko (1999) define teacher induction, specifically the first year of teaching, as “a time of intense learning and anxiety…a phase in teacher development and a process of socialization” (p.7). By using the teachers’ induction as the designated point in time for the study, these novice CTE teachers could better recall their previous experiences in the workforce to compare with their new understandings of the school environment in transition programming of CTE
students with disabilities. In other words, this research sought to capitalize on the “fresh eyes” of novice CTE teachers to identify consistencies (or lack thereof) between the workplace and schooling environment as they pertain to CTE students with disabilities.

**Role of the Researcher**

This study delves into the perceptions and experiences of secondary teachers related to inclusive education. As the researcher facilitated inclusive experiences for secondary students with disabilities for eight years, it is important to outline the researchers’ prior assumptions regarding inclusion and possible biases the researcher’s inclusions experiences and assumptions were addressed during this study.

**Assumptions.** Prior to conducting this study, the researcher taught students with disabilities for more than 10 years and completed a bachelor and master’s degree in special education with a concentration on secondary education and transition. As a transition support teacher for public high schools, the researcher facilitated the transition planning process for more than 150 students with disabilities and was directly involved in the co-op work experiences of more than 30 students with disabilities. During that time, the researcher witnessed the success and struggles of students with disabilities transitioning from the school context to the workplace and how both impacted the students, their families and their employers.

Before starting this study, the researcher held four beliefs or assumptions related to the themes that were predicted to emerge. These assumptions are outlined in detail in Chapter 2 but were grounded in the researcher’s experience, as well as existing research and conceptual literature on self-determination (Duvdevany, Ben-Zur, & Amber, 2002; Reeve et al., 2004; Scharma, Singh & Kutty, 2006; Wehmeyer & Bolding, 1999; Wehmeyer & Garner, 2003; Wehmeyer, Kelchner & ARC, 1995; Wehmeyer, Kelchner,
& Richards, 1996), critical disability theory and disability studies (e.g., Coleridge, 1993; Johnstone, 2001; Longmore, 2009; Pothier & Devlin, 2006) and in the broader social justice literature related in general to individuals whose self-determination has been structurally limited (McRuer, 2006; Nussbaum, 2009). One specific theory of self-determination, the Tripartite Ecological Model of Self-Determination (TEM-SD; Abery, Muthaug & Stancliffe, 2003) informed the rationale for this study. This theory is discussed in detail in Chapter 2.

**Biases.** The researcher acknowledged that previous teaching and research experiences provided her with authenticity and ease to discuss transition-related programming for students with disabilities over the course of teacher interviews. These same prior experiences, however, had the potential to threaten the validity of study, as the researcher might erroneously apply her previous teaching and transition related experiences and the above assumptions to those of the participants during the data analysis process. To protect the study from this potential threat, procedural safeguards were employed throughout the study. These included the triangulation of audio files and transcripts of each interview with researcher’s memos, the use of second interviews as member checks, and peer debriefing sessions as opportunities to get external perspectives on the data analysis process.

**Significance**

The research study has implications at the practical and theoretical level for special education and individuals with disabilities. The following is an overview of those implications.

**Practical significance.** Novice CTE teachers are teachers who typically enter the teaching workforce from non-educational industries through ARTC programs
Although the number of teachers coming into teaching via ARTC programs (including CTE teachers) is growing, little is known about these teachers (Rosenberg et al., 2005) including how these teachers may be engaging and impacting students with disabilities in particular. This is especially true in regard to novice CTE teachers and their students with disabilities. More research, such as the present study, is needed.

For special educators, the perspectives of the novice CTE teachers collected will make special educators more privy to the nuances of workplace culture towards disability. Such information could help them better design transition services that will better prepare students with disabilities for navigating in that culture and improving students’ postsecondary employment outcomes overall. For professional development personnel in education, this research may highlight areas of discussions needed to prepare novice ARTC teachers in general, and novice CTE teachers more specifically, for the transition into inclusive classrooms and to encourage these teachers' participation in transition processes of their own students with disabilities.

The void in research related to ARTC teachers and students with disabilities, including novice CTE teachers, could have a cumulative negative effect on the complex relationship between education and the general public perceptions related to disability. If novice CTE teachers experience cognitive dissonance while transitioning into inclusive schools from less-inclusive work cultures, this may lead them to resist providing classroom accommodations and/or limit access to school-based vocational opportunities (i.e., internships, cooperative work experiences) to students with disabilities. This resistance, in turn, may impact the way in which their students with disabilities conceptualize the construct of disability and/or self-determination in both
schools and the workplace. Without more information from the novice CTE teachers themselves, it would be difficult to ascertain whether a teacher’s reaction to inclusion is based more on her/his own interpretation of disability or whether her/his actions reflect a larger connect (or disconnect) between school and workplace culture related to disability. The proposed research could help determine methods for addressing this question with these teachers and in doing so, it might illuminate pragmatic ways to strengthen those connections or bridge any disconnect on behalf of students with disabilities.

**Theoretical significance.** For education researchers, the results of this research may help illuminate how teacher beliefs and experiences regarding inclusion are formed and how different types of formation can affect the engagement and impact of a particular set of teachers, novice CTE teachers, on a particular set of students, in this case students with disabilities. Furthermore, these teachers are uniquely positioned to help understand how the legislative macroculture, including the Individuals with Disabilities Act of 1990 (IDEA, P.L. 101-476) and the No Child Left Behind Act of 2001 (P.L. 107-110)) may be interacting with the microcultures (school and workplace cultures) in which students with disabilities operate. These teachers are currently teaching in IDEA-structured school environments, but they have come into this context directly from the Americans with Disabilities Act (ADA, P.L. 101-336)-structured workforce. As such, they may have knowledge that could be valuable to the transition process of students with disabilities.

**Conclusion**

Novice CTE teachers are a unique and understudied group of educators. They are unique in that they enter the CTE classroom with timely and authentic workplace
experiences. Although these experiences may be especially valuable to their students with disabilities, who traditionally have trouble transitioning successfully into the workforce, no research has examined the perceptions of novice CTE teachers of the transition process of students with disabilities. Additionally, there is no research to identify what, if any, factors may influence the novice CTE teacher’s transmission of workplace knowledge to the transition process of their students with disabilities. This exploratory study sought to address these omissions in the current CTE and special education literature with attention to the induction process that may be relevant to these teachers’ perspectives.
Chapter 2

LITERATURE REVIEW

Vocational, or “career and technical education” (CTE), courses are popular in American public schools and students with disabilities continue to enroll heavily in these programs (Gray, 2001; Haber, 2005; Harvey, 2003; Levesque et al., 2009; Wonacott, 2000). Indeed, approximately 92% of the 2005 graduating class of American students were enrolled in one or more CTE classes while attending secondary school (Levesque et al., 2008). This translates to more than 2 million students without disabilities and about 200,000 students with documented disabilities in the 12th grade. Gray (2001) reports that graduating students with disabilities are more likely to be in traditional CTE programs than in academic and integrated programs; they also take more credits in CTE than their peers without disabilities and are seemingly overrepresented in CTE programming in general. These numbers indicate a long-standing relationship between CTE and students with disabilities; however, this relationship is also complex for all stakeholders involved.

The following is a five-part review of the literature pertaining to this multi-faceted relationship. This literature review is meant to orient the reader to important aspects of this relationship and the specific implications of the relationship for second-career CTE teachers within their induction period. First, this review presents background information regarding two major laws – the Individuals with Disabilities
Education Act (IDEA) and Americans with Disabilities Act (ADA) -- that affect transitioning youth with disabilities, including the laws’ underlying concerns with the postsecondary employment of people with disabilities and their differing approaches to promoting employment. Second, the literature review continues with a brief explanation of the services students with disabilities receive in high school to address employment concerns, namely transition services and vocational education. Third, an overview of how vocational education has transformed into CTE and how that transformation impacts CTE students with disabilities is given. Fourth, novice teacher perspectives on teaching students with disabilities, including those of novice CTE teachers, are presented. Finally, this chapter concludes with an explanation of the present study as it relates to this literature. That explanation includes the theoretical framework and research questions.

Legal Contexts Affecting the Transition to Work of Youth with Disabilities

Two major federal laws have influenced the school-to-work transition of youth with disabilities. IDEA is the legislation that shapes the inclusion and accommodations of students with disabilities in the school context. The ADA is the legislation that focuses on the inclusion and accommodations of employees with disabilities in the workplace. Although both laws exist to improve the lives of individuals with disabilities, there are important differences between the laws and how they aim to improve the vocational outcomes of individuals with disabilities, including transitioning youth with disabilities. Because these are mechanisms that transitioning youth,
including those in CTE, are exposed to and may be operating under simultaneous while in CTE, they are important to review.

**IDEA’s evolving concern for transition to employment.** Special education as it is known today, a federally mandated set of services in public schools for students with disabilities, had its origins in 1959 with the passage of the Preparation of Professional Personnel in the Education of the Mentally Retarded Act (Hanley-Maxwell & Collet-Klingenberg, 2011; Taylor & Harrington, 2003). From 1958 to 1973, this special education legislation broadly engendered the learning success of students with disabilities through additional funding and resources, but the inclusion of these students in public schools was not addressed specifically. The passage of Section 504 of the Vocational Rehabilitation Act Amendments (P.L. 93-112) in 1973 changed this special education landscape and framed the schooling of students with disabilities as a civil right, an entitlement, to be addressed across all public schools (Scotch, 2009). Since the passage of Section 504, the inclusion of students with disabilities in public schools has only grown, as have the special education services provided by students with disabilities.

The seminal Education for All Handicapped Children Act of 1975 (EAHC, P.L.94-142) continued to expand the civil rights of children with disabilities in public schools. This law introduced the use of individualized education programs (IEPs) to identify educational strengths and areas of academic weakness unique to individual students with disabilities and determine how to address both in the school setting. This law also reinforced Section 504 in requiring schools to put procedural safeguards in place to ensure that students with disabilities could access (and benefit from) a “free and appropriate public education” (FAPE) via a “least restrictive [instructional]
environment” (LRE). These provisions within these laws underscored federal interest in having schools individualize the educational experience for all for students with disabilities, including those in CTE. The EAHHC has been amended and reauthorized several times since its initial passage in 1975 and in 1990 it was renamed IDEA. IDEA was reauthorized in 1997 (P.L. 105-17) and in 2004 (P.L.108-446).

Under the most recent authorizations of this law, certain provisions of the special education law changed. These changes included additional guidance and mandates related to the inclusion of students with disabilities in the school setting. The law also became more focused on increasing the participation of students with disabilities in general education settings, including students with disabilities in school-wide reform movements, namely high stake assessments (Turnbull, 2005), and expanding transition related activities for students with disabilities to help prepare them for inclusive postsecondary settings (Smith & Nevin, 2005; U.S. Department of Education, National Center for Education Statistics, 2006). The last change directly impacted secondary programming for all students with disabilities, including secondary students with disabilities enrolled in CTE. The changes included requirements related to transition-related programming intended to address the sobering postsecondary outcomes of students with disabilities, including employment.

Longitudinal studies seem to indicate that students identified as having disabilities have specific transition needs. These students tend to fare worse to differing degrees than peers without disabilities in the following postsecondary outcomes: 1) postsecondary education enrollment, 2) post-secondary education retention, and 3) employment in general (Newman et al., 2011). While it is important to note that postsecondary education can have positive impacts on individuals’ eventual
employment earnings (Pascarella & Terenzini, 2005), the immediate employment concerns of transitioning youth as demonstrated by the National Longitudinal Transition Study (NLTS-2) are of the most importance to examine for this study.

In Newman et al.’s (2011) NLTS-2 report, overall youth with disabilities were employed at lower rates than their peers without disabilities. The rates of employment by disability type, however, varied widely and some sub-groups of students (e.g., students with emotional disabilities) had rates significantly lower than their peers without disabilities. And although the number of hours worked for youths with and without disabilities were similar, the jobs that youths with disabilities had (e.g., food preparation) were associated with lower wages or “entry job” skills than the jobs their peers without disabilities held. Although the NLTS-2 does not reveal why this discrepancy exists, it does indicate that in the jobs that youths with disabilities held, many did not receive accommodations that could conceivably allow them more success on-the-job and/or in accessing higher status jobs.

According to this NTLS-2 report, approximately 7% of youth with disabilities receive accommodations in the workplace after leaving high school although 26% reported that their employer “was aware” of their disability. These numbers indicate that more than 70% of youth who qualified for and received individualized education services in school do not identify themselves as individuals with disabilities in the workplace and 92% of these same youth do not receive accommodations in the workplace. Looking ahead for transitioning youth, no literature was found to help determine the degree to which these choices, regarding the job held and accommodations received, lay in the hands of youth with disabilities or in the hands of the employers.
**ADA as context for transition to employment.** The under and unemployment of adults with disabilities has been a long-standing social and financial concern in the United States (Brault, 2012). Although public campaigns (e.g., “What can you do?” campaign, https://www.whatcanyoudocampaign.org/) and small-scale demonstrations projects (e.g., The Customized Employment Demonstration Program, http://www.dol.gov/odep/topics/CustomizedEmployment.htm) have been created to address this concern, it has been the Americans with Disabilities Act (ADA, P.L. 101-336) itself that has created a national dialogue about this employment issue. This law, along with its 2008 amendments (ADAAA, P.L. 110-325), established legal provisions intended to improve the employment of adults with disabilities through a focus on prohibiting discrimination based on disability and requiring reasonable accommodations for workers with disabilities.

There are three specific areas of significant difference between the ADA and the IDEA that the researcher argues could be reinforcing employment barriers for transitioning youth with disabilities. These differences include (1) the definition of what it means to have a disability, (2) the extent of funding the law provides to support the needs of individuals with disabilities, and (3) the locus of control for decision-making. The following is a brief overview of these differences and their implications for transitioning youth. These concerns about students navigating from the school environment to the workplace environment are the cornerstone of the present study.

**Defining what it means to have a disability.** IDEA gives 13 fairly specific categories under which to define a disability, whereas ADA provides no such specific categorical language. Under IDEA, there is a team-oriented approach towards diagnosing a disability and developing an appropriate educational experience for an
individual child. Under ADA, however, there is in individual-to-employer structure to
determine a disability and this approach is centered on crafting a vocational experience
that ultimately meets the needs of the employer.

Researchers who examine the ADA point out that the disability determination
processes employed under ADA are unique to that law (i.e., Dalgin & Bellini, 2008;
Parmet, 2003; Pothier & Devlin, 2006; Wilton, 2006). Under the ADA, an individual is
deemed as having a disability if they have the following characteristics:

- a physical or mental impairment that substantially limits one or more of
- the major life activities of such individual; (B) a record of such an
- impairment; or (C) being regarded as having such an impairment (42
  U.S.C. § 12102(2)).

In 2008, the ADA Amendments (ADAAA, P.L. 110-325) were passed as an
effort to address concerns regarding the disability determination process, namely
narrow employer and court interpretations of the above definition and the qualification
thresholds for an accommodation at work (Benfer, 2009). The passing of the ADAAA
reinforced the legislative intent of the ADA to protect individuals with disabilities and
“overturn[ed] a series of Supreme Court decisions that interpreted [ADA] in a way that
made it difficult to prove that an impairment is a disability” (U.S. Department of
Labor’s Office of Federal Contract Compliance Programs, n.d.). While the ADAAA has
tried to address this concern, the National Council on Disability (2013) admits that “no
major long-term conclusions [about the impact of the ADAAA] can be drawn at this
time” (p.87).
For transitioning youth with disabilities, the difference between IDEA’s and the ADA’s definition of disability could be problematic. For example, these students may have received individualized educational supports in school under IDEA for a concern or disorder that might not be recognized as a disability in the workforce under ADA. There are resources related to helping transitioning youth understand the disability eligibility protocols within the ADA (e.g., The U.S. Department of Labor’s Office of Disability Employment resources at http://www.dol.gov/odep/pubs/fact/ydw.htm). Unfortunately there is no literature regarding the use of these existing resources or their impact on youth’s understanding how to determine and share their eligibility for accommodations in the workplace.

**Differences in funding for services and accommodations.** Supports for individuals with disabilities, including accommodations, can cost money and those costs have been an area of concern for IDEA (Chamber, Parrish, & Harr, 2004) and ADA (Hendricks, Batiste, Hirsh, Schartz & Blanck, 2005). IDEA provides substantially more money, however, than ADA to agencies or organizational entities providing accommodations to individuals with disabilities. In terms of professional responsibility, the educational professionals under IDEA have many more mandates to follow than their counterparts under ADA, the employers. For example, under IDEA, education professionals (e.g., teachers, psychologists, administrators, and other school personnel) are required to provide a wide-range of educational services and accommodations to students with disabilities and their families. IDEA funds via federal and state budgets can be used to pay for student supplies, teachers, and/or approved special programs that are considered important to meet the needs of students with disabilities and their families (Yell, Shriner & Katsiyannis, 2006).
It is important to note that although these funds are provided, there continues to be contention about the amount of funding and support that individual students with disabilities should be entitled to under this law (Parrish, 2001). Under ADA (2008), however, employers and government entities are required to provide only “equivalent access” to educational activities and vocational activities for individuals with disabilities, including employment. Federal ADA funding is available only to establish monitoring, technical assistance, and “coordinating mechanisms” (Sec. 12117) towards the enforcement of this law’s provisions; however, no funds are given directly to employers or employees to offset any costs incurred in the process of making accommodations.

**Locus of control for decision-making.** How decisions about individual accommodations should manifest also seems to differ across the two laws. Under IDEA, the IEPs are the centerpiece of the special education programming in secondary schools, and must be the result of a team decision-making process. A plethora of resources are available to help individual students and their families create and/or advocate for the best possible IEPs for themselves. These resources include federally produced guides to IEP meetings for their individual needs (e.g., *A Guide to the Individualized Education Program* by the U.S. Department of Education, Office of Special Education and Rehabilitative Services, 2000), commercially produced books about the IEP process (e.g., *The Complete IEP Guide: How to Advocate for Your Special Ed Child*, Siegel, 2001), and research-based student-led and/or self-determined IEP curriculums (see Hawbaker, 2007; Wood, Karvonen, Test, Browder & Algozzine, 2004). Taken together, these resources point to an increasing effort on the part of educational professionals to
acknowledge and support the unique needs and interests of secondary students with disabilities.

This type of team-focused, person-centered decision-making effort is not extended by employers nor the general public towards adults with disabilities according to critical disability theorists (Dalgin et al., 2008; Pothier & Devlin, 2006; Wilton, 2006). Parmet (2003) explains that ADA differs from IDEA and other preceding disability civil rights legislation because it purposefully “prohibits differential and individual treatment of individuals with disabilities, premised on the belief that such individuals, more often than not, can be economically independent” (p.147). As the workplace is often a setting where employees, with or without disabilities, are purposefully made to feel beholden to the structured workplace hierarchy (Neath & Schriner, 1998), it makes sense that one might think twice before approaching their employer with any requests for individualized accommodations that might be interpreted as indicating one’s limitations.

Other researchers (e.g., Engel & Munger, 2003; McCusker, 1995) pose similar questions regarding the transition of students with disabilities from their school-based experiences shaped by IDEA to future employment-based experiences shaped by ADA. Engel et al. (2003) worries that transitioning youth with disabilities who have been entitled to IDEA-supported accommodations and services in the school system may struggle with the “historical dichotomization of disability and work” in the workforce (p.244), where individual-based needs and services are not, according to Davis (2003), as continuous for workers with disabilities under ADA.
School-Based Strategies to Address Transition Concerns

Special education transition services and career and technical education (CTE) are two types of programming that are accessible to transitioning youth with disabilities and could help diminish this dichotomization between school and the adult workplace for CTE students with disabilities. The following is a brief overview of transition services for students with disabilities that highlights the role of multiple stakeholders, self-determination, and CTE in promoting positive outcomes of these students.

**Transition services for students with disabilities.** Under the 1990 reauthorization of IDEA, special education began efforts to address the poor postsecondary outcomes of students with disabilities by mandating transition services. Since that time, this mandate has become more thorough and deliberate (Storms, O’Leary, & Williams, 2000). According to IDEA 2004:

The term “transition services” means a coordinated set of activities for a child with a disability that:

(A) is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;
(B) is based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and

C) includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation [602(34)].

Transition services for students with disabilities became mandatory for all students with disabilities age 16 or older for the first time under IDEA 1990. Since that time several changes have been made to the law regarding the mandatory transition services for all students with disabilities. Namely, the 1997 amendments lowered the age for mandatory planning to age 14 while preserving the requirement for beginning services by age 16. The 2004 reauthorization of IDEA dropped the mandatory planning by age 14 requirements, but noted that planning and services must begin by age 16, or earlier as determined by the IEP team. Many states have self-selected to maintain policies for providing transition planning and services for students with disabilities younger than 16. Although some logistical structures within special education transition services may change, the intent of these services has remained constant - to “determine what instruction and educational experiences will help the student prepare for the transition from school to adult life” (National Center on Secondary Education and Transition, 2002, p.1).
The role of multiple stakeholders in comprehensive transition services.

Quality transition services have been defined as those that include collaboration and interaction between all stakeholders in the transition process of students with disabilities - the students themselves, their families and the professionals with whom they work (Kohler, 1996). A comprehensive model of transition services is characterized by all the stakeholders collaborating over time to facilitate the transition of students with disabilities into postsecondary settings, including employment. The National Alliance for Secondary Education and Transition’s (NASET) National Standards and Quality Indicators (n.d.) for transition services make this explicit. NASET Standard 4.3 states that “School staff actively cultivate, encourage, and welcome youth and family involvement” (p.11) and Standard 5.1 states, “Organizations coordinating services and supports align their missions, policies, procedures, data, and resources to…ensure the provision of a unified flexible array of programs, services, accommodations, and supports” (p.12).

Levinson (2004) proposed a collaborative model of particular interest to this study because of its recognition of the roles of non-special education professionals, such as CTE teachers. The transdisciplinary transition model of transition advocates for transition-related collaboration across professionals from a range of disciplines (e.g., teachers, school psychologists, social workers, etc.) in delivering transition services on the behalf of students with disabilities (Noonan, Morningstar, & Gaumer, Erickson, 2008). This model refutes the notion that the transition process is a rigid linear progress;
instead, it proposes that the transition process is a continuous, organic process dependent on the interactions among the individuals involved and the capabilities and/or interests of the student being helped. Pertinent to this study, professionals who work collaboratively on behalf of students with disabilities need working knowledge of career development theories (see Sears, 1982; Super, 1990) to help develop and understanding of how best to support their students with disabilities transition successfully towards employment (Levinson, 2003).

The role of self-determination in transition services. The emphasis on student-centeredness within all types of transition activities has emerged from the special education field’s interpretation of the Self-Determination Theory (SDT; see Deci et al., 1985). This theory tells us that all people innately seek control in their lives but how they are able to exert any such control is determined by internal and external factors (Fiedler & Danneker, 2007; Wehmeyer, Abery, Mithaug & Stancliffe, 2003). Reeve et al. (2004) define SDT as a “macrotheory of motivation” (p.33) that can be utilized by educators to help move students towards increased postsecondary autonomy, competence, and relatedness. According to this theory, these personal traits are the “requisite nutrients for intrinsic motivation, [self-directed] motivation and healthy development” (p.34).

Self-determination (SD) has been a topic of considerable interest in the field of American special education since the 1980s (Fiedler & Danneke, 2007), when it was first linked to postsecondary concerns for students with disabilities transitioning into
adulthood. Research gives evidence of a positive correlation between student SD and positive postsecondary outcomes (Chambers et al., 2007; Wehmeyer et al., 2003; Wehmeyer et al., 1999; Wehmeyer et al., 1995; Wehmeyer et al., 2003; Wehmeyer & Schwartz, 1997). According to Wehmeyer (2003), SD “pertains, at its fundamental level, to issues of human action as a function of mind, will, and/or volition” and “in essence [SD] refers to acting based on one’s own mind or free will, without external compulsion” (p.6). Abery et al. (2003) argues that SD is “more complex than person control” (p.43) and as such SD should examine all of the different factors that allow individuals to exercise the degree of control they desire over those areas of like they consider important. Other researchers (Deci et al., 1985; Deci et al., 2006; Reeve et al. 2004) have provided research supporting an ecological view of transition. Numerous models of self-determination have emerged from the existing SD research (Beauchamp & Kiewra, 2004).

Using existing assessments, such as the *ARC Self-Determination Scale* (Wehmeyer et al., 1995), research in the field of special education transition planning indicates that students’ knowledge and development of self-determination skills during high school facilitates students’ postsecondary outcomes (Shogren et al., 2013; Wehmeyer et al., 1997). Furthermore, Lehmann, Bassett, Sands, Spencer, and Gliner (1999) explain that “self-determination within the context of transition services served as an underlying catalyst and framework” (p.3). This has been the case since Madelyn Will’s OSERS administration in the 1980s.
The role of CTE in transition. In 1987, the amendments to IDEA included vocational education in a list of “organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree” [300.26 (a)(5)]. In the 2004 reauthorization of IDEA, vocational education was listed under the secondary academic options to consider when discussing transition planning activities for students with disabilities (20 U.S.C. 1401(16)) (3)). Efforts are taken in the field of special education to inform students with disabilities and their families about existing CTE programs (e.g., Bakken & Obiakor, 2008; Pell & Eisenman, 2009; Parent Educational Advocacy Training Center, 2010).

Improved academic performance and/or completion rates. The enthusiasm for vocational education is warranted given the observed benefits of having CTE experiences for students with disabilities (Brown, 2003; Cardon, 2000; Cawley, Kahn & Tedesco, 1989; Harvey 2001; Wonacott, 2001). The two main benefits identified in the literature include: 1) higher school completion rates of students with disabilities in CTE than students with disabilities in general education programming and 2) better postsecondary outcomes for the CTE students with disabilities compared to students with disabilities in general education curriculum programming. It is important to note, however, that while there is evidence that taking vocational courses appears to provide advantages to students with disabilities, more data is needed to determine how they do so (Stern, Finklestein, Stone, Latting & Dornsife, 1994). The following two sections of this review outline those benefits and cautions in more detail.
The 2004 National Assessment of Vocational Education report (NAVE, Silverberg, Warner, Fong, and Goodwin) outlined evidence that “students in vocational programs of study have significantly increased their academic course taking and achievement over the last decade” (p.6). In regard to students with disabilities, a 1995 U.S. Department of Education report (U.S. Department of Education, 1995) cites the first National Longitudinal Transition Study (NLTS-1; Blackorby, 1993; Wagner, 1991) findings which indicated that enrollment in CTE courses was more positively associated with school completion for students with disabilities than enrollment in general academic or less coordinated vocational classes. The NLTS-2 found similar findings (Newman et al., 2011). This is supported elsewhere in the literature using qualitative means (e.g., Cardon, 2000) but so far these findings are limited to at-risk students in technology education students at–risk. Special education literature describes CTE as a definitive drop-out prevention mechanism for students with disabilities (Harvey, 2001; Wagner, Newman, Cameto & Levine, 2005).

**Improved postsecondary earnings.** The 2004 NAVE Executive Summary (Silverberg, Warner, Fong, & Goodwin, 2004) reported that “the short- and medium-term benefits of vocational education for all CTE students are most clear when it comes to its longstanding measure of success – earnings” (p.4). Literature regarding postsecondary employment benefits of CTE for students with disabilities has been longstanding and convincing (Hasazi, Johnson, Hasazi, Gordon & Hull, 1989; Lee, Rojewski & Greg, 2016; Rabren, Carpenter, Dunn & Carney, 2014; Siltionton & Frank, 1990). Data from the NLTS and NLTS-2 (Wagner et al., 1993; Wagner et al., 2011)
also indicate that CTE students with disabilities do incur vocational advantages when they have participated in CTE programming.

**Caution regarding CTE outcome data for students with disabilities.**

Longitudinal studies also seem to indicate that CTE participation may be associated with positive secondary engagement (Blackorby, 1993; Wagner, 1991) and postsecondary outcomes for students with disabilities (Harvey, 2001; Wagner et al., 1993; Wonacott, 2001). The 25th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (U.S. Department of Education, Office of Special Education and Rehabilitative Services, 2005), even highlighted NLTS-2 findings regarding the transition-related successes of students in CTE programming. Silverberg et al. (2004) provided more specific outcome data regarding CTE students within different CTE programs. They found that students who concentrated in CTE coursework (“concentrators”) and those who only took the occasional CTE class (“non-concentrators”) seemed to have some, albeit limited, differences in postsecondary outcomes but unfortunately the outcomes of students with disabilities were not disaggregated and outcomes specific to CTE students with disabilities were not discussed explicitly.

**Vocational Education**

CTE programming can vary from one setting to another and is also very extensive in scope. The following is a brief overview of vocational education as it pertains to CTE students with disabilities. This overview outlines how vocational
education, now referred to as CTE in the United States, is currently defined and structured. This section will conclude with a description of how legislative and academic initiatives within CTE relate to the needs of CTE students with disabilities.

**The redefining of vocational education.** By the early 20th century, the demand for increased federal support of vocational schooling in the United States culminated in the celebrated passage of the Smith-Hughes Act of 1917 (P.L. 64-347). This act is credited as the most influential vocational education legislation linking secondary vocational education with federal funding (Hillison, 1995). With the passage of the Smith-Hughes Act of 1917, vocational programming for youths in America grew. Since the passage of the Smith-Hughes Act in 1917, federal legislation and funding for vocational education of secondary students with and without disabilities has continued (see Appendix A).

The Smith Hughes Act of 1917 (P.L., 64-347), the Vocational Education Act of 1963 (P.L. 88-210) and the Carl D. Perkins Vocational Education Act of 1984 (Perkins I, P.L. 98-524) explaining how secondary CTE functions to date for students with and without disabilities. These laws and amendments demonstrate a national and persistent interest in improving the vocational capabilities and outcomes of American youth, including those of students with disabilities. Since 1984, the Perkins legislation has been reauthorized three more times with the last reauthorization, Perkins IV (P.L. 109-270), being passed in 2006. Perkins IV changed the name of vocational education to “career and technical education” and defined CTE as the following:

(A)... a sequence of courses that - (i) [provide] individuals with coherent and rigorous content aligned with challenging academic standards and
relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions ([S. 250—4]).

With this name change, the structure of CTE became more formalized and the academic rigor in the CTE classroom increased. As a result of the vocational education legislation over the years, there are many more, and more diverse, vocational programs of study for students to enroll in secondary schools. Regardless of the program students are enrolled, students in vocational programs now are expected to demonstrate more sophisticated vocational and academic competencies than were previously required.

**The structure of modern career and technical education.** Under the current Perkins legislation, there are 16 fields of study or career clusters for CTE students to follow in the United States (Table 1). These clusters have been formally developed through legislation and policymaker discussions since 1994 (Ruffing, 2006) and include traditional trade-related programs (e.g., electrical trades, which are now housed under “Architecture & Construction”) as well as new programs (e.g., biotechnology under “Science, Technology, Engineering, & Mathematics”, STEM). More information regarding the different clusters and the various fields of employment found under each cluster may be found on the National Career Technical Education Foundation’s Career Clusters website (http://www.careerclusters.org/index.php) and/or through state’s Department of Education CTE offices.

Career clusters are generally offered to students via four structures. These structures include: 1) CTE programs embedded within comprehensive high schools, 2) CTE schools that embed the comprehensive curriculum within the classes at the school, 3) CTE centers that offer CTE courses for students who travel to them from various neighborhood or regional high schools, and 4) Tech Prep programs that allow students
to take courses via any one of the previous options in conjunction with a postsecondary institution. Different states use different decision-making protocols to determine which CTE programs are actually made available to students (Harris & Wakelyn, 2007).

Each reauthorization of the Carl D. Perkins Vocational Education Act has brought with it unique aspects to the vocational education system in secondary schools. Perkins II (1990, P.L. 101-392), brought substantially more funding to vocational education and made the link between vocational and academic programming more explicit than anytime previously (Scott and Sarkees-Wircenski, 2004). Perkins III (1998, P.L. 105-332) further extended vocational education’s responsibility for the academic performance and general outcomes of students (Gordon, 2014; Scott et al., 2004).

The most recent iteration of the Perkins legislation, Perkins IV (2006), changed the name of “vocational education” to “career and technical education” (CTE). This change in the title and definition of the vocational education programming in school highlighted a larger shift in education, away from a multiple-track model of education (e.g., vocational education programming toward immediate post-secondary employment versus traditional academic programming toward college) to one model of education in which all students are prepared for college readiness (Gray & Walter, 2001; Skinner & Apling, 2005). As Harris et al. (2007) explains, “This name change has been anything but cosmetic. It signaled the need to couple a rigorous academic platform with elective CTE courses that help students apply their knowledge” (p.3).

CTE programs have 1) new, higher content standards in the CTE curriculum (National Governors Association Center for Best Practices, 2007) and 2) more technical assistance to CTE coordinators to align with their CTE curriculum with the college-
readiness initiative in NCLB (e.g., the National Career and Technical Education Foundation’s College and Career Readiness Program). Combined with a new emphasis on developing technologically advanced CTE pathways and facilitating CTE student participation in postsecondary education, the Perkins IV definition of CTE, seems to confirm a systematic movement in vocational education towards expanded and more sophisticated technical and academic benchmarks for students enrolled in all vocational programs (National Governors Association Center for Best Practices, 2007).

**Initiatives within CTE Related to Students with Disabilities.** Although there were initial concerns that reforms in CTE (and general education) to improve students’ academic performance would result in negative outcomes for students with disabilities (Austin & Maulman, 2002), these students have continued to enroll heavily in CTE programs (Gray, 2001; Harvey, 2003). Research by Hoachlander, Kaufman, & Levesque (2003) and Harvey (2003) indicates that how they enroll differs from their peers without disabilities. More students with disabilities appear to complete a specific set of coordinated courses, or an “occupational concentration” in a particular career cluster than do their peers without disabilities (Levesque et al., 2008, Table 2.19, p.31). Students with disabilities continue to be overrepresented in the Trade and Industry career cluster and underrepresented in the Technical and Communication cluster as compared to their peers without documented disabilities (Harvey, 2003; Hoachlander et al., 2003).

It should be noted that high participation of students with disabilities in CTE at the end of the 20th century could be the result of deliberate legislative initiatives to support students with disabilities in vocational education specifically. Under the 1968 and 1976 reauthorizations of the Vocational Education Act of 1963 (P.L. 90-576 and
P.L. 94-482 accordingly), special groups within vocational education were highlighted for increased attention and supportive programming. These groups included disadvantaged students and students with disabilities (Gordon, 2014; Scott et al., 2004). During the 1980s, the Carl D. Perkins Vocational Education Act of 1984 (P.L. 98-524) was passed with the intent “to make vocational education programs accessible to ‘special populations,’ including students with disabilities” (Skinner et al., 2005, pp.CS4-3; see also Robinson, 2007). The Job Training Partnership Act of 1982 (JTPA, P.L. 79-300) and the Workforce Investment Act of 1998 (WIA, P.L. 105-220) followed and emphasized the benefits of CTE for economically disadvantaged individuals. This has implications for students with disabilities because historically they have been overrepresented in that category (Fujiura & Yamaki, 2000).

**Teacher Perspectives on Teaching Students with Disabilities**

Novice teachers are entering the classroom at a time of unprecedented inclusion and academic rigor (Duncan, 2011). Novice CTE teachers are doing so almost exclusively through alternative routes to certification (ARTC), a non-traditional pathway teachers can take to enter the classroom almost directly from the workforce. To better understand the unique perspective of novice CTE teachers toward teaching students with disabilities in the rigorous CTE environment, it is important to first understand how teachers in general feel about teaching students with disabilities. In the following section, the literature regarding teacher perceptions of teaching students with disabilities in general is presented. Perceptions of novice teachers from traditional in-service preparation programs and novice teachers from ARTC will be examined briefly. This section will conclude with a more detailed look at the perceptions of novice CTE teachers regarding students with disabilities.
**Teacher perceptions in general.** How teachers perceive their students with disabilities and their ability to teach these students is important for understanding how best to prepare teachers for teaching these students (Berry, 2010; Scruggs and Mastropieri, 1996; Titone, 2005). A review of the existing research related to teacher perceptions of students with disabilities and teaching them seems to indicate that these perceptions are impacted by multiple variables. Some research has indicated that the depth of experiences a teacher has had with students with disabilities influences how they feel about inclusion and presumably act in an inclusive classroom. Some research seems to indicate that the greater the depth of experience a teacher has, either in preparation of teaching or while teaching, the more favorable the teachers’ perceptions are of inclusion (Burke & Sutherland, 2004; Reusen, Shoho & Barker, 2000; Sack, 1998; Taylor & Ringlaben, 2012; Taylor, Richards, Goldstein, and Schilit, 1997).

In their review of the inclusion literature, Avramidis & Norwich (2002) argue that other variables, including “child-related” variables (p.129; e.g., type of disability a student has) and “environment-related” (p.129; e.g., professional resources) should also be considered as well, if not more, when trying to understand teachers’ perception of teaching students with disabilities. Scruggs et al. (1996) earlier synthesis of the teacher perception research also underscored that teacher perceptions of inclusion are complex and multi-dimensional.

When asked about their experiences related to inclusion, novice and experienced teachers have given researchers a variety of responses regarding the difficulties they have encountered. Researchers have focused on teachers concerns about a lack of access to adequate in-service training related to disability knowledge and special education-related mechanisms (Buell, Hallam, Gamel-Mccormick & Scheer, 1999) while others
have focused on personnel support needs (Carter & Hughes, 2006). Researchers have also highlighted the challenges teachers have reported in regard to meeting instructional rigor and accountability testing within inclusive classrooms for secondary general education teachers as well (Mastropieri et al., 2001).

**Perceptions of novice teachers.** Teaching in general is a dynamic responsibility that is challenging in the beginning for all educators, even for those who have received formal and extensive instruction regarding how best to teach students (Cochran-Smith, Cannady, McEachern, Piazza, Power & Ryan, 2010; Woolfolk Hoy & Spero, 2005). Classroom management, curriculum management, and professional support (Fry, 2007, 2009) as well as addressing student motivation and differences (Flores & Day, 2006; Veenman, 1984) are major concerns for new teachers. Although important to address, these concerns are global and may not be specific to new teachers and their experiences with students with disabilities. The following is a brief overview of research related to novice teachers and their perceptions of inclusion and students with disabilities.

**Novice pre-service teachers.** Pre-service educators’ perceptions of students with disabilities and inclusion have been studied (e.g., Brown, Welsh, Haegele Hill & Cipko, 2008; Kamens, Loprete & Slostad, 2000). Brown et al. (2008) found evidence that pre-service teachers felt more confident in teaching students with disabilities when they received more professional development related to understanding disabilities and methods for creating differentiated materials for students. Kamens et al. (2000) found that per-service teachers has a wide variety of concerns related to teaching students with disabilities, including their ability to meet the classroom behaviors of students with disabilities, identify students as having a disability, and create appropriate academic materials and instruction for the students. Researchers often provide recommendations
for better preparing these traditionally trained teachers for inclusion through increased pre-professional development (Kamens et al., 2000; Pugach, 2005; Taylor et al., 2012). Although there is literature to support the need for expanding current professional development related to inclusion for pre-service teachers, there are differing opinions in the literature regarding whether or not newer teachers may actually be viewing inclusion more favorably overall than more experienced colleagues (Forlin, 1995; Leyser, Kapperman, & Keller, 1994; Melnick and Meister, 2008; see Avramidis et al., 2002, for more information about this debate).

**Novice teachers from ARTC.** The number of educators who are now coming into inclusive general education classrooms via alternate routes to certification (ARTC) programs have been on the rise as a means for addressing teacher attrition nationwide (Feistritzer, 2005, 2009; National Center for Alternative Certification, 2010; Rosenberg et al., 2005) and, when possible, the rigor of NCLB (Thurlow, Cormier & Vang, 2009). Rosenberg et al. (2005), citing Roth & Lutz (1986) acknowledge that ARTC programs vary greatly in size and features but describe ARTC programs (or “ARC” programs) in the following manner: “These [programs] often prepare teachers in unconventional ways and provide individuals with no traditional preservice teacher preparation entry into the education profession” (p.118). As rapidly growing number of educators are now coming into inclusive general education classrooms via alternate routes to certification (ARTC) programs (Feistritzer, 2009; National Center for Alternative Certification, 2010; Rosenberg et al., 2005), ARTC programs are purposefully aligning themselves with national academic standards that are focused on the academic-based knowledge and not the pedagogical knowledge that is now most associated with traditional pre-professional education programs (Burstein, O’Connel, Tozer, 2006).
Novice ARTC teachers begin teaching with differing levels of organizational support during their induction period (Rosenberg et al., 2005). This support typically manifests as mentoring, formal coursework, observations, field experiences and evaluations (see Feistritzer and Harr, 2010 for a detailed description of specific programming elements found within and across different ARTC preparation programs in the United States). There appears to be no consensus, however, regarding how these supports do or ought to address new teachers’ perceptions of diverse student populations and/or their ability to teach these students, including those with disabilities.

Research that looks into how new ARTC teachers specifically perceive their students with disabilities and/or inclusion is more elusive. ARTC teachers not only vary across the preparation for the classroom (Feistritzer et al., 2010), the supports they are given once in the classroom to support their students vary greatly as well. These variations appear to impact new teacher perceptions about teaching and their retention (Nagy & Wang, 2007). Some researchers report findings that indicate that new general education teachers in general feel they need more support in teaching students with disabilities (Grskovic & Trzcinka, 2011; Richardson, 2012). Additional research seems to indicate that when new teachers do not receive the inclusion support they would like, their views on inclusion become less favorable (Boyle, Topping & Jindal-Snape, 2013).

**Novice ARTC teachers in CTE.** Perception research regarding exclusively to novice ARTC teachers was not found in the review of the literature; however, research by Cotton and colleagues (Cotton, 2000; Cotton & Brewer, 2013; Cotton, Koch, & Harvey 2010; Harvey, Cotton, & Koch 2007; Harvey, Cotton, & Koch 2005; Koch, Cotton, & Harvey 2009) indicates repeatedly that CTE teachers who come from the workforce into the CTE classroom struggle to teach students with disabilities. Despite
these concerns teacher hires from ARTC programs are not new in CTE (Ruhland & Bremer, 2002; Walter & Gray, 2002; Zirkle, Martin & McCaslin, 2007). As is the case throughout the teaching profession, teacher attrition is a problem in CTE (National Association of State Directors of Career Technical Education Consortium, 2009; National Research Center for Career and Technical Education, 2011; Ruthland, 2001).

To help CTE programs address this, CTE has turned to alternative routes to certification to find teachers to fill empty CTE classrooms (Ruhland et al., 2002). Utilizing second-career (Resta et al., 2001) ARTC teachers may be especially valuable in CTE, given the authentic, real-world vocational expertise these teachers can bring into the CTE classroom (Reese, 2010; Walter et al., 2002; Zickle et al., 2007) from their previous career.

Beyond providing CTE programming with teachers who may have more-specific knowledge, little is known about the impact of ARTC teachers on CTE students, including CTE students with disabilities (Silverberg et al., 2004). Only one study of ARTC CTE teachers’ perspective on inclusion was found in the literature. In that study, Berry (2010) found evidence that new, temporarily certified career teachers are more likely to be resistant to inclusion than new pre-service and experienced counterparts. In that qualitative study, the temporarily certified career teachers discussed inclusion using language that “contend[ed] that students without disabilities will suffer in inclusion classrooms due to demands on teacher attention made by students with disabilities” (p.88).

Before understanding the impact of these teachers on students with disabilities, more information regarding these teachers themselves is needed. Namely, more information regarding their perceptions of their students with disabilities is needed. 

is underscored by the research that indicates that teacher perceptions regarding their students with disabilities are important as they have been found to impact how these teacher grade students with disabilities (Mastergeorge & Martinez, 2009), accommodate these students (Schumm & Vaughn, 1998) and shape the types of “goals and expectations” they have for these students (Cameron & Cook, 2013, p. 18).

The Present Study

Despite the increasing numbers of teachers in general coming through ARTC programs overall, the impact of these teachers on the vocational programming for CTE students, including those with disabilities is unknown. It is not surprising, therefore, that novice CTE educators are conspicuously missing in the research related to the transition planning process for students with disabilities. This omission, however, seems particularly troubling for two reasons in regard to students with disabilities. First, novice CTE teachers almost by definition are entering the classroom from having been acculturated in one or more workplace cultures that could provide them with timely workplace observations to share with their transitioning students. Second, such novice teacher observations could be instrumental in prioritizing particular dispositions and/or activities within the formal transition planning of students with disabilities.

Theoretical framework. This study was designed to look at the perceptions of novice CTE teachers toward students with disabilities and special education, including their transition services. This study is premised on four assumptions grounded in the research and conceptual literature on self-determination (Duvdevany et al., 2002; Scharma et al., 2006; Wehmeyer et al., 1996; Wehmeyer et al., 2003 b; Wehmeyer et al., 2007), critical disability theory and disability studies (e.g., Coleridge, 1993; Johnstone, 2001; Longmore, 2009; Pothier & Devlin, 2006) and in the broader social
justice literature related in general to individuals whose self-determination has been structurally limited (McRuer, 2006; Nussbaum, 2009). They have been synthesized by the researcher and are as follows:

1. Self-determination is an important internal structure innate to all individuals with global implications for the life functions of all individuals.

2. Although self-determination has global implications for individuals, it can manifest in specific ways in specific contexts, including school and workplace environments.

3. The environments in which an individual operates, including school and workplace cultures, impact how the self-determination of an individual manifests; however, the relationship between external and internal self-determination can be reciprocal.

4. Some people are uniquely positioned to help understand the relationship between school and workplace cultures and its impact on the postsecondary employment of students with disabilities transitioning between these two cultures.

One specific theory of self-determination, the Tripartite Ecological Model of Self-Determination (TEM-SD; Abery et al., 2003) best represents these assumptions and how they relate to the purpose of this study.
**Tripartite Ecological Model of Self-Determination.** Given the above discussion, the researcher believed that the novice CTE teachers would share perceptions related to the self-determination of themselves in the school setting and perceptions related to the self-determination of their CTE students with disabilities and that these perceptions may be impacted by external (or ecological) factors. The Tripartite Ecological Model of Self-Determination (TEM-SD) explains that an individual’s self-determination in life is an interaction of two forces, the environment (or ecology) in which the individual is situated and the degree to which the individual is able to identify, respond, and assign value to their own desired outcomes and desired level of control within their decision-making processes.

Abery et al.’s (2003) TEM-SD reflects the researcher’s perspective going into research that the context (or ecology) in which people, including novice CTE teachers and CTE students with disabilities, operate will shape their transition experience. The context in which these individuals operate will foster the degree to which self-determination can and/or will be utilized and/or developed during the teachers’ induction into teaching and their students’ transition services. Reeve et al. (2004) argued that one should also investigate how the relationship between context and self-determination may be reciprocal. In other words, they argued that the individuals’ self-determination can change the context in which he/she operates. This idea is referred to as the Organismic Integration Theory (OIT; Deci & Ryan, 2002) and it may have important specific implications for novice teachers transitioning in the inclusive classroom and students with disabilities transitioning into the workforce from special education in schools (Colker, 2003, 2005; Engel et al., 2003). The following is a very
brief description of the TEM-SD model and its possible relationship to students with disabilities and their transition from school programming into workforce expectations.

The TEM-SD model proposes that there is an interaction effect over time between two constructs, the individual’s self-determination and several layered environmental systems or contexts in which individuals must operate on a daily basis. The focus of this research was novice career and technical education teachers’ perceptions of this interaction, namely how these teachers saw themselves transitioning into teaching and how they see their students with disabilities transitioning from school environments into the workforce. For the purpose of this study, the researcher examined how novice CTE teachers perceive these processes as they relate to microsystems and macrosystems (Reeve et al., 2003) specifically.

According to the TEM-SD, there are several environmental influences on the development of an individuals’ self-determination. At the microsystem level there are the “settings in which we live our daily lives” (Abery et al, 2003, p.66). These include classrooms and future employment sites, the two contexts of most concern for this research. Based on previous research (Eisenman et al., 2010), there is reason to believe that the teachers interviewed would be able to speak to the following five influences at the micro-level within the TEM-SD (Abery et al., 2003):

- respect and acceptance,
- opportunities for SD,
- positive reinforcement for attempts to exercise personal control,
- participation and inclusion, and
- individualized programming and support (p.66-70).
In terms of the macrosystem level in the TEM-SD, Abery et al. (2003) draw upon Garbarino’s (1982; 1992) definition of macrosystems - “belief and values, which both affect and are altered by the overarching institutional and ideological patterns of society” (Abery et al., p.74). Of particular interest to the proposed research is the role of school induction on novice CTE teachers’ perceptions of students with disabilities, inclusion and special education transition services. Also of interest to the research are the teachers’ perceptions of the impact of the school context on the transition of their CTE students with disabilities.

In regard to the role of disability in a student’s transition process, IDEA and ADA are the primary pieces of federal legislation that will shape their transition experience. They are both considered to promote equitable opportunities for individuals: however, as discussed previously, there are some fundamental differences between the two laws that cause difficulties for students with disabilities who are trying to navigate across them (Engel et al., 2003). This last point provides a link back to the researcher assumptions above, that there are individuals who are uniquely positioned to make valuable insider perspective taking (Peshkin, 1997) in one or more contexts. In this research, novice CTE teachers are uniquely positioned to help understand how this legislative macroculture may be interacting with the microcultures (school and workplace cultures) in which students with disabilities operate. Theses teachers are currently teaching in IDEA-structured school environments, but they have come into this context directly from the ADA-structured workforce. As such, they may have important knowledge that could be important to the transition process of students with disabilities.
In short, novice CTE teachers are a compelling group of educators, leaving the traditional workforce (one microculture related to transitioning youth with disabilities) and re-entering schools (another microculture for these students) during a time of unprecedented inclusion and academic rigor and transition programming for students with disabilities. How these teachers perceive inclusion and transition processes in CTE classrooms in relation to their previous experiences in workforce culture environments might inform us as to why these changes in schools have not resulted in more positive postsecondary employment outcomes for the students after graduation. If given the opportunity to share their experiences and perspectives, these teachers may provide more authentic perspectives regarding how the general workforce perceives and includes individuals with disabilities; such knowledge could be used in discussions with students with disabilities who must learn to navigate from an inclusive schooling experience to a possibly exclusive post-secondary workforce.

This research represents first steps toward addressing Valentine et al.’s (2009) concern that even after an extensive review of research related to student transitions from CTE into postsecondary settings including employment, they were still unable to shed additional light on important questions such as the mechanisms by which some CTE interventions exert influence… and whether transition programs seem to be especially effective for students with certain characteristics” (p.53).

Likewise, this study addresses the concern voiced by Stern et al. (1994) that while “there have been numerous studies [focusing on vocational programs at that time]…the research is still limited in several respects” including selection bias, alternative explanations, and “lack of evidence about the effects of a comprehensive school-to-work system” (pp.6). Such information could be important if not fundamental to the complexity of CTE teacher decision-making about how best to structure their
CTE programs to address the postsecondary employment needs of their CTE students with disabilities.

**Research Questions**

This study was intended to answer three related research questions. First, from their unique vantage point, what observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services? Second, what continuities and discontinuities do they perceive across the two cultures in relationship to how disabilities are defined and addressed? Lastly, in what ways, if any, does the induction process influence these observations and perceptions?

**Conclusion**

The field of special education has demonstrated a persistent interest in the transition process of students with disabilities and there appears to be a renewed interest within the CTE field to better understand how to facilitate the transition outcomes of all CTE students (Valentine et al., 2009; see also National Research Center for Career and Technical Education, 2011). Researchers in special education and the transition of students with disabilities into postsecondary environments have long advocated for the ongoing (Sitlington, Neubert, and Leconte, 1997) or increased participation of CTE teachers in transition planning (Albright & Cobb, 1988; Wehmeyer and Webb, 2012) and activities for students with disabilities via IEP planning (Kochhar-Bryant, Bassett, Webb, 2009) and/or vocational assessments to guide transition planning and activities (Sitlington et al., 1997).
Despite significant gaps in the most transition data collected that pertain to CTE students with disabilities (Castellano, Stringfield, & Stone, 2003; Silverberg et al., 2004), Wonacott (2001) and Haber et al. (2008) argue that CTE teachers can be valuable, contributing members of the IEP team for their students with disabilities. Both find great value in CTE teachers’ working knowledge of their students with disabilities and postsecondary work environments. They encourage CTE teachers to share this knowledge more often with IEP teams working with their CTE students with disabilities because they believe that CTE teachers’ knowledge can only help a students’ transition process if shared with that student’s IEP team. As ACTE President Colleen Keffeler (2008) explained, CTE teachers have unique pedagogical perspectives grounded in experiential education that can and should benefit students with disabilities.

Career and technical education has been a meaningful and beneficial schooling program for secondary students with disabilities since the beginning of the 20th century. There is research and legislation to link CTE and special education for the benefit of CTE students with disabilities; however, that research has yet to specifically address what particular aspects of CTE programming may be most influencing the transition of CTE students with disabilities from school to employment. This exploratory study elicited uniquely positioned CTE teachers’ perspectives and experiences related to their students with disabilities, special education and transition services for students with disabilities. Such information could help novice CTE teachers and their students with disabilities in two ways: (1) with this information, schools and special education programs could help to facilitate novice CTE teachers’ understanding and instruction of students with disabilities, and (2) acknowledging these perspectives may help special education professionals better understand how to include novice CTE teachers into
transition services for students with disabilities and better utilize these teachers’ perspectives in shaping those services to prepare students for real world employment.
Chapter 3

METHODS

This exploratory study used a snapshot case study design to explore the perceptions of an identified sub-group of novice career and technical education (CTE) teachers regarding their students with disabilities. It sought to answer three research questions. First, from their unique vantage point, what observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services? Second, what continuities and discontinuities do they perceive across the two cultures in relationship to how disabilities are defined and addressed? Lastly, in what ways, if any, does the induction process influence these observations and perceptions?

The following chapter provides detailed information regarding the study’s design, participants, instrumentation, procedures, including data analysis, as well as the researcher’s efforts to address study limitations. Chapter 4 will outline the findings of this study and Chapter 5 will outline how this exploratory study may guide future research related to these teachers, their interactions with students with disabilities, and to these students themselves.

Study Design

An abbreviated snapshot case study (Jensen & Rodgers, 2001; Thomas, 2011) using qualitative research methods was used to capture the initial perspective of novice CTE teachers toward student with disabilities and these students’ transition from school
to workplace culture. Mann (2006) defines a snapshot case study as an “investigation of one research entity at one point in time” (p.83). For this research, the researcher conducted interviews to learn about the personal and professional perceptions of nine CTE teachers’ towards disability and the transition of their students with disabilities into school and specifically during the teachers’ induction in CTE classrooms from industry. Kavale (1996) and Patton (1990) explain that interviews are not only integral to qualitative research but they argue that interviews are especially effective at “capturing the meaning of [participants’] experience in their own words” (Bloomberg & Volpe, p.82). This study also considered both the settings and situations (Peshkin, 1997) novice second-career teachers find themselves in before and during their induction period into inclusive secondary school settings. As explained previously, existing research regarding the experience of novice CTE teachers is particularly small and the research of their experience as it relates to the transition process of CTE students with disabilities is non-existent. Therefore, the present snapshot case study is methodologically appropriate (Hoepfl, 1997; Patton, 1990) for an initial exploration into novice CTE teachers’ perception of CTE students with disabilities and the students’ transition into postsecondary employment.

As the study progressed, the design was adapted to address two unexpected factors. First, the original plan was to collect a wide range of perspectives through a brief survey and interview with 30 qualifying CTE teachers. However, after two rounds of direct and snowball sampling recruitment activities were conducted, the number of teachers recruited was low. With advisor recommendation and committee approval, the lack of participant breadth was compensated for by requesting second interviews with all participants as a means of exploring teacher perceptions in greater depth.
Second, the focus on perceptions of novice CTE teachers regarding the transition process of students with disabilities was broadened to elicit these teachers’ perceptions of students with disabilities in general during the teachers’ induction period. This shift occurred in response to three important concerns that emerged during the first set of interviews. These concerns were as follows: 1) participants had limited awareness and involvement in transition processes within their schools, 2) the participants’ sensitivity to provocative questions regarding accommodations, which might lead them to provide responses considered more socially-acceptable than authentic to their experiences and perceptions (Crewell, 2008; Kavale, 2007), and 3) time constraints, which might have inhibited the depth of participants’ responses.

Although these design issues were unexpected, changes in qualitative research designs are not particularly uncommon. Maxwell (2005) argues that “the design model itself is interactive…[and] the design of a qualitative study should be able to change in response to the circumstances under which the study is being conducted…” (p.7). More information regarding these changes and how the researcher attempted to address them are presented in the following sections this chapter.

**Participants**

There were three levels of participation for teachers in this study. At each level, participants completed a new activity that built upon information they and/or other teachers shared previous to the new activity. At level one, teachers completed a demographic survey (either online or in-person). At level two, teachers completed the survey and one semi-structured interview. At level three, teachers completed the survey and two semi-structured interviews. The following is a detailed description of teacher sampling and recruitment for this study, as well as participant demographics.
**Sampling and recruitment.** This study focused on a unique subset of novice teachers – second-career CTE teachers. For this study, these teachers were defined as new CTE teachers within their first five years of teaching CTE after having left the workforce in which they worked five years or more prior within a job that related to their CTE subject matter, or career cluster (see Table 1 for a brief overview of the career clusters within the National Career Clusters® Framework).

This study employed two levels of *criterion sampling* (Boomberg et al., 2008; Miles et al., 1994). First, participants’ responses to the survey were used to determine whether or not they qualified as a novice secondary-career CTE teacher for the study. Second, for participants who met the qualifications for an interview via their survey responses, the researcher verified their survey responses at the beginning of each interview. This cross-referencing strategy ensured that criterion sampling protocols were followed in this study.

Because of the programmatic variety in vocational education several methods were employed to find and contact relevant research participants. Efforts were taken to recruit novice CTE teachers from across different CTE settings with differing populations of CTE students with disabilities. These techniques included: 1) formal letters written and phone calls made to superintendents of CTE districts, 2) personalized emails to administrators at stand-alone and comprehensive CTE high schools, 3) personalized emails to CTE department chairs within comprehensive high schools, 4) in-person and email correspondence with CTE-related organizations at the local or state level, and 5) snowball sampling through key informants (Marshall, 1996). Despite these diversified efforts, finding candidates for this study proved difficult.
CTE teachers who were contacted for this study, directly by the researcher or by key informants familiar with the research, were asked to complete an online survey (Appendix B) if they were interested in participating in the study of CTE as described by the researcher. This survey was prefaced by an informed consent form (Crewell, 2009, Appendix C), which first outlined the research goals of the study and participants’ rights and then confirmed participants’ willingness to participate in the research. Once a teacher gave consent to participate in the study, the teacher was asked to answer several demographic questions.

After two waves of recruitment starting in January 2011 within four mid-Atlantic states, a total of fifty-three CTE teachers completed the online recruitment survey. Of those teachers, nine met the criteria for this study and were interviewed at least once either in-person, by phone or via Skype. There were four other novice CTE teachers who were initially interviewed based on their survey responses and interest in participating in this study. It was not until the interviews with these teachers started and the teachers’ survey responses were referenced, however, that the researcher was able to verify that these teachers did not qualify for this particular study. How these teachers may be valuable to future studies related to CTE and students with disabilities will be discussed in Chapter 5. All nine teachers who met the study criteria and completed the first interview were contacted for a second interview. Six responded and agreed to a second interview. Therefore, the findings presented in this paper represent a total of 15 interviews across nine participants.
Participant demographics. Disaggregated Demographic information about the interviewed participants can be found in Table 2. The first 3 columns provide information about the participants’ personal characteristics; whereas, the last 4 columns provide information regarding the participants’ CTE programming context.

Participants’ workforce and teaching experiences. The CTE career cluster each teacher was affiliated with is listed under the second column in Table 2. Overall, these nine participants represented six of the 16 CTE Career Clusters (as previously outlined in Table 1). Column 3 provides the number of years each participant was employed in the workforce outside of teaching CTE, but in a position that related to their chosen CTE field. Across the nine teachers, the average number of years in the workforce prior to teaching was nearly 21 years (20.9 years). Participant 1 had the least amount of time at six years; whereas, the Printing Technology Teacher (Participant 9) had the most at 33 years. Interestingly, both participants had owned a business related to their chosen CTE cluster.

Column 4 tells the reader the teaching year in which each CTE teacher was interviewed first. One participant was in his first year of teaching, five teachers were in their second year of teaching, one teacher was in her third year of teaching, and two teachers were in their fourth year of teaching when first interviewed for this study.

Participants’ career and technical education context. The Column 5 orients the reader to the CTE contexts in which participants were working during the interviews or, in the case of Participant 7, had also worked prior to their interview(s). Overall, the participants had worked in three types of CTE school settings. The following is a list of these settings: 1) a comprehensive high school with CTE (n = 4), 2) a comprehensive CTE high school (n = 3), and/or 3) a stand-alone CTE center (n = 3). Interestingly,
Participant 7, although only in her second year of teaching CTE at the time of her first interview, had taught in the last two settings.

Columns 6 and 7 describe, respectively, the percentage of students in each teachers’ classroom with disabilities and the types of disabilities that have been represented in each CTE teachers’ classroom, both being self-reported. Just as the school settings differed for the study participants, the types of disabilities represented in their classrooms and to what degree also differed. Teachers reported having taught one or more CTE students with the following disabilities in their classrooms: learning disability (LD, n=8), attention-deficit hyperactivity disorder (ADHD, n= 6), autism (n= 4), emotional behavioral disorder (EBD, n= 4), physical disability (n=2), blindness (n=1) and intellectual disability (ID, n=1). Of the nine participants, seven were able to provide estimates regarding the percentage of CTE students they typically have in class who have disabilities. The average of percentages shared across these seven participants was 9.6% with a range from (1% to 25%). Two teachers did not share the percentage during one or more interviews, even when prompted.

The last column indicates whether or not a participant was or had been involved in CTE-related cooperative education (co-op) programming as a CTE teacher. Less than half of all teachers, four out of nine (44%) reported having this type of involvement in the CTE programming at their schools. Of the five teachers who were not or had not been involved directly with their students’ co-op programming, some teachers explained that they were teaching courses that prepared students for future co-op level programming. Others explained that while they had CTE students in cooperative programming, that type of programming was handled by school personnel other than the CTE classroom teacher (e.g., the cooperative education coordinator).
Data Collection Instruments

This study employed three data collection instruments – a demographic survey and two interview protocols. The instruments were developed in discussion with the researcher’s faculty advisor and with support of the researcher’s committee as well as the Institutional Review Board for Human Subjects Research at the University of Delaware (Appendix D). The following is a description of these instruments. Each instrument is included in the Appendices F and G. All responses to the survey and interview questions were kept on a password protected server.

Demographic survey. The demographic survey asked participants to provide the following information in this order: 1) age (in 10 year ranges), 2) the total number of years they had taught CTE, 3) their current teaching status in CTE, including their involvement with CTE programming, 4) their CTE cluster of instruction, 5) the representation of student disabilities in their CTE classroom, and 6) their previous vocational experiences prior to teaching.

The demographic survey was made available to interested teachers via one of two ways: through an electronic link to an online survey posted on the University of Delaware Qualtrics® (Qualtrics, 2005) surveying website or through a paper copy of the survey. According to tracking information on the Qualtrics website and notes made during in-person dissemination of the paper version of the survey, respondents took 10 minutes on average to complete all questions on this survey. In all, 53 online surveys were submitted, with 45 completed surveys including responses to all survey items. Responses from these surveys were merged into an individual contact summary form (see Appendix E; Miles & Huberman, 1994), which were used in analytic decision-making prior and after interviews with study participants.
Collecting general information from participants via an initial survey facilitated development of possible probes for more information via semi-structured interviews with participants. More specifically, the demographic information was used to guide the researcher’s decision-making while conducting semi-structured interviews with study participants. This was made more readily possible by the creation of the contact summary forms for study participants.

**Semi-structured interviews.** In this snapshot case study, two semi-structured interview protocols were developed. The first protocol (Appendix F) was developed following a review of research related to special education, disability studies, school and vocational cultures, and teacher indoctrination. A research questions/interview questions matrix (RQ/SQ matrix, Bloomberg et al., 2008, p.74) was used to develop a series of more detailed-oriented questions that, when combined, could help to answer the overarching research question. These questions were, in turn, used to create the protocols used for the first of two interviews.

In total, 13 CTE teachers participated in one semi-structured interview organized to capture the meaning of their experiences related to disability and accommodations in their previous and in their current school setting. Of these 13, nine actually qualified for inclusion in this study. Of these 9, six completed two rounds of interviews.

Interviews were conducted in person and by phone; all interviews were digitally-recorded for transcription purposes and to ensure that data used later during analysis were valid and reliable (Bloomberg et al., 2008). The data represent the time between the researcher’s initial greeting to a given participant (at the beginning of interview) to the beginning of researcher’s farewell greeting to each participant. The
average length of all interviews was 34:57 with interview times ranging from 22:07 (Interview 1 with Participant 10) to 42:18 (Interview with Participant 5).

The first interview with all teachers consisted of questions to (1) verify information collected via the online demographic Qualtrics® survey (Qualtrics, 2005) and (2) elicit information about novice CTE teachers’ experiences in the workplace and schools, their perceptions of students with disabilities, and any perceptions regarding similarities and/or differences related to opportunities for self-determination (Weymeyer et al., 2003) for students with disabilities in either the contexts of school and workforce.

The first interviews with the selected novice CTE teachers, using the first protocol (Appendix F) lasted an average of 34 minutes and 15 seconds. Memos were written during and immediately after interviews to record the ideas expressed by the participant and my initial analytic observations. Transcriptions of these interviews were made and shared with study participants. No participants made edits or additions to their transcripts.

The second interviews were completed with an additional interview protocol (Appendix G) that was developed to elicit participant feedback regarding trends observed in participant responses during their first interview. This type of member-checking is an important practice in qualitative research (Guba & Lincoln, 1981, 1989) and provided the researcher with additional insights regarding the participants’ responses to their first interview. In all, there were eight overarching statements regarding response trends that participants could respond to during their second interview.
Analysis of Data

This exploratory research focused on an understudied teacher population and their viewpoints related to disabilities and accommodations in school and workplace contexts. The researcher employed three tools to organize and then analyze data collected during the study: contact summary forms, analytic memos and NVIVO software (QSR International Pty Ltd., 2008). Because of the exploratory nature of this study and to mediate any unintentional researcher bias, two methods of analysis were utilized: constant comparative methods and application of theoretical frameworks. The following is a discussion of these methods, the researcher’s rationale for using them, and the implementation of each in regard to this study. Findings that emerged from within the data via the two methods will be discussed extensively in Chapter 4.

Tools for data collection and analysis. Miles et al. (1994) recommend that a researcher create a summary sheet, per participant, that helps the researcher to quickly describe or recall study participants and their responses to key questions. The contact summary form (Appendix E) was developed to capture responses to the demographic survey, the points of contact per participant and distinct themes that emerged during those contacts. This sheet was updated at each point of contact with the participants, except after exchanges related to interview logistics. Throughout the data collection process, the researcher created analytic memos in which the researcher recorded key ideas and my observations from the interviews. The memos were used as a strategy to monitor my preliminary interpretations and triangulate participants’ responses to the survey and to their interview responses. In conjunction with transcriptions and repeated playback of digital audio files, memos provided a way to verify alignment of teacher responses and researcher interpretations.
All data were archived and analyzed using and NVIVO (QSR International Pty Ltd, 2008) software. NVIVO is a software package that gives qualitative researchers the ability to consolidate multiple sources of data and create aggregating and disaggregating coding mechanisms that can be applied to all or specific types of data in the consolidated file. Overall, two methods were used for data analysis in this study.

**Methods of data analysis.** Data were analyzed using constant comparative methods and using the theoretical framework of the Tripartite Ecological Model of Self-Determination (TEM-SD, Abery et al., 2003). Combined, these methods and this framework helped to identify and themes across the interview data that related to the three research questions. More information about the methods and the use of the TEM-SD framework follows.

**Constant comparative methods.** The interviews were transcribed and coded using constant comparative methods (Glaser & Strauss, 1967). Dye, Schatz, Rosenberg, and Coleman (2000) define constant comparative methods as “hypothesis generation (relationship discovery) begin[ning] with the analysis of initial observations” (p.2). They go on to explain, “This process undergoes continuous refinement throughout the data collection and analysis process, continuously feeding back into the process of category coding” (p.2).

Constant comparative methods are methods used in inductive research (Merriam, 2009) that starts with the development of open codes and then progresses into selective coding and eventually theoretical coding (Glaser, 1978) through an iterative process. For this study, the researcher employed six definitive waves of analysis, five of which would fall under the constant comparative method of analysis.
The unit of analysis was what Miles et al. (1994) referred to as multi-sentence chunks and they were multiply coded. Miles and colleagues explain that (re)viewing data in an iterative fashion allows the researcher to complete a first level of coding which can eventually evolve into pattern coding.

Open codes were initially developed (Wave 1) from the responses given from Participants 1-6. Based on that first level of coding across those interviews, the researcher adjusted questions on the first protocol for Participants 7, 8 and 9 and participant responses were compared to one another (Wave 2). Constant comparative methods were then used to compare and contrast codes in regard to all responses across all participants (Wave 3). At this time, cross-case patterns within the data were identified. Once all interviews with Protocol #1 were completed, the open codes found were organized into a partially ordered meta-matrix of salient themes (Miles et al., 1994).

For this study, the phrase “salient themes” is used to describe a specific perception that is expressed repeatedly to a point of saturation (Lincoln & Guba, 1985; Merriam & Tinsdell, 2014). To identify these themes, a frequency or counting system was employed (Miles et al., 1994, p.252) for particularly intriguing themes that emerged during the open coding process. The phrase “intriguing themes” refers to themes that emerged and were shared among two or more participants, were unexpected in relation to the researcher’s experiences in schools as a teacher and a researcher, and/or related to the special education literature. Themes were discussed during peer briefing with faculty advisor.

Once these patterns were identified after the first three waves of analysis, they were used to construct the second protocol for this study. This protocol was utilized as a
member-checking device to better ensure the reliability of the researcher’s interpretations and provide participants with more opportunities to share their perspectives on the topics addressed in the original protocol and any additional insights they had related to novice CTE teachers and students with disabilities. Responses to this second protocol, from Participant 3 and Participants 5-9, were examined first as they related to the participant’s first interview and then as they related to themes generated from responses to the first protocol (Wave 4).

After all interviews were completed, a final round of constant comparison across the teacher responses was employed (Wave 5). From the open coding of the interviews and their corresponding memos, a series of case dynamics matrices evolved into “portioned and clustered meta-matrices” (Miles et al., 1994, p.178). These matrices allowed the researcher to better identify trends in the data through the constant comparative process.

*Application of the TEM-SD theoretical framework.* Upon conclusion of all interviews and the first five waves of analysis, data were examined through application of a theoretical framework (Wave 6) to help minimize the potential for researcher bias and to consider how the findings might be situated in relation to important concepts in the special education transition literature (Brantlinger, Jimenez, Klingner, Pugach & Richardson., 2005; Charmaz, 2014). The interview data were examined through the theoretical frameworks that best represented the researcher’s epistemological positioning (Denzin & Lincoln 2003a, 2003b, as cited by Anfara & Mertz, 2006) prior to conducting this research. As discussed in chapter 2, the TEM-SD (Abery et al., 2003) was selected because the concept of self-determination is revered in both IDEA (Sitlington, et al., 2007) and transition planning at the secondary level as well in the
ADA literature related to the employment of individuals with disabilities (Parmet, 2003). This model also supports the theory that self-determination is developed ecologically.

Noted ethnographer, Alan Peshkin (1988, 1997) argues that in qualitative research the researcher is not a neutral observer. Instead, the researcher brings a unique, thus important, set of subjectivities, or Subjective-Is, to the analysis of the data. This unique perspective is not always to the detriment of the study; it has the capability to enrich the study if the researcher can thoroughly and effectively identify and utilize their own Subjective-Is in the analysis of the data. Once interviews were conducted, the literature related to CTE and students with disabilities was reexamined to identify any additional links between this study and those in existing research. This type of process follows the iterative process of constant comparative methodology and helps to remove bias in the analysis of qualitative data (Charmaz, 2014).

**Researcher Accountability to Address Study Limitations**

Discussions regarding the potential negative influence of bias in qualitative research are extensive in the qualitative research literature (Lincoln et al., 1985; Miles et al., 1994; Morse, Barrett, Mayan, Olson & Spiers, 2002; Wolcott, 1990), especially at the “more positivist end of a qualitative to quantitative continuum” (Brantlinger et al., 2005, p.198). To address these concerns, beyond applying theoretical frameworks to the data collected, four strategies were used to assure quality and integrity within the study design and interpretation of the data. These techniques included 1) the triangulation of data collected per participant via the demographic survey, interview transcripts and audio files, and researcher memos, 2) peer debriefing after interviews with advisor and other researchers in education and employment (Lincoln et al., 1985), 3) member
checks as previously described (Brantlinger et al, 2005), and ultimately 4) contrasting cases (Merriam, 2009; Miles et al., 1994).

In regard to the triangulation process, the researcher was able to use the various data sources listed to: 1) ensure that the participants were appropriate for this study, 2) guide the second interview and 3) ensure reliability in the researcher’s interpretation of the data. In regard to peer debriefing, participant responses to interview questions that referenced “self-determination” specifically were discussed at length and it was decided to drop self-determination questions from the initial protocol from the first interview. Uniformly, the first cohort of teachers responded to that question in a way that seemed to indicate that this concept, the development of student agency, was inherent (obvious even) to the purpose and structure of CTE. Pointed questions regarding this term and its relationship to the teachers’ CTE program and/or school, therefore, seemed to confuse the respondents; hence this modification to the original protocol.

Member checking is a valued strategy in qualitative research and it became essential to this study. As interviews with CTE teachers progressed, the researcher became aware of two unexpected outcomes. First, the anticipated length of time needed to cover the original protocol questions was too short and the researcher needed to find a way to validate and use teachers’ sharing of topics not specifically related to the original research questions, namely teacher induction-related topics such as adjustment to the academic needs of students with disabilities. This will be discussed at length in Chapter 4.

Second, the researcher also perceived participant reactivity (Bloomberg et al., 2010; Maxwell, 1997) to the interview questions by some of the participating teachers. Participant reactivity refers to “the influence of the researcher on the setting or
individuals studied” (Maxwell, 1996, p. 108) that can occur when the participant’s relationship (or lack thereof) with the researcher limits their responses either in length or substance. For example, several teachers followed their responses to some questions by saying, “I mean if you really want me to be honest…” (Participant 6) or other similar “confiding” phrases. These asides (or disclaimers even) seemed to indicate that some participants were responding to one or more questions through two possibly dichotomous perspectives, their professional perspective as an educator and their personal perspective as a bystander in the school context. All initial interviews with participants began with a review of the study’s intent and protections for participants; regardless, some teachers expressed a concern regarding possible repercussions for expressing opinions that might not reflect school or researcher expectations. To address this concern, confidentiality and value of participants’ opinions were reiterated at the beginning and end of all second interviews. All teachers were encouraged to contact the researcher after either interview if they wanted to clarify any of their responses made during the interview. No teachers did so.

Once consistent themes were identified within and across interviews, points of specific differences among participants’ responses were identified. These contrasting cases (Merriam, 2009) helped to reiterate the range of responses to the interview questions but also better identify unique features upon which responses differed. In Chapter 4, these cases are discussed in more detail, especially in regard to findings related to teachers’ conceptualization of self-determination.

Conclusion

This study explored novice CTE teacher perceptions regarding the transition of their CTE students with disabilities through a snapshot case study based upon a semi-
structured interview process. Although fewer teachers participated than originally planned, the present study provided meaningful information and teacher insights regarding CTE, schooling, and accommodations. Steps were taken during data collection and analysis to ensure the reliability and trustworthiness of the findings. Findings from the data collected over the course of this study are described in Chapter 4. A discussion of those findings and their implications for schools and researchers can be found in Chapter 5.
Chapter 4
FINDINGS

This exploratory study sought to answer three research questions:

1. From their unique vantage point, what observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services?

2. What continuities and discontinuities do they perceive across the two cultures in relationship to how disabilities are defined and addressed?

3. In what ways, if any, does the induction into teaching influence the observations and perceptions of these novice teachers?

The following chapter outlines trends that emerged across fifteen interviews with nine novice second-career teachers, representing six CTE career clusters. Overall, the data collected from these interviews yielded an introductory but complex picture of this unique group of educators. That overall picture is one of teachers having limited opportunities to observe the transition of their students with disabilities between the
school and work context and having limited understanding of the formal transition process in place for their students with disabilities. These teachers had some observations regarding continuities and discontinuities between the school and workplace but their concerns for their students with disabilities focused primarily on non-transition-specific concerns, which may be a result of these teachers being in the midst of their induction into the secondary CTE classroom.

This chapter is organized to follow the above order of research questions. In Chapter 5, the implications of the study findings for CTE, special education and researchers in the related fields will be discussed.

**Question 1: Observations about Student Transitions from School to Work**

*What observations do novice CTE teachers have regarding the transition of students with disabilities from school culture into the workforce culture, including secondary special education transition services?* – was the first research question for this study. Overall, participants reported having limited opportunities to observe student transitions and transition services planning. Most focused their comments on school-related transition components. In the following sections, a few teacher observations about student challenges with meeting workplace expectations are presented. Next, teachers’ comments about school-related transition components are described. This section of the findings for research question 1 concludes with an examination of how the teachers’ perceptions of student transitions link to the Tripartite Ecological Model of Self-Determination.

**Observations of student workplace challenges and planning.** Most teachers reported that they had limited to no opportunity to observe students, including those
with disabilities, in the workplace at the time of their interview(s). For those teachers who did have those experiences, they recalled three challenges that one or more of their students with disabilities encountered on the job. These challenges included understanding workplace humor, appropriately responding to critical feedback by co-workers or supervisors, and willingness to complete less desired workplace tasks relegated to newer employees. More specific information regarding these challenges are presented here. Also presented are teachers’ experiences related to work-related IEP transition processes.

**Student response to workplace humor.** The Printing Technology teacher (Participant 9), recalled a challenging cooperative work situation in which one of his students with a disability misunderstood workplace humor. The incident had implications for the instructor and program beyond the student in this misunderstanding:

And there’s, you know, adults in the environment. And sometimes the language, sometimes the conversation, the jokes, and everything can be a little above them. And this one company – it’s a great company, good environment, very friendly. And they joke a lot. And there was some misunderstanding or, uh, the details are fuzzy, but the one student told, went and told his father that the, his boss told him that he was trash. And it was this huge misunderstanding and, uh, they had a falling out. And they were worried about getting sued and all this stuff. And the kid, you know, the kid quit. So, I let it settle down for a while and I just sent an email to this one guy, [Chris], and I said, ‘[Chris], can I have another shot?”

**Student response to critical employer feedback.** The Culinary Arts teacher (Participant 7) described how he helped students become more resilient when
confronted by negative feedback in the workplace.

Uh, we really don’t get too much involved with calling the employers and saying, you know, ‘You can’t talk to them that way.’ Or anything like that. Uh, because I think it would make more problems than anything. But kind of pushing, like, like ‘This is how you want to handle it - If they do yell at you, instead of getting upset or anything like that and you want to lash back at them, maybe just regress and think about what they are saying and take it in a more positive, positive way.’ I have had a few discussions like that where, you know, I’ve gotten to the point where I’m like, ‘And if it does start getting out of hand and you are getting abusive’, you know, then I would get involved, involved with the employer.

**Student response to less desired workplace tasks.** The Information Technologies teacher (Participant 8), shared the following information about a student he had who was having trouble understanding that employees must follow a hierarchy of job tasks when entering a new job.

This kid, if I put the computer in front of him, he could do things that would just be off the charts. But, his writing skills are terrible. His work ethic is terrible, he only works on what he wants to work on. He has a real passion for this. And, uh, I’m trying to make him realize that when he gets to the working world - and it’s been unsuccessful so far - but I’m trying to make him realize that he will have to do things that he doesn’t agree with. He will have to do things he doesn’t enjoy. He’ll have to do documentation in the workplace that he doesn’t like to do. Because really all he likes to do is repair things.

**Teacher participation in work-related transition planning for students.** The majority of teachers interviewed for this study did not report being actively involved in
or observing transition-specific meetings or planning discussions for their students with disabilities. Only 3 teachers indicated that they were aware that some type of work-related transition goals were developed and tracked for students with disabilities via their IEP or IEP discussions. This is how the Horticulture teacher (Participant 1) described them:

Interviewer: Okay. Do you hear the words “transition” being discussed specifically [in regard to IEP goals for your students with disabilities]?  

Participant: With one, well I guess for one. When you talk about disability, two or three of [their goals] ring out about life and life skills…that’s what I hear coming from our administrators and counselors is about the emphasis of life skills and being able to understand how to deal with others. And to just have proper mannerisms while you’re around other people. So I would say life skills, so the key word, the key word that I hear. I think there’s, there’s, there’s an option for saying ‘Whatever may be in life; – not necessary be something in horticulture.

**Observations of schooling components related to student transitions.**

Because of the unique scheduling at most CTE programs, CTE teachers often spend a considerable amount of time with their student per day and over the course of multiple, consecutive semesters. This proximity provides CTE teachers many opportunities and time to consider a wide-range of school components that could impact their students in school and possibly in their transition into the workforce. Study participants seemed eager to share their commentary regarding: (1) students’ academic preparedness, (2) students’ intrapersonal and interpersonal skills, (3) student accommodations, and (4) school dissemination of special education information related to students with disabilities, and (5) the need for students to have “reality checks.” These were shared as
areas of concern by the participants for their students with disabilities and are explained in more detail below.

Students with disabilities have academic deficits. All participants expressed concerns regarding the academic skills of their students with disabilities. Participants shared how they were often, if not regularly remediating their students with disabilities for a range of academic skills, but namely those that the teachers explained as being basic for secondary students. A majority of teachers seemed to hold previous teachers and/or school systems accountable for not serving their students with disabilities effectively; they expressed feelings that their students were never taught and/or never learned fundamental academic skills.

The Horticulture Sciences teacher (Participant 1), recalled a conversation with one of his students with a disability in his class that really seemed to solidify his belief that students with disability were being held to lower (and inappropriate) academic standards than their peers. Here he recalls how this student reported having never been taught a particular writing concept, namely the purpose and structure of a paragraph.

And here’s, I got this freshman girl that is typical. They’re taking the midterms or exams and they’re open ended questions that has them writing three paragraphs and some of them…She told me that she was never told what a paragraph was…Well, I mean, I don’t get frustrated. I sat down with her one-to-one and, and, uh, you know we went over [it]. I said, in essence, I said, ‘Have you ever been told that it’s a complete thought?’ and she said, ‘No.’

Another teacher, the second health sciences teacher interviewed (Participant 6) shared how she has been providing extra support to her students with learning
disabilities. She explained, “I got, got my IEP students; stay with me every Tuesday. And I go through everything we went through the entire week - I stay after school with them.”

*Students with disabilities have intrapersonal challenges.* A majority of the study participants reported that their students with disabilities lacked intrapersonal skills and would not persist in academic tasks that they needed to perform to become academically and vocationally successful. Poor intrapersonal skills, specifically the lack of motivation and/or personal resilience of students with disabilities, was offered as a possible reason for the often low academic abilities of their students with disabilities.

Below, the Business teacher (Participant 5) gives us a more detailed look into the importance they place on these intrapersonal skills (and lack thereof) in one or more of their students with disabilities. This quote starts broadly but then focuses in on students with disability. Like other participants who spoke to this concern, this participant expressed a confused, almost disbelieving, tone when she shared her perspectives regarding the intrapersonal deficits she saw in her students with disability.

But, really, to me, all the students, even if they have a disability, have the potential to learn. To me, they're all intelligent. What I see is a lack of motivation and...I don't know where that comes from...And, that's probably the most difficult part of the job - trying to foster that. And I do give them, you know, the separate [motivational] attention that they need.

Another Business teacher (Participant 3) spoke to similar concerns in this exchange:
Participant 3: So many, a lot of [students with disabilities in her class] are so down on themselves, you know? I have to reverse a lot of things, help them realize that they can.

Interviewer: And so could you tell me a little bit more about how you see that happening? What does it look like when these students...how this frustration or this idea that they can’t do these things by themselves, how does that look in your classroom?

Participant 3: They sit there and they don’t want to do any work. They just sit there or they back out, initially. They, or they come late to class or distract other people. That’s how they initially look. You just have to continue talking to them. Keep going on. Eventually they’ll share.

One Business teacher (Participant 4) and one Health Science teacher (Participant 2), explicitly argued that poor intrapersonal skills are developmentally appropriate skill deficits found across adolescents and are not exclusive to secondary CTE students with disability. For these teachers, their CTE students with disability weren’t demonstrating any particularly different intrapersonal strengths or concerns.

The second Business teacher (Participant 4) shared that even an academically successful student with disability may have intrapersonal needs that a novice CTE teacher may need to address in their classroom.

This student, last year, that was, you know, more mine, uh, was an amazing student. He was just a straight A student. He just really wanted to learn and that makes a huge difference - if they want to learn. Huge difference. I mean, they're capable of it. And it was in a chemistry class. I mean, he did beautifully. I mean, he may have worked at a slower pace. You know, he always needed a confidence booster, he's always like, ‘You know, [Teacher Name], I need help with this one.’ And I would sit there and listen to his answer and I would be like, "What did you need help with again?" You know what I mean? Like, he always knew. He, you know, just needed the reinforcement. Okay?
Several teachers expressed a concern that the intrapersonal deficits for their CTE student with disabilities could exacerbate the students’ ability to respond positively to their CTE teacher, who is supposed to mentor them. The following was shared by one teacher (Printing Technology, Participant 9):

Interviewer: And what would you say would be the benefits and challenges to that amount of time that you’re spending with students?

Participant 9: Well, I’m glad you’re asking that. I have a strong opinion about it. These kids have, have only known not in their educational life, but their entire life, the only thing they’ve ever known is the format of an hour and a half class and then switched gears. Or a 45-minute class and switch gears. And then they’re thrusted into an environment where they have [the] same individual six hours a day.

The study participants voiced both concerns and frustrations regarding the interpersonal skills deficits that they saw in their students with disabilities. Only one of the business teachers (Participant 4) discussed a deliberate method for addressing these concerns. This participant reported that journaling activities she created in her classroom provided a foundations for her interpersonal communication with her students. In that case, the teacher created a mechanism to support all of her students but which focused on a particular area of concern for her students with disabilities. Another way that the participants tried to help their students with disabilities to meet classroom expectations was to use accommodations; however, students’ use of accommodations was a concern for study participants.
Accommodations may have unintended consequences for students. Almost half of the participants expressed a belief that their students with disabilities had been allowed to use accommodations in school to such an extent that their ability to perform fundamental skills or study effectively or independently may have been compromised.

The teachers seemed to link the lower than expected academic skills of students with disabilities to the students’ use or misuse of classroom and testing accommodations. These teachers seemed to blame schools for allowing, if not enforcing, the students' use or misuse of calculator and retesting accommodation in the first place.

One Health Science Teacher (Participant 2) seemed worried that her students, with and without disabilities, are being denied opportunities to improve their independent math skills when schools reinforce students using calculators. The students are being led astray, according to this teacher, from experiences that could enhance not only their math skills but also opportunities to self-direct their cognitive skill development.

Two teachers expressed opposition not to the accommodations themselves but rather to the way students are using them arbitrarily and/or in place of difficult tasks that require perseverance. In the next comment, the Printing Technology teacher (Participant 9) recalls an on-going concern in his classroom regarding accommodations for one of his students with disabilities. Here he explains how his student with disability used his testing accommodations to delay or avoid studying for an upcoming test.

So, it’s the final exam, similar situation and, he’d never accepted any accommodations. You know, he has the verbatim reading deal so the test could be read to him. He refused, but every test he took, he had to redo in order to pass it. Sometimes he’d do it twice. But that 3rd time, he would always do well because he actually studied.
Three teachers expressed wishes that their students with disability at least try
given tasks spontaneously without first employing accommodations. The first Business
teacher interviewed for this study (Participant 3), for example, took this a little farther
when she shared fears regarding how student accommodation habits now may
negatively impact these young adults later in the postsecondary settings. Here she
explains:

The concerns that I have is hoping they are prepared to transition into the
workforce. I think we give them…we do a lot for them in education. So
it is hard when their IEP has so many accommodat[ions]. [Extended
pause] When they leave high school, and go into their career, for the
employer won’t accommodate them. I guess that is a concern that I have
for them with that transition. So, I want to make sure that the kids not
only know their accommodations but they use them as vehicle for
independence….That [academic work] was my concern with a lot of kids
when I was in school because they hadn’t had all the accommodations. A
lot of my co-workers at the time, we didn’t have all these
accommodations that they have now. It’s not that there is anything
wrong with them. [Pause] I think the accommodations are great, but it’s
critical that 11th and 12th grade -we’re going to have to prepare them,
prepare these students to be more independent. And I don’t know if this
is the way for the kids with a disability overall. They are just used to
receiving a lot more now, but when they get out into the workforce now
is competitive, more…[Pause] You know what I am trying to say?

Accommodations are specific provisions provided to students with disabilities
through their IEP. These specific provisions appeared to be problematic for teachers for
multiple reasons. The teachers interviewed also seemed to find it difficult to understand
the larger picture of special education programming and activities in their schools.

**Difficulties in understanding special education-related activities.** Teachers
also shared aspects of current schooling procedures related to special education that
confused and/or frustrated them. These aspects left many of these teachers wanting more support during their induction period. The aspects of school that seemed to confuse and/or frustrate them most, besides the ones previously mentioned – students being underserved academically or inappropriately accommodated -- were (1) an emphasis on special education procedure over collaboration, (2) the lack of involvement of adults in IEP meetings, and (3) a lack of information regarding transition services.

An emphasis on special education procedure over collaboration. According to the majority of the teachers interviewed, the attitudes other adults had in regard to helping students with disabilities seemed more procedural than what these teachers expected, especially in regard to IEP-related activities and accommodations. The Printing Technology teacher (Participant 9) shared a detailed description of a confrontation between himself and a counselor that seemed to discourage him greatly about the validity of the development and use of accommodations between school professionals.

Furthermore, it seemed to some teachers that schools were more concerned about completing IEP documents or following IEP regulations than making sure that the IEPs were disseminated in a way that best helped the teachers to help the students. In the following quote, the first Health Sciences (Participant 2), explained how she viewed a missing IEP as negatively impacting her work with a student:

You know, now I don’t know whether it was an oversight or maybe our school hadn’t gotten it from the sending school. But whatever the reason, I didn’t have [the IEP] in my hands and it was a frustrating time for myself and the student. Because had I known, I could have adapted things a little bit, you know.
A majority of teachers shared confusion regarding how disability and accommodation determinations were made in their school and how that information was disseminated to them. Teachers specifically reported not being given information about which of their students had disabilities and/or what type of disabilities students had until after the teacher had started teaching. Teachers explained that the lag time between the start of school and this notification was problematic for them. Many teachers were confused as to why some students had certain accommodations. The second Business teacher (Participant 5) shared his frustration regarding the lack of contextual information that he was afforded in his school:

They would never specify if [students with accommodations] were 504 or IEPs. They would just say, ‘There’ - it would be a checklist that had different accommodations on it. And they would write on there, ‘This student needs test questions read to them’ or ‘needs extra time for tests’ or they need ‘help with spelling’ or ‘reading’. That, I, I would never see all of the IEP. I would just see the checklist of some information or accommodations required. I just feel like it would be nice to see, be able to see everything. That would be easier. I don’t have access.

Some teachers found this even more confusing when a student had an identified disability but its manifestation was not obvious to the teachers. Conversely, teachers were confused about why some students who demonstrated needs were not considered to have disabilities and/or did not have disabilities. Two teachers recalled how the different CTE schools they had worked in had different protocols for disseminating disability- and accommodation-related information. These teachers also indicated that those differences had qualitative implications for each teacher.
The Information Technology teacher (Participant 8) reported, “I was caught off guard really” in terms of who had a disability and accommodations in his first school. That wasn’t the case at his second school. There, he explained, the special education department had “very good communication” with the instructional staff.

One Business teacher (Participant 5) recalled what a colleague told him about the role of the teacher in students’ vocational goal setting. His peer explained that teachers can no longer comment on career goals that students share regarding what is a realistic vocational goal and what is an unrealistic one for a student. Not only did this teacher seem to view this intentional ambivalence as unethical, he seemed to interpret this message as schools placing more emphasis on procedures than best practices for the students.

The lack of involvement of adults in IEP meetings. Teachers who attended IEP meetings indicated concern about the lack of teacher participation, and sometimes parent participation at those meetings. Some teachers questioned why they, the novice CTE teacher, were the only teachers attending a student’s IEP meetings. The second Health Science teacher (Participant 6) was the most emphatic about this point in regard to the lack of academic teachers attending IEP meetings during the following exchange:

Participant 6: And so [the IEP meeting notification] says ‘This is the meeting date’ and so I just always make arrangements to help because I think it is important.

Interviewer: Um, hmm. And you notice that you are one of the few teachers there?

Participant 6: THE teacher there! I mean nobody’s there from academic.
Only two of the nine teachers interviewed indicated that CTE teachers seemed to be particularly valued IEP meeting members due to their perceived influence on their CTE students. The type of school in which a teacher taught seemed to have an impact on how involved the CTE teachers were in their students’ meetings. Teachers at comprehensive high schools reported attending meetings more than those in stand-alone CTE programs. Teachers in stand-alone CTE programs explained that only the program special education coordinators interacted directly with IEP team members and/or attended IEP meetings at the CTE students’ home school. One teacher (Participant 6) seemed confused by the lack parent and student involvement in meetings related to IEPs. The level of involvement observed was overall much less than they anticipated.

A lack of information regarding transition services. Over the course of the interviews, some teachers voiced an interest in learning more about the transition planning process for students with disabilities and helping students with disabilities to become less dependent on accommodations throughout that process. When the interviewer mentioned that there were transition-specific provisions in IEPs, teachers expressed an interest in having more information about formal special education procedures related to transition programming. Most teachers were unaware of formal discussions related to “transition” programming of students with disabilities from school into the workforce in general. This was case for all teachers except the one teacher pursuing his master’s degree in special education.

Student reality checks. Another theme that emerged, and was mentioned briefly before, was the novice CTE teachers wanting more “reality checks” regarding career choices and options for transitioning youth, especially those with disabilities. This seemed to be an area of particular frustration for several of the teachers. They worried
that students were not allowed to make mistakes in schools, although these teachers felt students needed that experience. Although some teachers indicated that these “reality checks” were needed in schools in general for all students, other teachers were concerned specifically about their students with disabilities.

For example, the second Health Sciences teacher (Participant 6) talked about interrupting one student while that student was sharing her goal to be a doctor to explain how “unrealistic” that goal was and how this teacher felt the school was doing a “disservice” to the student by not bringing this to the student’s attention previously. Similarly, the other Health Science teacher (Participant 2) described frustration with what she characterized as inappropriate career guidance. Here are her words:

Well, I, it’s frustrating when you think that the student [is going to keep pursuing nursing] - look, it seems like we’re setting them up to fail. You know, ‘They’re going to be a nurse, they’re going to be a nurse.’ But they can’t. They have difficulty with, you know, math skills or, you know, reading skills or even anger issues. You know, and it’s like, ‘Well, you got a lot working against you prior to coming into this profession that deals with, you know, somebody’s life.’ So sometimes I think it’s unrealistic in that we allow them to continue on [one vocational] path and not make necessarily recommendations that, ‘You might want to try something else.’ But seasoned teachers tell me that is not our role. [Laugh] - ‘Our role is to teach them and to get the information across.’

**Links to the Tripartite Ecological Model of Self-Determination.** Before turning to the second research question, it is important to acknowledge and spend time on the last transition-related construct that emerged from the interviews. As discussed in Chapter 2, the Tripartite Ecological Model of Self-Determination (TEM-SD; Abery et al., 2003) asserts that the development of one’s self-determination is an interaction or process influenced by both the individual and his/her environment. This study is
premised on the idea that novice CTE teachers are uniquely positioned within the schooling microsystem of CTE students with disabilities and these teachers may have timely perspectives regarding how they see these students transitioning from the school microsystem, or environment, into the workplace environment. As part of the school environment, according to the TEM-SD, these teachers and their CTE classrooms may have seven particular characteristics that can influence their students’ development of self-determination. (Abery et al., 2003, p.66-70):

- participation and inclusion
- individualized programming and support.
- fulfillment of basic needs
- respect and acceptance
- opportunities for self-determination
- positive reinforcement for attempts to exercise personal control
- availability of role models.

The following is a description of how each of these microsystem characteristics was referenced, directly, indirectly or not at all, across the teacher interviews. This information is presented here from the most referenced characteristic to the least referenced characteristic. Across the 15 interviews, all teachers spoke to (1) the participation and inclusion of students with disabilities in the classroom, (2) the individualized programming and supports for students with disabilities in their CTE classroom, and (3) fulfillment of basic needs (although not as defined by Abery et al., 2003). Different teachers spoke to varying levels about (4) respect and acceptance, (5) opportunities for self-determination, (6) positive reinforcement for attempts to exercise personal control and (7) availability of role models.
**Microsystem factors addressed by all teachers.** Through survey responses and/or interview responses, all of the teachers were found to have CTE classrooms that included students with and without disabilities. The ratio of students with and without disabilities varied but, according to the self-reporting of the teachers, the teachers’ classrooms had a majority of students without disabilities and could thus be considered “inclusive settings.” Although all teachers spoke about the inclusiveness of their classroom, they differed in information shared regarding how their students with disabilities chose to participate in their inclusive classroom. Several teachers explained that they had a student with disabilities who refused to participate in class activities in general and/or to do so specifically with accommodations.

All teachers explained that they had provided individualized support, in the form of accommodations, for one or more of their students with disabilities based on IEP documentation. This was reported even by teachers who felt they had received one or more IEPs that were late, incomplete or incorrect (e.g., the teacher felt the IEP was inappropriate for a given student). What seems ambiguous, however, was the degree to which accommodations or academic programming were truly individualized for particular students across the teachers. One teacher explained that she provided any accommodation a student requested whether or not that student had a documented need for an accommodation.

All teachers expressed an interest in helping their students to succeed in school, including their students with disabilities. They all expressed serious concerns, however, about the academic preparation that their students with disabilities had received. Although the TEM-SD refers to “basic needs” akin to the “physiological needs” level within Maslow’s Hierarchy of Needs (1943; e.g., food and shelter); the authors also
When basic needs go unmet, the focus shifts to survival. Individuals in such situations miss a host of opportunities that could provide them with contexts for acquiring and refining capacities supportive of self-determination.

Comparing this description to teacher interview responses, it appears that the teachers interviewed felt that a basic need of their students with disabilities was the need for effective instruction. Furthermore, the teachers felt that this basic need has gone unfulfilled for one or more of their students with disabilities. No teachers, however, discussed any observations or concerns for their students with disabilities related to Maslow’s “physiological needs”.

**Microsystem factors addressed by some teachers.** In different ways, one or more teachers interviewed spoke directly to these microsystem traits that the TEM-SD proposes as positively influencing the self-determination of individuals with disabilities: respect and acceptance for individuals with disabilities, opportunities for self-determination, positive reinforcement for attempts to exercise personal control, and availability of role models. The following is a brief overview of what teachers spoke to regarding these specific traits, in the order just listed.

In terms of the fourth element, respect and acceptance for individuals, teachers talked about this in direct terms, either affirming they tried to give it to their students with disabilities in particular or expressed disappointment when sharing that they felt others were not giving either respect or acceptance to students with disabilities. One teacher (Horticulture, Participant 1) discussed the need for students to understand that respect is a two-way relationship between a student and a teacher. When this was expressed, the teacher(s) seemed to feel that respect between a teacher and a student,
including one with a disability, should be mutual, earned quid pro quo.

Teachers were not asked about times they gave opportunities for self-determination by name as it was discovered during the course of the interviews that the term “self-determination” was unknown to most of the teachers, with one exception. Furthermore, this construct proved difficult to define without risk of introducing any additional, albeit unintentional, “socially desirable response” bias (Paulhus, 2002) from teachers regarding how they interacted with their students with disabilities or were involved in their development. Instead, interviews were coded for any situation or teaching strategy that a teacher recalled spontaneously that had the intent of eliciting thoughts or actions by their students with disabilities that were self-directed.

Some teachers spontaneously shared a situation or teaching strategy related to the teacher explicitly giving students opportunities for self-determination or self-directedness in class while others did not. Two teachers (Horticulture, Participant 1; Printing Technologies, Participant 9), on the other hand, shared that they took away opportunities for their students with disabilities to self-determine when asking to first use accommodations for a given task. Their students were required to try an activity without an accommodation first, after which they could choose to use the accommodation in the future.

When teachers shared such a situation or strategy in which students with disabilities were given opportunities to self-determine, the interviewer sought to find out if positive reinforcement for attempts to exercise personal control was also given by the teacher. One teacher (Business, Participant 3) shared a pointed acknowledgement of conversation with a student after the student’s attempt at a self-determined action. Beyond these direct interactions between the specific teachers and their students, most
teachers shared messages that it was the intent of their class to reinforce students’ attempts at exercising personal control, regardless of a disability or no disability. They seemed to consider “showing initiative” a positive trait and a trait synonymous with exercising personal control.

The availability of role models, the last trait of a microsystem that the TEM-SD (Abery et al., 2003) proposes can positively influence the self-determination of an individual with disabilities, was a topic rarely discussed by the teachers. Only two teachers spoke to this concept across the interviews. The Horticulture teacher (Participant 1) reported sharing his experiences as a self-employer with his students as a way of encouraging them to consider starting their businesses. This teacher explained that he was explicitly promoting self-employment for his students with disabilities as it could help them to find a job and develop their own vocational skills. The Culinary Arts teacher (Participant 7) shared that his students with disabilities were being exposed to self-determined peer role models via SkillsUSA (regional CTE) competitions. Skills USA is a professional organization through which current CTE students can develop additional leadership and vocational skills in their particular trade or CTE program of study. No teachers mentioned knowing or utilizing any role models with disabilities specifically either in the classroom or in the workplace.

**Question 2: Perceptions of Disability in School and Work Cultures**

*What continuities and discontinuities do novice CTE teachers perceive across school and workplace cultures in relationship to how disabilities are defined and discussed?* – this was the second research question. This was a complex question that proved especially difficult to answer because most of the participants were found to have little to no awareness of how disability was defined or addressed in their previous
workplace. Nevertheless, most participants were still able to comment on advice they would give transitioning youth with disabilities about self-disclosing a disability and/or need for accommodation in the workplace. This advice seemed to be drawn from the participants’ general workplace experiences and their own beliefs rather than from formal guidance related to disabilities in the workplace or school. The following is an overview of participants’ perspectives regarding how disability is addressed across the two contexts and what self-disclosure advice they would give transitioning youth with disabilities. Included in this overview will be teacher perspectives that seem to indicate they believe self-disclosure advice may be irrelevant for some transitioning youth.

**Observations of disabilities in the workplace.** A minority of teachers in this study reported having observed employee-related disabilities being discussed in the workplace. Even the Information Technology teacher (Participant 8), who owned his own company for more than 15 years prior to teaching, indicated that he had had no employees self-disclose or request an accommodation formally. Participants 5 and 7 reported witnessing semi-structured conversation in their previous workplace related to disability and/or accommodation disclosure. In two interviews, teachers were able to recall informal spontaneous conversations they had been involved in at work related to a colleague’s self-disclosure of a disability. The following is a more detailed look at the conversations that teachers recalled from their previous workplaces.

**Semi-structured disclosure conversations.** The Culinary Arts teacher (Participant 7) recalled working in one restaurant when he was given directions regarding how to work with a student with a hearing disability “that was really obvious.” The staff was instructed to “look at” the student when talking so she could read their lips. The teacher did not recall any additional conversations with management
or the student one-to-one regarding either the student’s disability or her accommodations.

As a store manager, the last Business teacher (Participant 5) had a collaboration to provide internship opportunities to students with significant disabilities through a local cooperative education program. As part of this collaboration, instructors from a special education work-study program sat with him and his staff to discuss the cooperative students’ disability and accommodation needs. The students were not included in this conversation.

The above situations are being framed as “semi-structured” conversations regarding disabilities because they were purposeful and coordinated conversations made on behalf of employees with disabilities but they did not appear to follow any specific, pre-existing protocols. What is consistent between these conversations was that the individual(s) with the disability were remembered as not being part of these conversations.

**Informal and spontaneous disclosure conversations.** Two teachers shared experiences in which their colleagues mentioned “missing [their] meds” (Business teacher, Participant 4) or “having trouble hearing” (Business teacher, Participant 5) while on-the-job. These teachers explained that those spontaneous disclosure discussions would usually be brief and casual in nature. It appears that the teachers were not alarmed by these admissions nor did they feel differently about their colleague or expected to follow any particular protocol with the given information.
**Disability disclosure advice for transitioning youth.** Although the teachers had limited cooperative work experiences with their students who had disabilities, the interviewer asked teachers to describe what, if any, advice they had given their students with disabilities about self-disclosing a disability and/or accommodation-related needs. None of the teachers interviewed had ever spoken to any of their students with disabilities about self-disclosing a disability and/or need for accommodations in the workplace. When asked to share what kind of advice they would offer in the event a student approached them about self-disclosing either, all but one teacher provided some type of definitive advice or opinions regarding self-disclosure.

The advice ranged from telling students not to self-disclose to telling them that disclosure would be advisable. Some teachers thought that disclosure advice might be irrelevant. The following is a detailed examination of the various types of advice that the teachers shared. Some teachers felt this type of discussion would be under the purview of others such as guidance counselors and special educators.

**Don’t disclose, at least not initially.** Of the nine teachers interviewed, four teachers explained that they would not advise a student to self-disclose a disability and/or need for accommodations in the workplace, at least not initially. The Horticulture teacher (Participant 1) and the Printing Technology teacher (Participant 9), were two teachers who offered advice that seemed intended to steer students away from self-disclosing a disability or a need for accommodations in general. Below is what they shared respectively:

Uh, going back to, you know, to [that student who was “demanding” accommodations in the classroom, he would say], “You know there are many successful people and life that, you know, had classifications and that may be [pause, breath]…When the opportunity arises, you know it
may seem intimidating or challenging, buy maybe you don’t look for that crutch. Okay? And so what’s the worst thing that you can do? Fall down, you know, and get up again and try it again.’

Well, [sigh] I think [his student with autism] just needs to understand that he has to be held accountable [first], and, and, but yet he, you know, [needs to know] there has been so many [similar] brilliant minds in our society can be [successful]...

It is important to note that this teacher ended his above statement with the following additional thoughts:

…but for everyone that was successful, there’s probably a hundred or a thousand that struggle their entire life. So, I don’t know, but it’s difficult for me to answer [this advice question].

The second Business and Health Science teachers plus the Culinary Arts teacher (Participants 4, 6 and 7 respectively) indicated that they would advise students against seeking assistance for getting workplace accommodations until the student was formally employed. Participant 4 characterized this question regarding advise as a “tough one” but ultimately said she would encourage her students to find a mentor on the job in whom the student could confide and through whom the student could get any on-the-job support. Likewise, the Culinary Arts Teacher (Participant 7) recommended that students consider sharing their difficulties at work, disability-related or task-related, with a helpful peer who could help them out when needed. He explains, “So, like, [the student] can go over to, you know, Joe Smith and go ‘Hey, you know, what does he [the chef] mean by this?’”

Participants 7 and 8 said that they would advise students to seek help from others on the job on an as-needed-basis, focusing more on the specific task given than
on any disability-related needs. Health Sciences teacher (Participant 6) suggested that students could approach in-service personnel to minimize any harm a learning disability could incur when an employee must complete a post-professional development assessment.

Teachers demonstrated some visible reticence in giving advice related to self-disclosure to students with disabilities. It is important to note, however, that none of the eight teachers who responded to self-disclosure advice questions shared advice that appeared to characterize self-disclosure as an inherently wrong or inappropriate activity.

**Do disclose.** Two of the nine teachers interviewed definitively reported that if they were going to give self-disclosure advice to their students with disabilities, they would encourage their students to self-disclose a disability and/or need for accommodations during the hiring phase or immediately at the start of a new job. While Participant 3 seems to support full disclosure from the start with an employer, she threw in the caveat that self-disclosure may be disability dependent. Here is how she put these two ideas together:

*Well, first of all, [the students turn employees] have to be honest to themselves and…to their employer. Um, [pause] because if there is anything that’s trying to be hidden in order for them to get the job, I think it would be detrimental to them all around, not to disclose information. [Breath out, pause] I guess it would depend on what their disability was.*

For the second Business teacher (Participant 6), the thought of giving advice regarding the self-disclosure a disability and/or accommodations seemed less worrisome than it appeared to be for the other teachers. He appeared to readily draw
upon his knowledge of the Americans with Disabilities Act from his master’s course when explaining why he felt it was important for students with disabilities to self-disclose a disability and/or accommodation need at the beginning of a job:

Well, [his students with disabilities] shouldn’t be afraid of telling [employers] about this because they tend to [Pause] - if they are in an environment where they work and don’t accomplish a task, and the disability was the cause of it then, you know, that could be grounds for them being dismissed from their position [under ADA]. I just think it is better that everybody knows and all the disclosure is done at the front and they tell their employer what, what they need.

Prefacing these words, this teacher explained he would recommend students draw parallels between their unique accommodation needs and the types of everyday supports people use in their lives (e.g., eye glasses). By doing this, it seems, the accommodation would be considered more functional than demanding.

**Disclosure advice might be irrelevant.** Teachers provided four reasons for why disclosure advice might not be necessary to give transitioning youth with disabilities. First, as mentioned earlier, some teachers pointed out that although some of their students did self-disclose their disability or accommodation need in school, there were other students who were unwilling to self-disclose either a disability or request an accommodation in the classroom. Here, the Printing Technology (Participant 9) explains:

And for the most part, the students [with disabilities] don’t like to be recognized for having [a disability] issue, that IEP issue. They don’t - some of the students refuse any accommodations because they don’t want to be singled out or, you know.
Second, there are some supportive mechanisms currently in the workplace that could mediate the need for disclosing a disability and/or need for an accommodation for a disability. For example, the second Health Sciences teacher (Participant 6), explained that retesting accommodations for certification tests are not only allowed in the field of nursing (within pre-defined limits), the retesting option is available to all testers. Other mechanisms included good managerial support. The Culinary Arts teacher (Participant 7) made a note that food industry workers have always presented employers with a variety of strengths and needs therefore, good managers have learned to adjust their managerial style. He explains, “[Managers] have to treat everybody differently anyway. And I have had so many years of that…it [became] kind of simple to.”

The third and fourth reasons were shared by the Horticulture teacher (Participant 1). This teacher explained that students may not need to disclose a disability or a need for an accommodation by having their own business and/or by maturing. As mentioned previously, this teacher encouraged his students to consider self-employment and seemed to feel this option could give them individual flexibility and a sense of vocational responsibility. He also indicated there was a possibility that students with learning disabilities could “outgrow” the disabilities themselves or the weak vocational behaviors he saw in his students with disabilities.

As previously mentioned, the second research question of this study was difficult to answer because the teachers interviewed had little to no exposure to disability-related discussions in the workplace, indicating that disabilities are, in their experience, not discussed in the workplace. Although some teachers argued that secondary students don’t want to discuss their disability in the classroom, the teachers still presented a picture that schools are having more discussions related to disclosing a
disability and/or need for accommodations than the workplace. Overall, the novice CTE teachers appeared unsure as to how to advise their students for self-disclosing a disability and/or accommodation need in the workplace. The advice given regarding self-disclosure of a disability and/or accommodations differed across teachers; however, delayed self-disclosure in the workplace seemed to be preferred to pre-emptive self-disclosure.

**Question 3: Induction Process Influence on the Novice CTE Teacher**

*In what ways, if any, does the induction into teaching influence the observations and perceptions of these novice teachers* – was the third research question for this study. The CTE teachers interviewed expressed a range of reactions to their new instructional roles and students, including those with disabilities. These reactions already described in relation to the first research question included: surprise about students’ with disabilities perceived lack of academic and intrapersonal skills, confusion about schooling processes and procedures related to students with disabilities, including accommodations and IEP, and concern regarding how these students have been academically supported and vocationally directed.

Two additional themes were observed within participant interviews. Teachers expressed feeling acutely unprepared to meet the needs of their students with disabilities. Some teachers described themselves as being different than seasoned teachers; they felt they were bringing new perspectives into their schools that weren’t there already.

**Feeling acutely unprepared to meet student needs.** The teachers consistently shared two things that they felt would help them to better support their students with disabilities in the classroom and, possibly the students’ transition process: (1) more
instructional support and (2) more information about special education programming, including transition services.

**Seeking more instructional support.** Teachers interviewed indicated that their CTE students with disabilities shared many similar attributes with their peers without disabilities; however, there were some important differences between the student groups. Furthermore, the teachers felt those differences often made teaching students with disabilities more challenging. With the exception of one teacher, the Culinary Teacher (Participant 7), the teachers interviewed explained that they were actively seeking additional supports to help them teach students with disabilities specifically. The second Health Sciences teacher (Participant 6) shared that she had repeatedly asked for instructional support to help in teaching her health sciences students with disabilities but none had been given to her. Her frustration seemed apparent when she shared the following in an elevated voice:

> Listen, I’m going to tell you, honest to God, tell you that if I had some support from teachers that were educated in this, then I could get these kids through! But I get no support. I’m winging this [remediating students with disabilities] all by myself.

Most teachers interviewed felt they were not able to effectively help students with disabilities in one capacity or another in the classroom. Despite feeling this way, teachers reported activities they were trying to use to help their students with disabilities in the classroom. The Information Technology teacher (Participant 8) was even completing a master’s degree in special education as a way of learning more about teaching students with disabilities.
Seeking more information about special education programming. Some teachers indicated that they wanted more information about work-related transition goals and planning process for students with disabilities. One teacher, Health Sciences (Participant 6), asked if transition planning ought be discussed in the professional learning community (PLC) meetings held by academic departments in her school. Others, however, explained that they felt the discussions related to the transition of students of disabilities were the purview of other professionals in the school (e.g., special education teachers/coordinators, counselors, parents, and/or cooperative work coordinators).

Although most teachers were concerned about their lack of preparation to teach students with disabilities, the few who discussed receiving professional development related to these students seemed to indicate that those opportunities helped. Some teachers attended IEP meetings because of assignments related to certification and/or coursework. Some teachers reported learning via professional development opportunities how to better tailor their instruction for students with disabilities, including: 1) how to address the unique perspective of an individual with a disability and 2) how to assess students so you better understand where they are in terms of skills and content.

As mentioned earlier, some teachers voiced an interest in learning more about the transition planning process for students with disabilities and helping students with disabilities to become less dependent on accommodations throughout that process. Two teachers (Business, Participant 3; Health Sciences, Participant 6) voiced an interest in restructuring the accommodations systems in high school as a way to help their students
with disabilities better prepare for the workplace even when they were unaware of specific transition-related programming for students with disabilities.

**Viewing themselves as bringing new perspectives into schools.** Some teachers interviewed indicated that they felt their perspective on teaching, as novice teachers coming into the classroom from industry, was qualitatively different than the perspective of their experienced colleagues in their schools. More specifically, in tones of caution, frustration and even laughter, several teachers explained that they felt they were unable to support what they perceived as existing school norms related to accommodations and vocational goal-setting. As mentioned previously, teachers expressed confusion regarding how accommodations are determined for and used by students.

Some teachers interviewed reported that they went beyond being confused by the accommodation policies in their schools during their interviews and began to openly question accommodation protocols. As previously mentioned, the Culinary Arts teacher (Participant 7) explained that in the food industry where he came from, formal accommodations were a rarity. Instead, employees and employers just worked around each other’s strengths and needs. For this teacher it seemed, decisions and discussions about accommodations were different in the workplace when compared to schools. He also seemed to feel that was not taken into account in by schools and/or his colleagues.

In regard to instructional decision-making, two teachers described in detail how they came into classrooms that they felt were not structured for appropriate vocational learning. One of them, the Horticulture teacher (Participant 1) explained:

> I know for me, I’m a different teacher than who [the teacher] I replaced. And [that teacher] accepted them at the lower levels and the best picture I can take is that she did not challenge them especially mathematically and through literature arts.
Although some teachers reported that they were challenging the norms they disagreed with at their schools, several teachers explained how they learned to adjust for the needs of their students, including their students with disability, as they continued to teach. Although teachers didn’t always differentiate between what they learned about teaching students with and without disabilities, several teachers did speak to lessons learned unique to their students with disabilities. Most of these teachers discussed the need to develop a trusting relationship with their students with disabilities as they helped the student to build some fundamental academic skills. One teacher discussed how he stopped splitting his classroom between students with disabilities and students without disabilities. Two teachers discussed how they had learned that students with disabilities also need individualized supports in cooperative settings, too. The third Business teacher (Participant 5) recalled how a candid discussion with a student with disability regarding the student’s accommodations seemed to improve the teacher’s understanding of accommodations and how to address them in his classroom. Here is what that teacher shared:

I have a young lady, a 9th grader this year, that was on an IEP but I didn’t get all of the specifics about it but she just came out and told me, ‘You know I have trouble hearing in the classroom’ and explained, what, where she would like to sit in the classroom, what was more comfortable for her. And you know 9th graders, there is going to be some background noise there. So, we’re going to try to make it easier for her to pick up things. … not miss what is going on in the classroom because of her hearing. And I tell all my kids…You know, if they have any concerns about anything, they can just come to me and ask about it and I’ll do my best to help them out.
Conclusion

This exploratory study revealed a range of perceptions held by novice CTE teachers regarding the school to work transition of students with disabilities. The perceptions were shared as the participants were navigating through the induction process of becoming teachers in CTE. Teachers spent the most time during interviews sharing their perceptions of the academic and intrapersonal skills of students with disability, namely the concerns they had. Teachers also voiced concerns about special education procedures including how they can appear more procedural than function and yet IEP discussions do not often include CTE teachers.

In general, these novice CTE teachers had limited, if any, involvement in workplace programming and exposure to formal procedures in the workplace regarding employees with disabilities. Their advice regarding disability and/or accommodations disclosure for CTE students with disability transitioning into the workplace, either given or hypothesized, ranged from no disclosure to full disclosure.

Teachers reported multiple lessons learned during their induction period. They discussed coming to the understanding that students, including CTE students with disability, bring with them unique experiences and needs that need to be taken into account in the classroom. The teachers interviewed explained that they were looking for support during their induction period related to improving their classroom instruction, engaging students in “realistic” career planning and obtaining transition-related planning information. Teachers also reported feeling unique among more experienced teachers and feeling more competent in the classroom with students with disability after having received professional development. Implications of these finding and others outlined in this chapter are discussed in Chapter 5.
Chapter 5
DISCUSSION

This exploratory qualitative study focused on illuminating how a uniquely situated group of educators, novice CTE teachers, viewed their students with disabilities and those students’ transition from school to the workplace. This study was also designed to elicit these teachers’ perspectives of continuities and discontinuities between school and workplace contexts in regard to disabilities, including how disabilities are defined and addressed. The possible influence of the induction process on these teachers’ perceptions of the above was also examined.

In all, nine second-career CTE teachers were interviewed for this study. Multiple interviews were used to increase the reliability of the study and provide teachers with additional opportunities to share their perspectives on the above topics. The following is a discussion of the results of those teacher interviews and their implications for students with disabilities and the professionals that work with them, including CTE and special education personnel.

First, perceptions that these teachers shared regarding their students with disabilities and those students’ transition from school to the workplace, including secondary special education transition services will be discussed. Second, the continuities and discontinuities that these teachers perceived across the two contexts in relationship to how disabilities are defined and addressed will be examined. Third, the possible influence of the participants being within their own induction process into education during this study will be discussed. Finally, study limitations and recommendations for future research related to this study are also presented.
Perceptions of Transitioning Students with Disabilities

Four major themes came from the interviews that pertained specifically to schooling structures and students with disabilities. First, these CTE teachers had limited opportunities to observe students with disabilities on-the-job, yet the observations they made align with literature regarding the interpersonal skill deficits of many individuals with disabilities. Second, all of the teachers interviewed expressed concerns regarding the intrapersonal skills of one or more of their students with disabilities, which aligns with concerns in the literature regarding the resiliency of students with disabilities. Third, these teachers were unaware of the term “self-determination”; however, they each spoke to the importance of self-determined student decision-making in both in their classroom and in the workplace. And last, these CTE teachers had persistent questions related to special education process and protocols and these questions seem grounded in making these processes and protocols more functional for all stakeholders.

Observing students with disabilities in the workplace. Unfortunately, study participants had limited opportunities to observe their students with disabilities on the job. Although it was expected that study participants would have opportunities to observe their student with disability via co-op programming, this was the case for only 3 of the 9 study participants. The three teachers who were able to share some student co-op experiences indicated that, in their experiences, some students with disabilities encountered challenges while “on-the-job.” These challenges varied but they were interpersonal in nature. Interpersonal, or social skill, deficits have been a consistent concern for students with disabilities (Kavale & Mostert, 2004) and employees (Phillips, Deiches, Morrison & Kaderoff, 2015). Kavale et al. (2004) speak to concerns regarding a range of social skills including, but not limited to, poor social cognition and motivation, as well as negative classroom behavior. Phillips et al. (2015) defined
these challenges as “the ability to receive, process, and perform context-appropriate social tasks sufficient to obtain social goals” (p.2).

How these teachers reported responding to these concerns, however, were not consistent and should be considered. In two cases, the teachers reached out to both the employer and student to remedy the problems that emerged from their students’ misunderstanding of humor and critical feedback at work. Another teacher explained that he tried not to interfere when his students encounter problems at work. He seemed to feel that students need to learn how to negotiate workplace challenges on-the-job.

Interpersonal skills are important in the workplace so it seems imperative that CTE teachers understand that (1) students with disabilities may experience difficulties in mastering interpersonal skills, but (2) there are resources to help students develop those skills and apply them (e.g., the Program of the Education and Enrichment of Relationship Skills, PEERS ®, Laugeson & Frankel, 2005). What was not collected during the interviews were rich descriptive details of the discussions these teachers had with their students to better negotiate a future workplace situation in which they have to use better interpersonal skills.

**Having concerns about the students with disabilities themselves.** Student competency concerns seemed particularly salient when teachers described their first-hand experiences witnessing the academic struggles of a student with a disability. Teachers explained how surprised they were with the academic deficits of their students with disability. They shared detailed examples of students with disability struggling with basic writing and math activities. Not surprising, most teachers interviewed said they were looking for support to improve how they taught students with disability. The exception to the case was the Culinary Arts teacher (Participant 8). Instead of being
surprised or disarmed by any academic deficits of his students with disability, he drew heavily on the parallels between his previous managerial demands in restaurants and his demands as a teacher to help students compensate academically.

Despite these concerns, the teachers interviewed, in general, expressed a belief that their students with disability could achieve success in the workplace and in the CTE program to levels comparable to their peers without disabilities. Teachers’ expressed the belief that this would be more possible for students with disability if the students could demonstrate more resilience in the face of their academic challenges. Although no research related to the resilience or coping mechanisms of students with disability was found in the CTE literature, this topic has an extensive history in the special education literature (Firth, Greaves, & Frydenberg, 2010; Margalit, 2003; Murray, 2003; Zolkoski & Bullock, 2012). This is especially true in regard to students with disability and academic programming (Wong, 2003), transitions in to adulthood (Getzel & Webb, 2012; Rojewski & Gregg, 2011; Scholl & Mooney, 2004), self-determination (Cosdon, Brown, & Elliott, 2002; Field, Sarver, & Shaw, 2003), and engagement in at-risk behaviors (Doren, Murray, & Gau, 2014; Morrison & Cosden, 1997).

Resilient individuals are individuals “possessing certain strengths and benefits from protective factors that [can] help them overcome adverse conditions and thrive” (Zolkoski et al, 2012, p. 2295). In the special education field, there is general consensus that students with disability are more likely to exhibit non-resilient behaviors than their peers without disabilities. However, it is also generally agreed that those skills could be developed (or inhibited) by a variety of factors, including schooling (Werner, 1984) and positive relationships between students with disability and their teachers (Doren, Murray, & Gau, 2014). Based on the interviews, it appears that teachers recognize that
students with disability appear less resilient than peers and feel that some factors, including accommodations, may contribute to this resilience problem. Teachers do not, however, appear comfortable and/or prepared to play an instructional role in that regard.

Existing evidence that teachers perceive students with disability to have lower general interpersonal skills (Carter, Trainor, Sun, & Owens, 2009) support this study’s findings. Taken together, it appears that special attention should be paid to helping CTE teacher and students with disability to construct relationships that are positive and robust enough to sustain threats of perceived lack of resiliency. This relationship-related issue may be compounded when looking at research in which CTE teachers reported having lower expectations for CTE students with disability than CTE students without disabilities (Harvey et al., 2005; Harvey & Pellock, 2003).

**Facilitating student self-determination.** Initially, one purpose of this study was to learn about novice CTE teachers’ conceptualization of self-determination in regards to students with disabilities. Although the original protocol included questions that referred to the concept of “self-determination” by name, the decision was made during the course of the interviews to drop this language. It seemed that the teachers were not aware of this particular concept by name. Instead, they spoke to elements of self-determination when they spoke about resilience and, at times, student use of accommodations.

A complex example of this in the study would be when Participant 1 spoke about a student being willing to fail at a new task without accommodations. In essence, he was speaking to Perske’s (1972) belief that individuals with disabilities be allowed the “dignity of risk.” For this teacher, how accommodations were used in schools (and by his students) were actually interfering with his students’ opportunity to take risks and
he seemed to view this as detriment to their success in the workplace. Participant 5 also spoke to this when she expressed her concerns about the lack of oversight in the applicability of accommodations being utilized and depended on by secondary students.

When teachers spoke about resiliency and dependence on accommodations in regard to their students with disability, they seemed to agree in their own way with the National Council on Disabilities (2007) that “many students with disabilities are unaware of their full potential” (as described by Bangser, 2008, p.8). In the special education literature, the construct of self-determination by name has been studied closely (Chambers et al., 2007; Field et al., 1998; Wehmeyer et al., 2003a) and its application to transition-related interventions for students with disability has been investigated specifically (Test, Karvonen, Wood, Browder & Algozzine, 2003; e.g., the Self-Directed IEP lessons by Martin, Marshall, Maxson & Jerman, 1996).

If the fields of CTE and special education want to collaborate around addressing the documented challenges of students with disability in demonstrating self-determined behavior, differences in how the associated behaviors are labeled and received will need to be addressed. According to this study, being a student with a disability and being self-determined in asking for your accommodations can be considered both a positive and negative attribute. For one teacher, requesting an accommodation is labeled as an arbitrary act at best, a potentially damaging crutch at worst; however, for another teacher, a student’s act of requesting an accommodation affirms that the student is more cognizant of their own needs and better able to address those needs confidently in future. Without a shared conversation regarding what self-determination is and how it differs across contexts across their educators, students with disabilities may not be able to understand the complexity and nuances of accommodations and that lack of
understanding may prevent them from even considering a request for an accommodations in the workplace.

**Sharing Questions about Special Education Services and Processes**

The CTE teachers interviewed for this study indicated concerns about several aspects of special education protocols or processes in their schools. First and foremost, all but one teacher shared concerns about accommodations, including how they were selected, used, and operationalized in general. These concerns were fundamentally grounded in teachers’ concern with promoting positive long-term outcomes for the students such as resiliency, meaningful decision-making, and successful transition into the workforce. Some teachers reported becoming more aware of the benefits of accommodations while others seemed to have trouble integrating how they personally viewed accommodations (as a “crutch” or “disservice to students”) and how accommodations were seemingly being endorsed by their school system.

Teachers also reported having limited involvement in the IEP discussions of their students with disability or being one of the only general education teachers involved in the IEP discussions. These teachers shared concerns about the level or lack of access to IEP documentation overall and related information regarding the needs of their students with disability. Some teachers reported having received important IEP-related information about their students with disability (e.g., accommodations) only after the school year started. These concerns about their lack of engagement in the IEP process are echoed in the CTE research (Haber & Sutherland, 2008). On this basis, CTE researchers have recommended greater involvement of CTE teachers in IEP development for students with disability (Harvey, Yssell, Bauserman & Merbler, 2010). The findings of one study (Sunisloe, 2012) refute this theme and the majority of
teachers interviewed were involved directly with IEPs and/or IEP development. That study, however, was based on interviews with CTE teachers from only one state and from teachers that followed only one CTE school model.

Teacher complaints about the lack of instructional guidance and/or direct support given from special education were a common phenomenon across the interviews. This is a theme that has emerged elsewhere in the CTE literature (Casale-Giannola, 2012; Harvey, 2003; Schmalzried et al., 2014). In the special education literature, discussions have focused on how to improve collaborative discussions about the transition of students with disability among professionals that support them (Murphy & Golden, 2004).

In 2008, Haber and Sutherland proposed a four-step model for CTE teachers to follow to better understand and support their CTE students with disability. The four steps to this model, as described by the authors are as follows:

1. Orient staff who refer students to CTE programs and assist them in placement decisions;
2. Obtain assistance in implementing Individual Education Plan (IEP) accommodations;
3. Assess the appropriateness of the accommodations, record and make recommendations to the IEP team; and
4. Act as an advocate for the student in counseling and IEP development procedures (p.4).

This model provides a general outline of tangible actions CTE teachers could take to address the types of academic concerns the participants expressed in this study; however, the model may have flaws. First, from a special education perspective, Steps #1 and #3 may lead to the increased exclusion of students with disability in CTE
programs, albeit unintentionally, and/or the decrease access of reasonable and effective accommodations for those students with disability. This may be especially true if a CTE teacher who is uninformed of effective instructions practices or accommodation unduly influences placement and accommodation decisions in the CTE setting. Second, from clinical standpoint, no research has been found to support either the feasibility or effectiveness of this model to help CTE teachers understand and support their students with disability. In general, this model assumes teachers have background knowledge about students with disability and the special education system. This model could be more relevant, however, if some conditions with CTE were met before its implementation. These conditions would include more professional development for CTE teachers regarding effective instructional strategies for students with disability and professional development that outlines the demonstrated need of students with disability for special education support, including transition-focused supports.

**Perceived (Dis)Continuities Between School and Workplace Contexts**

Prior to becoming CTE teachers, each study participant worked five or more years within a job that fell within the career cluster that included their current CTE field. It appears that in the years these individuals were in the workforce, they had witnessed no formal discussions or in-depth experiences related to employee disabilities. These teachers, therefore, could not share observations regarding how disabilities are defined in the workforce as compared to the school environment. They did, however, share their perspectives regarding what advice they would give a student with disabilities about disclosing a disability and/or need for accommodates on-the-job based on their experiences in the workforce and personal viewpoints. Teacher
perspectives regarding the advice they would give a transitioning student differed, as did their rationales for their perspectives differed.

**Missing disability definitions.** Some teachers interviewed were unsure why certain students were diagnosed as having a particular disability and why other students were not. This seems to indicate that those teachers have preconceived definitions of one or more disabilities but little or no formal guidance regarding how a disability is diagnosed or defined either in the classroom or in the workplace. Research, however, supports the need for adults working with transitioning youth to facilitate the youth’s understanding of their own disability and ability to present their disability-related needs to others, especially in the workplace (Lindsay, McDougall, Menna-Dack, Sanford & Adams, 2015). These novice CTE teachers are clearly unable to do that yet they are the mentors with whom CTE students with disabilities will be working most closely with as they transition out of high school. Given this, any training to help CTE teachers better understand disability diagnoses ought to include definitions of disabilities covered in schools, under IDEA, and in the workplace, under ADA.

**Proposed disclosure advice.** When asked to share advice they would give their students with disability regarding self-disclosure of a disability and/or need for accommodation in the workplace, the CTE teachers seemed to have a difficult time responding. With the exception of the one teacher who had taken a special education-related graduate course, the teachers in this study appeared to feel ill equipped and not informed enough about disability-related disclosure to give a ready response. Teachers’ hesitation to answer this question (including three teachers who declined to answer this question during one or more interviews) is not surprising given their professed lack of background knowledge regarding special education in general during the interview. It is
also not surprising in light of the lack of exposure many of the teachers reported having in the workplace in regard to disability-related protocols.

Despite these potential barriers to responding to this disclosure question, in the end, all but one teacher offered some type of advice, ranging from a “do not disclose” perspective to a “disclose once your foot is in the door” perspective to a “disclose – it will help” perspective. Teachers offered different specific rationales for the type of advice they offered but interestingly, they all felt that the advice they gave would benefit the student in the long run in the workplace. For the teachers who indicated that students should not disclose, they did so with the belief that disclosure of either a disability or an accommodation need could undermine how the employee-employer relationship develops, as this type of discussion could diminish how the employer views the student’s capabilities and/or work ethic. For the teachers who indicated that one should disclosure but after being hired, they seemed to believe that by waiting, the student would have earned enough respect on the job to warrant an accommodation for a disability. For the teachers who endorsed disclosing at the beginning of the job, one mentioned the ADA in his response, drawing from his graduate studies work. The other teacher, ironically akin to the “do not disclose” rationale, explained that this lack of communication at the beginning of the working relationship could undermine the employer-employee relationship.

No research was found in the CTE literature regarding CTE teachers and the self-disclosure of CTE students or CTE graduates. This seems to support the impression given by the teachers in this study that formal disability-related self-disclosure conversations are not commonly discussed in the field of CTE. In the special education and psychology literature, this is a different story and one that could be used to inform
the CTE field. For example, it is readily agreed in the field of secondary/transition special education that students with disability must learn how to navigate from an entitlement system of accommodations to an eligibility system (Luecking, Stuart, & Buchanan, 2009), but this can be an overlooked consideration in the transition process of students with disability (DaDeppo, 2009). It is also readily known that workplace self-disclosure is still an area of concern among individuals with disabilities (Gerber & Price, 2003; Madaus, 2008; Madaus, Gerber & Price, 2008; Santuzzi, Waltz, Finkelstein, & Rupp, 2014; Toth & Dewa, 2014). The National Collaborative on Workforce and Disability for Youth (NCWD-Y) has created hands-on resources to help facilitate self-disclosure discussions in school and/or at home. The 411 on Disability Disclosure (NCWD-Y, 2009) workbook series for students with disability and the adults supporting them was created to help demystify when, where and how to self-disclose a disability and/or accommodation need in the workplace.

**Evolving Career and Technical Education Teachers**

The participants in this study are at the crossroad of increased inclusion in the CTE classroom and increased academic demands on CTE students, including those students with disabilities. Being at this crossroad seemed to bring with it concerns for the novice CTE teachers in this study. The following is a comparison of the participants’ perspective regarding their feeling underprepared to teach students with disabilities with existing research and a proposal for providing more professional development regarding instructional strategies and the transition planning of students with disabilities. Recommendations regarding how to make that professional development more relevant and accessible to novice CTE teachers are also discussed.
Feeling underprepared to teach students with disabilities. Teachers interviewed for this study, with the exception of the Culinary Arts teacher (Participant 8), recalled how unprepared they felt to teach students with disability, when starting their job and at the time of their interview(s). These teachers’ also expressed deep concern about the lack of basic academic skills of their students with disability. Research indicates that new alternate routes to certification teachers would like more information about students with disabilities. Specifically, CTE teacher concerns regarding their lack of training and preparation to teach their students with disability is not new in the CTE literature (Casale-Giannola, 2011; Haber et al., 2008; Harvey, Cotton, & Koch, 2007; Joerger & Bremer, 2001; Schmalzried et al., 2014). Casale-Giannola (2012) found this to be a primary concern across vocational teachers, academic teachers and special educators in CTE settings. These concerns also appear pre-Perkins VI in the special education literature (Okolo & Sitlington, 1998). Only one previous survey research study with secondary teachers characterized as “vocational educators” (Harvey, 2000), seemed to indicate that CTE teachers felt secure in their abilities to teach students with disabilities; however, this study was conducted prior to the transformation of vocational education into rigor-driven CTE programming and the introduction of accountability-driven education legislation. It seems reasonable to imagine why vocational teachers fifteen years ago may have felt more secure in their abilities to meet their professional responsibilities than current CTE teachers (Fletcher, 2006).

Provide meaningful professional development. In regard to effective instructional strategies for students with disability, CTE teachers should be exposed to instructional strategies that are evidence-based during their induction process. Such
strategies exist in the areas of reading and writing (Deshler, Palincsar, Biancarosa, & Nair, 2007) and math (Maccini, Mulcahy, & Wilson, 2007). They may benefit from exposure to the Strategic Instruction Model (SIM; Bremer, Clapper, & Deshler, 2002). Although secondary teachers in general report concerns about their repertoire of instructional strategies (Berry, 2011), second-career teachers are perhaps in the most need as they are typically entering the teaching profession from industries other than education and often receive little to no pedagogical training prior to actually teaching. Research indicates that exposure to professional development related to teaching students with disabilities, even in limited amounts, can positively impact teacher perceptions of inclusion in the secondary setting (Boyle, Topping & Jindale-Snipe, 2013; Forlin, Loreman, Sharma & Earle, 2009; Van Reusen, Shoho & Barker, 2001).

In regard to professional development to help novice second-career teachers understand the needs for special education support including transition-focused support, schools should provide relevant hands-on activities for these teachers. By doing so, the time and energy they spend in professional development activities will be meaningful and applicable to their current students with disability. For example, schools may encourage their novice CTE teachers to work through the 411 on Disability Disclosure workbook for adults (NCWD-Y, 2009) in conjunction to their students with disability completing the youth version. If this is too overwhelming, have the CTE teacher actively collect transition related assessment information about their CTE students with disability required for IEP development for young adults. For example, consider having CTE teachers sit down with their students with disability and complete a “Student Interview for Transition Planning” worksheet (Kellems & Morningstar, 2010). Such an
activity might also promote the student-teacher relationship that appears so important for students with disability.

Schools may want to put into place small but consistent procedures through which CTE teachers can find out more about the transition process and needs of their students with disability. The deliberate scheduling of IEP meetings so CTE teachers can attend them is an example procedure. This can also include critical career/vocational assessment activities (Sitlington & Clark, 2001; Sitlington et al., 1997) through which the teacher learns valuable vocation-related information about a CTE student and while collecting valuable information for upcoming transition-related IEP discussions for that student.

**Consider structures beyond traditional professional development.**

Unfortunately, given the demands of being a novice teacher, there is a real possibility that a novice CTE teacher may not have time to invest in all of the activities just proposed. Schools, therefore, should go beyond traditional professional development and teacher instruction (Cochran-Smith & Villegras, 2015) in supporting their novice CTE teachers. Schools can attend to the needs of these teachers by engaging in one of more the following activities: 1) promoting a systems change within CTE curricula to address transition-related skills, 2) involving other colleagues in the induction process of these teachers, and/or 3) working with CTE students with disability to promote CTE teacher knowledge of their unique transition needs.

**Integrating transition discussions within the CTE curriculum.** In regards to systems change, CTE programs should explore the possibility of embedding disability-related transition-related skills into the common core state standards (Bartholomew, Papay, McConnell, & Cease-Cook, 2015) for CTE programs. In terms of involving
other colleagues during the induction period of novice second-career teachers, CTE programs should consider providing professional development related to the transition needs of students with disability to experienced CTE teachers who could then serve as instructional mentors for novice teachers. Research exists to provide insights into mentoring methods that have been employed to help support special education teachers entering the field through alternative routes to certification (Epanchin & Wooly-Brown, 1993; Rosenberg & Rock, 1994; Rosenberg et al. 2005; Burstein & Sears, 1998). Likewise, CTE programs may consider training special education teachers to facilitate the use of instructional and/or transition-related strategies in the novice teachers’ classroom as co-teachers and/or consulting teachers (Casale-Giannola, 2012).

**Study Limitations**

There are four important limitations to this study that must be considered by the reader. First and foremost, this study is not generalizable to other CTE teachers. This research was exploratory, looking at a specific sub-set of CTE teachers during a specific time in their professional career, their induction from the workplace to the inclusive CTE classroom.

Second, novice CTE teachers are an understudied teacher population whose perspectives have not been collected in previous known literature, which limits the possibility of comparing findings across studies. Although the researcher utilized semi-structured interviews, which are “well suited to the exploration of attitudes, values, beliefs, and motives” (Barriball & While, 1994, citing Richardson, Dohrenwend, & Klein, 1965) this type of interview may result in interviews that are more personalized to the participant (Opdenakker, 2006), but less consistent across topics discussed. For this study, even more time with each participant to fully explore all research questions...
would have helped to better ensure that all participants were able to speak to all points of interest.

Third, this research is based on teacher self-reports related to their own teaching practices and perceptions of several complex topics, which may result in bias in participant responses (Podsakoff & Organ, 1986). Because socially desirable responses (Paulhus, 1984) to questions asked about inclusion, self-determination and teaching were expected techniques were used to minimize these types of responses. These techniques included rapport building with the participant (Murrow, 2005) and question rephrasing as needed.

Fourth, the Tripartite Ecological Model of Self-Determination, as described by Abery et al. (2003), proposes seven factors within a microsystem (e.g., the CTE classroom) that can help foster the self-determination of a student with disabilities. Although seemingly distinct and categorical in nature at first, each factor is actually multi-dimensional, which posed a significant challenge for analytical purposes in this snapshot case study employing brief teacher interviews and self-reporting mechanisms. Lindsay et al. (2013) also endorse further, more detailed, exploration of microsystems within what they term as the ecological model of “barriers to employment”.

**Future Research**

Based on the experiences of this study, it is recommended that future research related to studying classrooms as microsystems within the TEM-SD do the following: 1) employ ethnographic methodology in order to more fully explore and thus define the characteristics of the seven microsystem factors that Abery and colleagues propose, 2) elicit student perspectives on the microsystem factors they see being made available in schools, and 3) cross-reference such student perspectives with teachers’ self-reports.
regarding these factors, as there may be important differences in opinion to note regarding how a student and how a teacher define a particular factor (e.g., respect and acceptance).

In terms of novice CTE teachers, future research should examine in more detail the experiences of these teachers with their students with disabilities in the classroom and within workplace experiences in particular. While this exploratory study provides initial insights into what topics to focus on in future research with these teachers (e.g., teacher perspectives regarding accommodation use), future research ought to look at more teachers and perhaps juxtapose the new CTE teacher perspectives with those of their students with disabilities.

On a broader scale, more research is needed to better understand the impact of self-disclosure training for CTE teacher and their students. The teachers who participated in this study were tasked to prepare students for the workforce but they did not see that preparation as including discussions related to disability disclosure and accommodation requests. Until there is training related to these important topics and evaluations to determine their effectiveness, it is likely that CTE teachers will continue to relegate the responsibility of talking with students about self-disclosure to special education.

**Conclusion**

This study delves into the understudied intersection of CTE and special education as it relates to novice CTE teachers with authentic and timely experiences within the workforce and the classroom. Future research should focus on expanding the methodology and scope of this study. It should also examine the feasibility and effectiveness of self-disclosure training for CTE teachers and students with disabilities.
The employment rates of adults with disabilities continue to be a problem (U.S. Department of Labor, Bureau of Labor Statistics, 2015). It is, therefore, imperative that schools find ways to better prepare youth with disabilities for successfully transitioning into the competitive workplace. In this exploratory study, a small sample of novice CTE teachers uniquely positioned because of their own recent transition from the workforce into the classroom, provided compelling perspectives on students with disabilities, the special education and transition services they receive, and disability disclosure.

Despite the limitations in the study design, this study does extend the CTE literature about new teachers and students with disabilities in two important ways. First, this study provides the reader with perceptual data from teachers via qualitative methodology, which allowed teachers to share rich descriptions of their concerns. The perceptions of CTE teachers in regard to students with disabilities and special education processes have primarily been studied via quantitative methods (e.g., Harvey et al., 2004; Harvey et al., 2005; Schmalzried & Harvey, 2014). This study builds upon the limited qualitative research on this topic (Casale-Giannola, 2012) to provide the CTE and special education field what Stebbins (2001) argues is “a more inviting and indeed accurate way of representing social research” (p. v).

Second, and more importantly, this study extends the related literature to include teacher perceptions of the school-to-work transition of CTE students with disabilities specifically. While guiding documents may endorse the involvement of CTE teachers in the formal transition processes and/or discussions related to their students with disabilities, there is little understanding of how these teachers (or CTE teachers in general) view these processes. Those views may inform their involvement in these important processes for students with disabilities. This study, albeit limited in scope,
provides additional insights into how much information new CTE teachers need to start facilitating pragmatic classroom conversations about workplace culture and expectations. It also provides some recommendations regarding how to facilitate the involvement of new CTE teachers into the school-to-work transition process.

The perspectives that these teachers shared have important implications for improving and expanding collaboration between CTE professionals with their special education colleagues to improve the post-school employment outcomes for transitioning youth with disabilities (Harvey et al. 2007, Wonacott, 2001). These perspectives also reinforce, through narration, the need for expanding current induction support to help new CTE teachers provide an inclusive and effective CTE experience for students with disabilities (National Research Center for Career and Technical Education, 2011).
REFERENCES


Parrish, T. B. (2001). Who’s Paying the Rising Cost of Special Education?. *Journal of Special Education Leadership, 14*(1), 4-12.


**Appendix A**

**LEGISLATION WITH IMPACTS ON CTE STUDENTS WITH DISABILITIES**

<table>
<thead>
<tr>
<th>Year</th>
<th>CTE – Centered Law</th>
<th>General Education</th>
<th>Special Education – Centered Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917</td>
<td>Smith-Hughes Act (P.L. 64-347)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1929</td>
<td>George-Deen Act of 1929 (P.L. 70-702)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1936</td>
<td>George-Deen Act of 1936 (P.L. 74-673)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1946</td>
<td>George-Barden Act of 1946 (P.L. 79-586)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td>Elementary and Secondary Education Act (ESEA, P.L. 89-10)</td>
<td>State Schools Act (P.L. 89-313)</td>
</tr>
<tr>
<td>1968</td>
<td>Vocational Education Amendments of 1968 (P.L. 90-576)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>The Vocational Education Amendments of 1972 (P.L. 93-203)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td></td>
<td></td>
<td>Section 504 of the Vocational Rehabilitation Act</td>
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<tr>
<td>Year</td>
<td>Legislation</td>
<td>Amendments</td>
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<tr>
<td>------</td>
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<td></td>
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<tr>
<td>1975</td>
<td></td>
<td>Education for All Handicapped Children Act (P.L. 94-142)</td>
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<tr>
<td>1976</td>
<td>The Vocational Education Act Amendments of 1976 (H.R. 12835)</td>
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<td></td>
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<tr>
<td>1982</td>
<td>Job Training Partnership Act (P.L. 97-300)</td>
<td></td>
<td></td>
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<tr>
<td>1994</td>
<td>School-to-Work Opportunity Act (STOWA, P.L. 103-239)</td>
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<tr>
<td>1997</td>
<td></td>
<td>Individuals with Disabilities Act (IDEA, P.L. 105-17)</td>
<td></td>
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<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Carl D. Perkins Career and Technical Education Improvement Act (Perkins IV, P.L. 109-270)</td>
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<td></td>
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</tbody>
</table>
Appendix B

ON-LINE TEACHER SURVEY QUESTIONS

Please answer the following thirteen questions to the best of your ability.

1. What is your name? [Insert text box]

2. What is your age?
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60 or older

3. How many years have you been teaching in career and technical education at the secondary level?
   - I just started this year.
   - I have been teaching 1-5 years
   - I have been teaching for more than 5 years.
   - It is a little complicated to answer this question. Please explain. [insert text box]…

4. Are you a CTE teacher at this time?
   - Yes.
   - No.

5. What subject area(s) do you teach now or have taught in the last five years?
   - Health services
   - Construction Trades
   - Science/Technology/Engineering/Mathematics (STEM)
   - Other. Please explain. [insert text box]

6. Prior to your current teaching position, what other career area/s did you work in?
   Please write the career area and approximate number of years per career area (for example: “accounting, 5 years, performance art, 2 years”). [insert text box]

7. Are you or have you been involved in any way with your schools’ cooperative work experience program for CTE students in your school?
8. Do you teach students with disabilities in your CTE classroom/classes now?
   - Yes. What is the approximate percentage of students with disabilities across your CTE classroom/classes? [Multiple choice: less than 5%, 5 to 10%, between 10 and 20%, more than 20%]
   - No.
   - I am not sure.

9. Since you have been teaching, what types of documented disabilities have your students had?
   - Attention deficit disorder (ADD/ADHD)
   - Autism
   - Blindness
   - Deafness
   - Emotional Behavior Disability/Disorder
   - Learning disabilities (in reading, writing, math, processing, etc.)
   - Intellectual disabilities (or “mental retardation”)
   - Physical disabilities
   - Other. Please list [Insert textbox]

10. This research is related to disabilities and how they are perceived in schools and at work. It may be helpful for the researcher to understand your personal experiences related to disabilities. What experience(s) have you had with disabilities and/or individuals with disabilities? (Check all that apply).
   - I have/had a friend with a disability.
   - I have/had a family member with a disability.
   - I have volunteered in a program for individuals with disabilities.
   - I have had no experience with individuals with disabilities.
   - I have a disability and I WOULD BE comfortable sharing my experiences related to being a person with a disability.
   - I have a disability but I WOULD NOT BE comfortable sharing my experiences related to being a person with a disability.
   - I am not comfortable answering this question at this time.

11. When you attended high school, how would you describe how students with disabilities were taught? (Check all that apply)
   - In general, my school was diverse so it seemed like students who had disabilities were included in most classes.
   - I knew some students in my school who had disabilities but we still had one or more classes together.
I saw students with disabilities at school but I don’t remember taking any classes with them.

I took “special education” classes myself and noticed that only students with disabilities were in those classes.

I never saw any students with really significant disabilities in my high school.

I am not sure, I never thought about this when I was in high school.

My high school experience was different than any of the descriptions above. Please explain. [Insert text box]

12. Do you have any questions, comments, or concerns about this research? [Insert text box]

13. What is the best way to schedule your 1-2 interview?

- Via email
- By phone [insert text box for phone number]
Appendix C

PARTICIPANT CONSENT FORM

The Research Activities:
There are 2 activities for CTE teachers who choose to participate in this research study:

1. **Participant Questionnaire:** This questionnaire provides some background information about current CTE teachers. It takes less than 5 minutes to complete. Approximately 150 teachers from four states will be invited to complete this questionnaire.

2. **Participant Interviews:** Individual interviews will be conducted with up to 30 CTE teachers selected from the Participant Questionnaire. These one-to-one interviews are scheduled at the teachers’ convenience and are expected to last 30 minutes or less. We will select teachers to interview who represent the wide range of industry and instructional experience of current CTE teachers. During this interview, the transition of students with disabilities from school contexts to workplace contexts will be discussed. Topics such as accommodations, self-advocacy, and special education transition services may be discussed. About one-third of the participants will be contacted for a follow-up interview to clarify information shared in their first interview. These interviews are expected to last 30 minutes or less.

Your Participation in the Study:

**Is Voluntary:** Doing either research activity is completely voluntary and there are no penalties for not participating, withdrawing from the study later, or not answering some questions. If you withdraw from the study, your responses to the questionnaire and/or interview will be deleted from our records. There are no risks to you.

**Is Confidential:** This research is about your experiences but your identity will be kept confidential. To make sure your identity is kept confidential, you will be assigned a numeric code during this research. This code, instead of your name, will be used to identify your questionnaire and interview responses from the responses given by other teachers. The list of participants’ names and numeric codes will be kept separate from each other at all times (each will be kept in a different locked file cabinet at the University of Delaware).

Individual responses to the questionnaire will not be reported to anyone, including your school. If you are selected for a follow-up interview, quotes from your interview may be used to demonstrate an important theme found across interviews; however, no personal, identifying information will be included with these quotes. All data collected during the questionnaire and interviews will be kept on a secure server in a password-protected account and/or in a locked file cabinet at the University of Delaware.
indefinitely. Access to this data is given only to the researcher and her advisor.

**Is Appreciated:** Although completing the survey provides no direct benefit to you, we believe this research will help researchers better understand how to support CTE teachers who work with students with disabilities. The overall findings from questionnaire and interviews will be shared with other interested researchers, educators, and policy-makers through professional meetings and publications. If you would also like a summary of the results, you can contact me at mpell@udel.edu.

**Questions:**
You can ask me questions about the study any time. My contact information is below. If you have any concerns about the conduct of the study contact the Chair of the Human Subjects Review Board at 210 Hullihen Hall, University of Delaware, Newark DE 19716; 302-831-2137. This research is being conducted under the supervision of the researcher’s advisor, Dr. Laura Eisenman (see contact information below).

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302.831.0532(p) / 302.831.4110(f) / eisenman@udel.edu

**AT THIS TIME, WOULD YOU LIKE TO CONTINUE YOUR PARTICIPATION IN THIS STUDY?**

- Yes.
  Your name: _________________________________________
  Your signature: ________________________________________
  Today’s date: _________________

- No.

**DO YOU GIVE YOUR CONSENT FOR AUDIOTAPING YOUR INTERVIEW?**

- Yes. Your Initials: __________

- No.

**The Research Activities:**
There are 2 activities for CTE teachers who choose to participate in this research study:

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**Is Appreciated:** Although completing the survey provides no direct benefit to you, we believe this research will help researchers better understand how to support CTE teachers who work with students with disabilities. The overall findings from questionnaire and interviews will be shared with other interested researchers, educators, and policy-makers through professional meetings and publications. If you would also like a summary of the results, you can contact me at mpell@udel.edu.

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AT THIS TIME, WOULD YOU LIKE TO CONTINUE YOUR PARTICIPATION IN THIS STUDY?

☑ Yes.

Your name: _________________________________________

Your signature: ________________________________________

Today’s date: _________________

☑ No.

DO YOU GIVE YOUR CONSENT FOR AUDIOTAPING YOUR INTERVIEW?

☑ Yes. Your Initials: __________

☑ No.
Appendix D

UNIVERSITY HUMAN SUBJECTS APPROVAL

DATE: December 28, 2010

TO: Megan Pell, M.Ed.
FROM: University of Delaware IRB

STUDY TITLE: [205978-1] Disability in Career and Technical Education: Perceptions of CTE Teachers Toward the Transitions of Students with Disabilities

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: December 24, 2010

EXPIRATION DATE: December 23, 2011

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.
## Appendix E
### CONTACT SUMMARY FORM

**CONFIDENTIAL INFORMATION**

**DISSERTATION RESEARCH SUBJECT # ________**

<table>
<thead>
<tr>
<th>Subject Qualtrics #:</th>
<th>Confirmation of Consent:</th>
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<tr>
<td>«Q9V1»</td>
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<table>
<thead>
<tr>
<th>Age:</th>
<th>Years of Teaching CTE:</th>
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<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Currently Involved in Cooperative Work Experience:</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Confirmation of Interest in Interview:</th>
<th>Future Research Interest:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiotaping:</td>
<td></td>
</tr>
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</table>

**CONTACT RECORD:**

- **RECORDED SCHOOL LOCATION:** ____State 1 ____ State 2 ____ State 3 ____ State 4
- **TYPE OF SCHOOL:** ____ COMPREHENSIVE ____ CTE CENTER ____ OTHER
- **EMAILLED THANK YOU FOR TAKING THE SURVEY**
- **Interviews:**
  - ____ conducted interview #1: ________________________________
  - ____ uploaded interview documents to secure driver
  - ____ invitation for 2nd interview
  - ____ sent transcript
- ____ conducted interview #2:

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Appendix F

SEMI-STRUCTURED INTERVIEW #1: PROTOCOL

Greet Participant at Beginning of Interview

Hello, my name is Megan Pell and I am a researcher from the University of Delaware. I am a doctoral student in the special education department and I am interested in new teachers and students with disabilities. Thank you for volunteering to participate in this study. Today’s interview should be about 1 hour. First we’ll review your rights as a participant in this study and then we’ll dive right into the questions…

Review Participant Protections

Confirm Permission to Audiotape Interviews

Interview Protocol

1. Before we really get started, I would like to know you a little better.
   a. Please tell me a little about yourself (i.e., your general interests and/or your life outside of teaching).
   a. Because we will be discussing disabilities and special education today, may I follow-up on some of your responses to my initial survey questions about personal experiences with disabilities?
2. As I have explained in my previous contact with you, one of the reasons why I’m here today to ask you about your decision to start teaching.
   a. Have you taught before coming to this school?
      i. For example at a church, synagogue, or mosque?
      ii. How about coaching?
      iii. Any teaching with adults?
      iv. How about tutoring?
      v. Any other experiences teaching prior to taking this job?
   b. How did you get this particular job?
   c. How would you compare this school to the schools you attended as a student?
3. I am also very interested in your previous experiences working in a career other than teaching.
   i. Could you describe your previous vocational/working experiences?
   ii. What did you like most about being in that career (area)?
iii. What were some of the hardest challenges in that career?
iv. Could you describe your reasons for leaving that career to start teaching?

4. I’d now like to talk about your transition from the workforce into your current teaching position now.
   a. So, how is it going/did it go?
      i. What have been/were some of the surprises in the transition process?
      ii. What have been/were the biggest challenges?
      iii. What have been/were your first successes?

5. So overall, how do you feel about your decision to go into teaching? At this point, we are going to discuss a particular interest of topic that you may have thought about in both your current teaching position and your previous workforce experiences – disabilities. I would like to know more about how your perceptions related to how individuals with disabilities are treated in both settings.
   a. Let’s start with your previous workforce experiences.
      i. Could you describe how you saw individuals with disabilities being treated in your career areas? This could include co-workers, employers, and/or customers.
      ii. In what ways, if any, did you or your company address the Americans with Disabilities Act, sometimes called the ADA?
      iii. In what ways were individuals with disabilities encouraged to discuss their disability? Do you remember seeing or hearing someone being discouraged to discuss their disability? Please explain.
      iv. In what ways were individuals with disabilities encouraged get special services or accommodations because of their disabilities? Do you remember seeing or hearing someone being discouraged to ask for special services or accommodations? Please explain.
      v. Did you have any concerns or questions about the ways in which individuals with disabilities were treated at your workplace?

b. Now I would like to talk about your current school.
   i. Could you describe how you see individuals with disabilities being treated in your school? This could include students, co-workers, and/or parents.
   ii. In what ways, if any, do you and/or the school address the Individuals with Disabilities Act, sometimes called IDEA?
   iii. In what ways are students with disabilities encouraged to discuss their disability? Do you remember seeing or hearing someone being discouraged to discuss their disability? Please explain.
   iv. In what ways were students with disabilities encouraged get special services or accommodations because of their disabilities?
Do you remember seeing or hearing someone being discouraged to ask for special services or accommodations? Please explain.

v. Did you have any concerns or questions about the ways in which individuals with disabilities are treated at this school?

c. I have heard you mention some similarities and differences between how people with disabilities are treated across these two settings, the workplace and school.
   i. In terms of how people with disabilities are treated, could you tell me about any additional similarities you have seen?
   ii. How about any additional differences you may have seen in how people with disabilities are treated at work versus in school?

6. According to my initial survey, you are a CTE teacher who has some input and/or responsibilities related to the cooperative experiences of students.

   a. If so, could you help me to understand how you typically prepare your students with disabilities for their cooperative experiences?
   b. In what ways is this process of preparation similar and/or different to how you prepare your other students for these experiences?
   c. Overall, what are your concerns for all of your students entering the workforce after high school?
   d. What, if any, other observations do you have about the way the school helps students with disabilities to transition from the culture of school into the workforce culture?
      i. What seems to be working well in your opinion? Please explain.
      ii. What concerns still need to be addressed before these students are really prepared for this transition? How do you see these concerns being addressed in school?
   v. Overall, how does the special education staff at the school help prepare these students for the transition into the workforce? What do you think about this assistance?
      a. What do you like?
      b. What do you worry about in how they are helping students?

v. In special education, as you may or may not know, there are special rules that are in place that require that schools provide transition planning services for students with disabilities. These transition services try to encourage student-focused planning, the involvement of students and families at IEP meetings and students determination activities.

   a. How familiar are you with the special education transition services at your school?
   b. More specifically, how do you see the special education department encouraging students to express
their opinions, make independent decisions, and request accommodations?

c. What do you see as the advantages and possible disadvantages of these activities for the students?

v. Based on your experiences in the workforce, how should students reveal or address their disability on the job?

7. Is there anything more you would like to tell me about either your transition into teaching of your students’ transition out of school and into the workforce?

Thank you for your time and interest in this research!
Appendix G

SEMI-STRUCTURED INTERVIEW #2: PROTOCOL

NOTE #1: The italicized information is contextual information only for the researcher, not to be shared with participants

*Primary Research Questions [Consistent with Round One Interviews]:*

1. What observations do these teachers have about the transition of students with disabilities from the school context into the work context?
2. How do these teachers see themselves being involved in the school to work transition process of students with disabilities?
3. How do these teachers perceive self-determination, accommodations, and disability being interpreted within both contexts?

NOTE #2: Researcher will start interview with a review of the study’s purpose.

*Study Purpose:*
To better understand how CTE teachers perceive the transition of students with disabilities from the school context to the workplace context.

NOTE #3: Researcher will remind participant that they have protections as outlined by the IRB protocols submitted by the primary researcher. The primary researcher will confirm that audiotaping of the interview is permitted.

NOTE #4: Researcher will start interview with a review of the study’s purpose.

*Interview Questions:*

Hello again! As you may remember, I am a doctoral student in the special education department and I am researching career and technical education programming for students with disabilities. Thank you for volunteering to participate in this study. Today’s interview should be about 30 minutes First we’ll review your rights as a participant in this study and then we’ll dive right into the questions…
1. I’d like to ask you for your observations regarding the transcript from your interview. [RQ1]
   a. Where there any surprises? Please tell me more.
   b. In what ways did those comments reflect (or not) your current perspective? Please tell me more.
   c. Is there anything you would like to add or comment on from your original responses to the interview questions? Please tell me more.

2. Next, I’d like share with you the types of responses shared by you and the other initial participants in the research. [RQ2] [RQ3]

School

I TRY TO TREAT STUDENTS WITH DISABILITIES AND STUDENTS WITHOUT DISABILITIES THE SAME

- What do you think about these responses?
- In what ways do these responses reflect (or not) your perspective now, __ months later?
- What might you add to these responses at this time (if anything)?

ACCOMMODATIONS ARE GOOD BUT NOT ALWAYS NECESSARY

- I provide accommodations to any student in my class who needs it.
- Students with disabilities can rely too heavily on accommodations.
  - I challenge them to try activities without them.

- What do you think about these responses?
- In what ways do these responses reflect (or not) your perspective now, __ months later?
- What might you add to these responses at this time (if anything)?

I HAVE SOME QUESTIONS ABOUT SUPPORTING STUDENTS WITH DISABILITIES

- I worry sometimes about the academic expectations for and preparation of my students with disabilities.
- I wish I had more support to help me teach students with disabilities.
- I don’t know of any special transition programs for students with disabilities.
- Persistence is a concern for students with disabilities.
• What do you think about these responses?
• In what ways do these responses reflect (or not) your perspective now, ___ months later?
• What might you add to these responses at this time (if anything)?

NEW TEACHERS ARE DIFFERENT
  o New CTE teachers can have a different perspective than older teachers in a school.
    ▪ About how to teach students.
    ▪ How to better prepare students for the real world of work
  o Inclusion has its benefits and its challenges.
• What do you think about these responses?
• In what ways do these responses reflect (or not) your perspective now, ___ months later?
• What might you add to these responses at this time (if anything)?

Work

I EXPECT MY STUDENTS WITH DISABILITIES AND STUDENTS WITHOUT DISABILITIES TO HAVE THE SAME OUTCOMES IN THE WORKFORCE.
• What do you think about these responses?
• In what ways do these responses reflect (or not) your perspective now, ___ months later?
• What might you add to these responses at this time (if anything)?
  o EMPLOYEES NEED TO DEVELOP, PRACTICE, AND MAINTAIN GOOD INTERPERSONAL SKILLS.
• How does this relate to your students with disabilities in particular?
• What do you think about these responses?
• In what ways do these responses reflect (or not) your perspective now, ___ months later?
• What might you add to these responses at this time (if anything)?
  o EMPLOYEES NEED TO DEVELOP, PRACTICE, AND MAINTAIN RESILIENCE IN THE FACE OF DIFFICULT SITUATIONS AT WORK. HOW DOES THIS RELATE TO YOUR STUDENTS WITH DISABILITIES IN PARTICULAR?
• What do you think about these responses?
• In what ways do these responses reflect (or not) your perspective now, ___ months later?
• What might you add to these responses at this time (if anything)?
Accommodations are rarely discussed at work, at least they are rarely discussed formally.

- What do you think about these responses?
- In what ways do these responses reflect (or not) your perspective now, ___ months later?
- What might you add to these responses at this time (if anything)?

Disability Discussions

3. You might remember this question from your first interview. It pertains to some specific transition issues for people with disabilities that you may have observed as a teacher and as a professional in another career before teaching. [RQ3].

Based on your workforce and teaching experiences, what advice do/would you give your students with disabilities about:
  i. Revealing or discussing their disability on the job?
  ii. Asking for accommodations on the job?
  iii. Reporting disability discrimination on the job?

Application of Research Findings

4. Possible next steps
  - In what ways do you think these types of responses could and/or should be addressed in professional development activities for CTE teachers (if at all)?
  - In what ways do you think these types of responses could and/or should be addressed for CTE students with disabilities (if at all)?

5. Is there anything more you would like to tell me about either your transition into teaching or your students’ transition out of school and into the workforce?
Appendix H

WAVES OF ANALYSIS

<table>
<thead>
<tr>
<th>Wave</th>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
<th>Wave 4</th>
<th>Wave 5</th>
<th>Wave 6</th>
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<td>Analysis</td>
<td>1st Level Open-Coding</td>
<td>1st Level Open-Coding</td>
<td>Initial Pattern Coding</td>
<td>Member Check</td>
<td>Final Pattern Coding</td>
<td>Theoretical Framework Coding</td>
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<tr>
<td>Purpose</td>
<td>Evaluate Protocol #1 and examine concepts emerging from interviews</td>
<td>Continue to identify cross-case patterns in the data to address in Protocol #2</td>
<td>Identify level of response consistency within and across subjects</td>
<td>Construct a final list of cross-case patterns in the data and divergent views</td>
<td>Determine level of coherence between the TPM-SD</td>
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TPM-SD = Tripartite Model of Self-Determination (Abery et al., 2003)
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<th>Cluster</th>
<th>Sample Programs</th>
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<td>1. Agriculture, Food, &amp; Natural Resources</td>
<td>Plant Systems; Animal Systems</td>
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<tr>
<td>2. Architecture &amp; Construction</td>
<td>Electrical Trades; Plumbing</td>
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<td>3. Arts, A/V and Communications</td>
<td>Printing Technology; Visual Arts</td>
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<td>4. Business, Management, &amp; Administration</td>
<td>General Management; Marketing</td>
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<td>5. Education &amp; Training</td>
<td>Professional Support Services/; Teaching/Training</td>
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<td>6. Finance</td>
<td>Securities &amp; Investments; Business Finance</td>
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<td>7. Government &amp; Public Administration</td>
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<td>8. Health Science</td>
<td>Diagnostic Services: Health Informatics</td>
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<td>9. Hospitality &amp; Tourism</td>
<td>Lodgings; Travel &amp; Tourism</td>
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<td>10. Human Services</td>
<td>Family &amp; Community Services; Personal Care</td>
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<td>11. Information Technology</td>
<td>Network Systems; Interactive Media</td>
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<td>12. Law, Public Safety, Corrections, &amp; Security</td>
<td>Legal Services; Law Enforcement Services</td>
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<td>13. Manufacturing</td>
<td>Production; Quality Assurance</td>
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<td>14. Marketing</td>
<td>Professional Sales; Buying and Merchandising</td>
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<td>15. Science, Technology, Engineering, &amp; Mathematics</td>
<td>Biotechnology; Engineering and Technology Health</td>
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<td>16. Transportation, Distribution &amp; Logistics</td>
<td>Safety, and Environmental Management; Logistics Planning &amp; Management Services</td>
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Adapted from *Advance CTE (n.d.)* [https://www.careertech.org/careerclusters](https://www.careertech.org/careerclusters)
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<th>Participant (Number of Interviews)</th>
<th>CTE Field</th>
<th>Years of Prior Experience in Related Workforce</th>
<th>Year Teaching CTE</th>
<th>Secondary School Structure Experience</th>
<th>Percentage of Students with Disabilities</th>
<th>Disabilities in Classroom</th>
<th>Co-op Teaching Experience</th>
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