SPECIAL EDUCATION AND CAREER AND TECHNICAL EDUCATION

COLLABORATION AND COMMUNICATION:

PROCESS, PRACTICE, AND PERCEPTION

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Dedicated to Lee and Nate, and
my mom and dad:

Boys – thank you for always being there,
supporting me, and keeping me grounded.
I am blessed.

Mom and dad – thank you for all that you did
and all that you gave up so we could
be what we wanted. I miss you both.
The purpose of this study was to explore the current practices used by secondary educators (special education teachers and guidance counselors) and stand alone career and technical education (CTE) center teachers when working with students with disabilities from home high schools participating in secondary CTE programming. In addition, this study looked at the perceptions that each educational system (high school and secondary CTE) had in regards to need and responsibility when working with these shared students. Participants for this study included CTE teachers and administrators from stand alone CTE centers in the state of Indiana and secondary special education teachers and guidance counselors from high schools feeding into those centers. Study participants were provided a paper/pencil survey and asked to respond to survey questions using both Likert-type scale and forced choice questions. Demographic data were gathered that included gender, age, position, years in position, years in education, and current classroom/service delivery setting. Participants were asked to rate statements regarding the level and types of communication and collaboration that were taking place between CTE teachers and their respective high schools (special education teachers and guidance counselors). The study found that there was inconsistency in the methods that were
used to share information about students with disabilities and who was responsible for providing that information. A relatively high percentage of respondents did not have any knowledge about how information was shared. The study also found that many respondents (CTE and secondary educators) did not feel regular communication took place between the two systems in regards to students with disabilities. Overall, this study found that the responses provided by CTE and secondary education (special education teachers and guidance counselors) were varied based upon respondents personal involvement or responsibility. Recommendations are made for both local and state follow-up to investigate how CTE and special education are communicating and collaborating on behalf of students with disabilities. Further research is needed in order to establish and implement more consistent practice and process related to communication and collaboration between CTE and high school personnel (special education). This study was exploratory, designed with a targeted sample (n = 131) that provides important results and useful insight that can be instructive for further conversation and research.
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CHAPTER ONE

Overview

“We must ensure that every student graduates from high school” (U.S. DOE, A Blueprint for Reform, 2010, p. 1). When students graduate from high school or reach the age of majority (age 18) most naturally they enter a time of decision making that will move them into adulthood. Those decisions may include going on to post secondary school, enrolling in vocational training, living independently, or seeking gainful employment [20 U.S.C. 1401(34)]. For students with disabilities, however, this progression is not always natural or successful. Students with disabilities often need a more organized, and more involved, plan to prepare for their futures. This organized effort to help students prepare for what they are going to do after high school is commonly known as transition planning (Flexer, Baer, Luft & Simmons, 2008). In 1990, the federal legislation governing special education (The Individuals with Disabilities Education Act [IDEA]) defined new rules regarding this progression, or “transition” of students with disabilities through high school and into adulthood. IDEA 1990 (PL 101-476) defined Transition Services to be “a coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including employment (including supported employment), continuing and adult education, adult services, independent living, or community participation.” This law validated the need for more coordinated efforts between educational systems to better prepare students with disabilities for post secondary education, employment, and adult living.

One avenue that had long been utilized to meet the employment and post secondary needs of students was vocational education (now Career and Technical Education – CTE).
According to the Association for Career and Technical Education (ACTE), CTE was designed to “prepare both youth and adults for a wide range of careers which require varying levels of education” (www.acteonline.org, 2009). The goal of CTE is to assist students in gaining skills that would lead to better post secondary outcomes. Likewise, the goal of secondary special education is to assist students in meeting their academic, social, and vocational goals to lead to better outcomes. A natural connection of individual, outcome oriented programming has long existed between special education and career and technical education (CTE). Many students with disabilities have accessed CTE. Though a current national number is not available, Dr. James Greenan (personal communication, April 27, 2010) believes that between 40 and 50% of students attending CTE centers are identified with some type of a disability. The National Longitudinal Transition Study 2 (2005b) interviewed and surveyed more than 8,000 youth with disabilities across the nation and found that 68% of students with disabilities had participated in some type of vocational education program while in high school. Wagner (1991) reported that students with disabilities who had participated in a vocational education program in high school were 13-48% more likely to have gainful employment after high school than those who did not participate. Test, Aspel, and Everson (2006) stated that “Career and technical education (CTE) should be a major component of transition services for the majority of students with disabilities due to the employment and training services offered, the expertise of CTE staff in preparing young people for future employment, and the important role CTE plays in many high school programs” (p. 229). Career and technical education for students with disabilities is a viable option; and the connection between CTE and special education should support this option.
Even though secondary special education and career and technical education are designed to assist students in preparing for life after high school, gaps in communication and collaboration between the two educational systems exists. The Michigan Office of Career and Technical Education (2009) pointed out that “even with the positive effect CTE programs have on students with a disability, disconnect still exists between the two educational fields” (p. 2). It is necessary for CTE and special education to develop a more organized process when working with students with disabilities who access career and technical education and special education. Collaboration between two distinct education systems does not always happen naturally. Marilyn Friend, a nationally known advocate for educational collaboration, indicated that for educators to work together collaboratively they need to develop a supportive and mutually beneficial relationship (Friend & Cook, 2010). DeFur (1997) indicated that youth with disabilities are at a crisis level within the educational systems that currently exist. She stated that “it is necessary to abandon the fragmented services we offer students and replace them with cooperative and collaborative models of working together” (p. 174).

Collaboration as a whole is needed to support students with disabilities; it is specifically needed to better implement the transition planning process and assist students in preparing for life beyond high school. Harvey (2001a) advocated that strong partnerships between vocational and special education should be developed and should include shared participation in the planning process for students. CTE teachers and special education teachers need to plan together to meet the needs of students with disabilities in the CTE setting (Wonacott, 2001). Both groups of educators bring a different piece of information and perspective to the table; if used collaboratively, student needs will be better addressed.
Ultimately, there needs to be a strong connection between career and technical education and special education to support students with disabilities during their years of educational and vocational transition.

Not only is CTE important to special education and students with disabilities during their time in high school, it is an important path to employment. One of the most important goals of transition planning is eventual successful employment (Sabornie & deBettencourt, 2004). In the 1983 Blue Ribbon Commission Report, “A Nation at Risk” student employability was an area of concern (A Nation at Risk, 1983). Students with disabilities who drop out of high school become less and less employable in the current workforce (Test et. al, 2006). The National Longitudinal Transition Study (NLTS2) reported that in 2003 over 30% of students with disabilities either dropped out of high school or earned a certificate of completion versus a high school diploma (NLTS Data Brief, High School Completion by Youth with Disabilities, 2005). Even though the NLTS2 reported that over half of students with disabilities have a transition goal directly related to employment, only 46% of those in the same group were competitively employed (High School Completion, 2005). The Office of Disability Employment Policy (ODEP) documented that in December of 2009 only 21.6% of people with disabilities were in the labor force, compared to 70% of people with no disability (2009). The literature suggests that 1) students who graduate from high school are more likely to be employed; b) students who earned a high school diploma and are employed are more likely to earn more money as adults; and c) students dropping out of high school is counterproductive to the goal of employability (Harvey, 2001a; Custer & Panagos, 1996; Flexer et al., 2008). Even though successful employment for students with disabilities has been a national concern, it has not translated into successful intervention.
Educational reform across disciplines (general education, special education, and career and technical education) continues to include elements specific to the secondary and post secondary needs of students with disabilities. Under the current educational legislation, The No Child Left Behind Act (2001) the standards for all students have been raised, including those skills needed to become competitive in America’s workforce (Fletcher, 2006). Raised standards and expectations in NCLB are expected for all students, including those with disabilities. The most recent authorization of IDEA, the Individual with Disabilities Education Improvement Act of 2004 (IDEA ’04, PL 108-446) refined the definition of transition and the planning and services needed to support students in meeting their desired outcomes. An emphasis in the IDEA re-authorization is also in the area of raised expectations for students in their current programs and raised expectations for their preparedness when they exit high school (Cortiella, 2009). Along with NCLB and IDEA the most recent Carl D. Perkins Career and Technical Education Act IV (2006, PL 109-270) addressed the need to better prepare students with disabilities for post secondary outcomes, including employment (Brustein, 2006). When addressing services for “special populations”, the Perkins Act IV expanded to include “ensuring access to career and technical education for special populations who face unique challenges, and to preparing those students for careers that will lead them to self sufficiency” (Carl D. Perkins Act of 2006, [Sec. 134(b)(8)(L)]. The Perkins Act also aligned itself to NCLB by ensuring that any gaps or disparity in performance by “special populations” would be identified and addressed. Federal and state legislation continues to define the expectations for education and very specifically outline the Perkins mandates to support students with disabilities.
To further explore the connection between CTE and special education as a viable path for students with disabilities a variety of influences need to be addressed. Historical and current educational mandates and reform in general education, career and technical education and special education have continued to more specifically define the expected delivery of services. Employment outcomes are being impacted by the labor needs of the community workplace in the current economic environment and also deserve exploration. Students who exit from high school need to be prepared for the employment needs of their local communities. Higher levels of occupational skills are needed in today’s workplace compared to 20 years ago. Along with educational mandates and employability outcomes, it is imperative to look at the practical connection between CTE and special education. It is important to discuss not only what process special education and CTE teachers use to collaborate, but also the perceptions of the current systems that are in place. Ultimately, the direct relationship that exists between career and technical education and special education staff in the form of communication and collaboration may have the greatest impact on meeting the needs of students with disabilities in the CTE environment.

**Historical Background**

To understand the current intertwined systems of career and technical education and special education, it is important to look at historical legislative practice. The first significant legislation regarding disabilities was Section 504 of the Rehabilitation Act of 1973. This Act was a civil rights law that was designed to eliminate discrimination on the basis of disability in any program or activity that received federal funding (U.S. Department of Justice, 2005). In 1975, the first major special education legislation was passed. The Education for All
Handicapped Children Act (EAHCA), or PL 94-142, was considered to be the Bill of Rights for students with disabilities. Public Law 94-142 had six major components:

1) That all students with a disability must be provided a free and appropriate public education (FAPE) at no cost to the family.

2) That students would be educated in the least restrictive environment (LRE) and to the maximum extent appropriate, with students without disabilities.

3) The development and implementation of an Individual Education Program (IEP) to meet the student’s specific needs.

4) The right to procedural Due Process.

5) Nondiscriminatory educational evaluation prior to placement in special education.


In 1983, an amendment to PL 94-142 provided the first special education legislation that included secondary transition services. Within this amendment (PL 98-199), monies were made available by the federal government to plan transition programming that would help students develop independence (Sabornie & deBettencourt, 2004).

In 1983, Madeline Will, then secretary of the Office of Special Education and Rehabilitative Services, introduced a model of transition, called the Bridges Model (Flexer, et al., 2008). This school-to-employment model established transition services as a federally recognized activity and addressed the need for special educators and adult service providers to be connected on behalf of students with disabilities (p. 42). In 1984 Will led a new charge for a Regular Education Initiative (REI), advocating that students with disabilities should be educated in the general education environment with their non-disabled peers (Crockett &
Kauffman, 1999). Fuchs and Fuchs (2005) have interpreted the REI movement and its large scale impact as being its broader aim of transforming general education into a more instructionally responsive system that would accommodate a large majority of children with disabilities and reduce the size and cost of special education. After its inception, the Regular Education Initiative developed into mainstreaming and inclusion. Inclusion, though never a legal mandate, was based on the philosophy that students with disabilities deserved to be educated along-side their non-disabled peers (Kauffman & Hallahan, 2005). The impact of this delivery model shift was felt in special, general, and vocational education (CTE). One of the intents of inclusion was to improve the likelihood of successful post school outcomes for students with disabilities (Cook & Rumrill, 2000). Cook and Rumrill (2000) explain that students with disabilities who are included vocationally may have a better opportunity to be exposed to, and learn, appropriate job related social and behavioral skills, which can lead to more successful employment. An added benefit of inclusion is the impact is has on non-disabled peers, teachers, and employers. Inclusion within the vocational environment might “change and normalize the attitudes of the larger society toward the potential and skills of individuals with disabilities” (Cook & Rumrill, p. 18).

The movement to prepare students for adult life came to full fruition with the 1990 reauthorization of the EAHCA, which was re-titled the Individuals with Disabilities Education Act (IDEA). This reauthorization established mandates that all students with disabilities, beginning no later than age 16 (age 14 when appropriate) would have a written Individual Transition Plan (ITP) that would include an outcome based set of activities that would drive the student’s educational program. By the time of the 1990 reauthorization, there was serious concern about the readiness of students with disabilities to transition into
adulthood (Test, 2006). “A Nation at Risk” (1983) had earlier brought to the forefront concerns about students being employable upon graduation. This document created a concentrated effort to provide students with skills needed in the workforce. In 1990, the authorization of the Americans with Disabilities Act (ADA), an extension of Section 504, was intended to protect and accommodate those with disabilities in the workforce (U.S. Department of Justice, 2005). The continued momentum in the area of secondary transition for students with disabilities was seen again as IDEA was reauthorized in 1997. At that time transition services became a mandate for students at age 14 and included a focus on the student’s course and choice of study. Educators were given the task of looking at student outcomes in many different life domains including: employment, community access and integration, independent living, and post secondary education (IDEA ’97, PL 105-17).

When federal education legislation is reauthorized, changes are typically driven by three sources: 1) student needs and outcomes; 2) political and societal design; and 3) budgetary constraints and allocations. It is a balance of these issues that ultimately impacts the direction that education will take. As the face of education continued to change and additional student needs were identified, IDEA was again reauthorized. The Individuals with Disabilities Education Improvement Act (IDEA 04), which passed in 2004, continued to support the strong parameters that had been put in place in the area of individual transition planning for students with disabilities. The most current reauthorization of the Individuals with Disabilities Education Act (IDEA) (2004) defined transition services as:

A coordinated set of activities for a child with a disability that is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to post school activities, including postsecondary education, vocational education, integrated employment, continuing and adult
education, adult services, independent living or community participation; and is based on the individual child’s needs, taking into account the child’s strengths, preferences, and interests; and includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation [(34 CFR 300.43(a)]).

IDEA (2004) also changed the beginning age of transition planning from age 14 back to the original age 16. In Indiana, the interpretation of IDEA is Indiana Article 7: Special Education Rules 511. Keeping with the same basic definitions as IDEA, Article 7 kept the earlier age (14) of transition planning, which was significant to support earlier planning for students. Special education law has consistently attempted to reflect the identified needs of its population, both during their years in public education and preparing them for independence when they exit.

Not only has the path of special education had a significant impact on how special education and CTE collaborate; vocational education played a similar role. The first Vocational Education Act (PL 88-210) in 1963 included the “provisions and language to serve students with special needs in vocational education” (Harvey, Cotton & Koch, 2007). Students with disabilities were to have access to regular vocational education programs and federal funding was set aside to meet that goal. Since that time, the Carl D Perkins Career and Technical Education Acts (1984, 1990, 1998 & 2006) have included language to further the development of vocational programs for students with disabilities, as well as further the development of successful student outcomes (Association for Career and Technical Education, ACTE, 2009a). The initial Carl D. Perkins Act of 1984 mandated the right of students with disabilities to have access to and participate in the least restrictive environment of vocational education (Okolo & Sitlington, 1988; Threeton, 2007). The reauthorization, the
Perkins Act II in 1990, was developed around the concern that the U.S. was falling behind other nations in its ability to compete in the global marketplace (Threeton, 2007). Therefore, the focus was on strengthening workforce preparation, more academics, and a stronger connection between school and work (Threeton, 2007). The third re-authorization, Perkins III, in 1998 was based upon accountability and academic and technical performance (Threeton, 2007). The most recent re-authorization is the Carl D. Perkins CTE Improvement Act of 2006 (PL 109-270). The current Perkins Act (IV) aligned itself with NCLB, not unlike IDEA ’04, and included greater accountability for the integration of academic standards (ACTE, 2009a). Perkins IV, for the first time, very specifically defined the role of the guidance counselor in assisting students in career planning (Threeton, 2007). It also stressed the development of the individual student and the need for CTE teachers to understand the specific needs of students. In relationship to students with disabilities, Perkins IV assures students with disabilities access to career and technical education and strives to identify gaps in opportunities and performance (Carl D. Perkins Act IV, 2006). According to the Association for Career and Technical Education (ACTE) one of the major desired outcomes of all of the Carl D. Perkins Acts has been to ensure access to career and technical education for special populations, including students with disabilities (ACTEonline.org, 2006). Plank, DeLuca, and Estacion (2005) reiterated a statement presented by the Advisory Committee for the National Assessment of Vocational Education (NAVE), that career and technical education empowers students by providing opportunities that serve many different learning styles.

Along with special education and career and technical education, general education has been legislatively impacted by the needs of students with disabilities. The Elementary
and Secondary Education Act (ESEA) was passed in 1965 by congress and signed into law by President Lyndon Johnson. The emphasis of this act was to provide equal access to students and raise the level of academic expectations (Center on Education Policy, n.d.). Imbedded in the earliest, and subsequent revisions of the ESEA, are qualifiers for services and accountability in serving students with disabilities. The current impact of the re-authorized ESEA, the No Child Left Behind Act (NCLB) 2001 is discussed in detail in the following section. In addition to the ESEA, Section 504 of the Rehabilitation Act of 1973 (which started out as a civil rights law) became an important piece of education law. A student who qualified under Section 504 in public education is a student who must:

“Be determined to have a physical or mental impairment that substantially limits one or more major life activities including learning or behavior. Have a record of having such an impairment or be regarded as having such an impairment” (National Resource Center on ADHD, 2009).

When this determination is made, students meeting the 504 criteria are ensured equal access to education, including appropriate accommodations (National Resource Center on ADHD, 2009). In essence, this means that a student, who does or does not qualify under the special education law (IDEA), may be protected under Section 504. As the needs of secondary students with disabilities grow, special education, career and technical education, and general education legislation will continue to evolve to meet the needs.

**Current Education and Legislative Reform**

President Barak Obama states in the *Blueprint for Reform* (U.S. DOE, 2010) that education must ensure that all students graduate from high school prepared for college and a career. His statement is imbedded in the current discussion revolving around the impending
reauthorization of the Elementary and Secondary Education Act (No Child Left Behind Act, 2001). Along with the college and career ready agenda, the upcoming reauthorization specifically addresses a raised and rigorous, but fair, level of accountability for all students, including those with disabilities. The *Blueprint* acknowledges that though states have developed standards under the current law, the concern is that these standards do not always reflect the knowledge and skills that students really need to be successful on a job or in further education (2010).

As education awaits reauthorization, the current legislation and alignment at both the national and state level includes the challenge of meeting the many mandates handed down by the No Child Left Behind Act of 2001 (NCLB). Both NCLB and IDEA (2004) have raised the standards of education for students with disabilities. These pieces of legislation (IDEA 04 & NCLB) are a complement to one another. Higher expectations for students and teachers, as outlined in NCLB, should lead to better long term outcomes. The mandate by NCLB that all students reach an optimum level of academic performance and pass state proficiency tests to receive a high school diploma, however, can conflict with the individual needs of many students with disabilities (Gaona, 2004). The National Youth Employment Coalition (2007) reported that though NCLB has brought to light the disparity that exists in the educational system, it has not provided solutions for struggling students (para. 2). In fact, a report by Fatt, Harris, Thakur, and Larsen (2007) indicated that NCLB may speed up the disengagement of students by requiring an unobtainable level of proficiency. In *Improving Educational Outcomes for Students with Disabilities* (2004), the National Council on Disability (NCD) explored the concerns surrounding the increased mandates from NCLB. Though the council supported the increased expectation for students with disabilities, they
documented their concerns about the unintended consequences of pushing students beyond their intellectual means (p. 5-6). The National Center on Secondary Education and Transition (NCSET) further outlined unintended consequences as including those things education has been trying to avoid: higher dropout rates, lower self esteem, and long term lower employability (2009). Trying to balance legislative mandates with meeting the individual needs of students presents a challenge to educators.

The task of the special education system is to not just meet academic needs, but to support all areas that will lead students to becoming self fulfilled and sufficient adults. One of the concerns regarding raised expectations both for individual courses and for high school completion is that they may leave students without the option of participating in career and technical education. The National Council on Disability (NCD) (2004) expressed the importance in finding ways to allow students with disabilities to show their abilities, beyond just the classroom. Of concern in the NCD study was whether or not students with disabilities were given an appropriate level of support as they tried to balance a typical high school schedule and a vocational schedule. It is important that a student with a disability have the means to learn a vocational trade while trying to meet the requirements for a high school diploma (NCD, 2004). The NLTS2 (Reports and Fact Sheets, 2005) found that 49.6% of the students with disabilities that were interviewed had participated in some type of vocational course or program during their high school experience. A synthesized report by Anne-Marie Knokey (2006) stated that students were becoming less likely to be able to participate in vocational education, due to increased requirements of academic courses. For many students with disabilities the legislative agenda and mandates have become and will continue to be, a significant educational challenge. The responsibility special educators and
career and technical educators now share is how to best identify and serve the career and vocational needs of students identified with disabilities while balancing the federal and state regulations.

Along with the historical path that led to secondary transition planning and the past and current educational legislation, there is a practical piece to providing collaborative services for students in the vocational environment – employability. Knokey (2006) found that over 50% of students with disabilities at the secondary level have a goal that is directly related to postsecondary employment. The state of Indiana has collected data from students with disabilities as they exit high school and one year post graduation through the Indiana Post Secondary Follow up Study (INPSFS). Since 2005-06 the number of students with disabilities exiting Indiana high schools who were gainfully employed has continued to decrease (Harvey & Choi, 2007, 2008, 2009). In addition, data for students exiting high school indicated that those who had participated in a work or vocational experience were more likely to be in paid employment than those who did not (Harvey & Choi, 2009). Knowing that a significant number of students with disabilities are looking for employment after high school and that a similar number of students are involved in vocational/career education programs further demonstrates the need for a strong connection between the two educational systems.

Collaboration and communication between two educational systems is not a new concept. General education and special education have been working at developing strong relationships on behalf of students with disabilities for many years. Though there is not a large body of literature in regards to the relationship between CTE and special education, there is a great deal of information about the relationship between general education and
special education. This information can, hopefully, be used as a basis for understanding the needs in forming strong partnerships and the challenges and barriers that might arise. Mainstreaming, inclusion, and Response to Intervention (RTI) are perhaps three of the strongest examples of educational “movements” where collaboration and communication between educators is a necessity to meet the needs of students. Mainstreaming and inclusion can both be defined for the purpose of this study as placement of students with disabilities in classrooms or programs with their peers who do not have disabilities (Friend & Cook, 2010). Inclusion, the most recent term used for integrating students with disabilities is based upon the belief that all students are entitled to be fully participating members of their school classrooms and communities (Friend & Cook, 2010). The basic philosophy of inclusion began as far back as the 1960’s and 1970’s when concern arose about special education delivering watered down curriculum that did not prepare students with disabilities for life after high school (Cook & Rumrill, 2000). Though it is not a mandate of any education law, inclusion is a reflection of the requirement that students be educated with nondisabled peers to the maximum extent appropriate. A review of literature regarding inclusion and the challenges that it poses to educators will shed light on many parallel challenges for CTE and special education.

Collaboration and communication on behalf of students with disabilities has continued to grow. Legislative mandates as well as best practice have increased the amount of time general education, special education, and career and technical education work together to meet the needs of all students. Mainstreaming and inclusion both began in the 1980’s and have continued to be utilized as a method to provide students with disabilities opportunities in the least restrictive environment within educational settings. The current
version of IDEA (2004) included a new requirement that has also impacted where and how students with learning and behavioral difficulties are served. Response to Intervention, which is a general education initiative that has been imbedded into special education law, moves collaboration a step further by looking at interventions for students that are both research based and very proactive in scope (Bender & Shores, 2007).

Response to Intervention (RtI) has become the answer to making sure that the academic and behavioral needs of students are addressed early and with an organized, research based approach (Hall, 2008). The National Center on Response to Intervention (n.d.) defines RtI as an approach for schools to “identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions, and identify students with learning disabilities or other disabilities” (p. 2). As with mainstreaming and inclusion, RtI requires that general education and special education collaborate to meet the needs of students at all learning levels. As has been experienced with past and current educational collaboration, and currently with CTE and special education, making the integration of students with disabilities successful in educational environments is a challenge for both educators and students.

Problem

The over-riding concern from the literature is the lack of consistent and purposeful practices and procedures between career and technical education and secondary special education in regards to students with disabilities who participate in both educational settings. In addition, regular collaboration and communication regarding students, disabilities, accommodations, programming, and services is not implemented on a regular basis. Students with disabilities historically do not make the transition from the school setting to the
work setting naturally or easily (Flexer et al., 2008; Test et al., 2009). To be prepared to compete in the employment market, and to become self sustaining adults, it is imperative that an emphasis is placed on career and technical education opportunities. To make these opportunities successful, educators (especially special educators and CTE educators) must increase their commitment to collaboration and communication.

**Purpose of Study**

The purpose of this study was to investigate the practices utilized by career and technical educators and special educators to collaborate and communicate in regards to shared students identified with disabilities. Collaboration has been defined as working jointly with others, especially in an intellectual endeavor (retrieved from www.miriam-webster.com). For the purpose of this study, collaboration is defined in respect to the educational systems working together on behalf of meeting the needs of students with disabilities. Communication, though an integral part of collaboration, is defined as the actual practice of sharing information (www.miriam-webster.com). Communication is specifically defined in regards to the systems and practices that are used between CTE and special education when sharing information regarding students with disabilities. This study investigated the relationship between CTE teachers and special education teachers and looked at what processes and practices are currently in place. In addition, this research looked at the perceptions that each educational system had regarding the importance of communication and collaboration and the responsibilities that each holds. This study intended to identify what is taking place in regards to communication and collaboration between the two educational entities within the state of Indiana and what challenges and barriers might be getting in the way of best meeting the needs of students.
As transition supports and services for students with disabilities are implemented, career and technical education needs to continue to be considered as an important option. Legislation and educational reform calls for higher expectations for students in the area of academics. Employment rates and the individual vocational preparation needs of students with disabilities indicate a need for understanding between special education and CTE staff. Special education is a system based on meeting individual student needs. Career and technical education is outcome oriented. CTE opportunities for students with disabilities are desired and needed (Harvey, 2001b, Wonacott, 2001, & DeFur, 1997). Given the goals and beliefs of both educational systems, research questions looking at the practices in place to communicate and collaborate regarding shared students with disabilities were developed.
Research Questions

The research questions posed for this research study are:

1) What are the most commonly used methods of providing information to CTE teachers regarding students with disabilities?

2) How often do CTE staff and secondary education staff (special education teachers, guidance counselors) communicate regarding students with disabilities?

3) Are CTE teachers and/or administrators invited to attend Case Conferences for current and/or projected students with disabilities?

4) Are CTE teachers provided professional development or training opportunities regarding students with disabilities?

5) Are special educators provided with professional development or training opportunities regarding CTE programs?

6) What are the perceptions of CTE teachers regarding their role and responsibilities in collaboratively working and communicating with special educators students when working with students with disabilities in their programs?

7) What are the perceptions of Special Education teachers regarding their role and responsibilities in collaboratively working and communicating with CTE teachers when working with students with disabilities in their programs?
Definitions of Terms

Career and technical education (Vocational Education) (defined using the Association for Career and Technical Education [ACTE] fact sheet):

Career and technical education prepares both youth and adults for a wide range of careers. These careers may require varying levels of education – from high school and postsecondary certificates to two-and four-year college degrees. Career and technical education is offered in middle schools, high schools, community and technical colleges, and other postsecondary institutions.

Career and technical education (CTE) Stand-alone Center:

A CTE Stand-alone Center is a career and technical education center that is not physically attached or on site with a secondary building. Stand alone centers typically receive students from a number of feeding high schools within a geographical area.

Collaboration:

“to work jointly with others or together especially in an intellectual endeavor”
(http://www.miriam-webster.com/dictionary)

Communication:

“a technique for expressing ideas effectively”
(http://www.miriam-webster.com/dictionary)

Inclusion:

Placement of students with disabilities in classrooms or programs with their peers who do not have disabilities (Friend & Cook, 2010).

Indicator 13: A federal and state monitoring process to look at the following:
Percent of youth with IEPs aged 16 and above with an IEP that includes appropriate measurable postsecondary goals that are annually updated and based upon an age appropriate transition assessment, transition services, including courses of study, that will reasonably enable the student to meet those postsecondary goals, and annual IEP goals related to the student’s transition services needs. There also must be evidence that the student was invited to the IEP Team meeting where transition services are to be discussed and evidence that, if appropriate, a representative of any participating agency was invited to the IEP Team meeting with the prior consent of the parent or student who has reached the age of majority.

[20 USC 1416(a)(3)(B)]

**Indicator 14:** A federal and state monitoring process to look at the following:

The percentage of youth who had IEPs, are no longer in secondary school, and how have been employed, enrolled in some type of post-secondary school, or both, within one year of leaving high school. [20 USC 1416(a)(3)(B)]

**Least Restrictive Environment (Indicator 5):**

To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are nondisabled [20 USC 300.114 (a)(2)(i)]

**Mainstreaming:**

The integration of students with disabilities with their non-disabled peers for some portion of the school day (Kauffman & Hallahan, 2005)

**Response to Intervention (RtI):**
An approach to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions, and identify students with disabilities (National Center on Response to Intervention, n.d.).

Secondary School:

A high school, which is any combination of grades 9, 10, 11, or 12 (Indiana Department of Education. 2008, 511 IAC 7-32-82).

Student with a disability:

A student who has been evaluated in accordance with Article 7 and determined eligible for special education and related services by a case conference committee (Indiana Department of Education, 2008, 511 IAC 7-32-92).

Summary of Performance:

The public agency provides: a summary of academic and functional performance, including recommendations to assist the student in meeting postsecondary goals, for students whose eligibility terminates because of graduation with a regular high school diploma or because of exceeding the age eligibility for FAPE under State law (Individuals with Disabilities Education Improvement Act, 2004, §300.305[e][3]).

Teacher of Record:

The single special education teacher to whom a student with a disability is assigned (Indiana Department of Education, 2008, 511 IAC 7-32-97).

Transition Individualized Education Program (Transition IEP):

An IEP that is developed and in effect when the student enters into grade 9 or becomes 14 years of age (whichever comes first) or earlier if determined appropriate by the case conference committee (Indiana Department of Education, 2008, 511 IAC 7-32-48[b]).
Sec. 100 (a) “Transition Services” means a coordinated set of activities for student with a disability that: (1) are designed to be within a results-oriented process that is focused on improving the academic and functional achievement of the student with a disability; (2) are incorporated into the student’s transition IEP; and (3) facilitate movement from school to post-school activities, including, but not limited to:

(A) Postsecondary education;

(B) Vocational education or training, or both;

(C) Integrated employment, including supported employment;

(D) Continuing and adult education;

(E) Adult services;

(F) Independent living; or

(G) Community participation.

(b) The coordinated set of activities described must be based on the individual student’s needs, taking into account the student’s strengths, preferences, and interests, and include the following:

(1) Instruction.

(2) Related services.

(3) Community experiences.

(4) The development of employment or other post school adult living objectives;

(5) If appropriate: (A) acquisition of daily living skills; and (B) provision of a functional vocational evaluation.
c) Transition services for students with disabilities may be:

(1) Special education, if provided as specifically designed instruction; or

(2) A related service, if required to assist a student with a disability to benefit from special education.
Significance of Study

A more organized and collaborative process and set of procedures between career and technical educators and special educators is necessary to ensure better outcomes for students with disabilities enrolled in CTE programs. Research shows that participation alone in CTE programs leads to higher rates of employment for students with disabilities (NLTS, 2005a). Current statistics also indicate that students who are involved in a vocational program are less likely to drop out of school (Wagner, 1991). An expanded support system, including communication, collaboration, and professional development needs to be in place (Wagner, 91). The purpose of this study was to investigate the process and procedures currently used between Indiana career and technical educators and secondary educators (special education and guidance counselors) in identifying and meeting the needs of students with disabilities participating in secondary CTE. At the same time, this study looked at whether or not there are differing perceptions of how and what should be taking place and the impact it may have on student success. Identifying successes and barriers will provide critical information that can lead to attempts by career and technical education and special education to creatively problem solve in an effort to identify means to communicate and collaborate more effectively.


Basic Assumptions

This study was conducted using paper/pencil surveys, delivered in person or via U.S. Postal Service, requiring administrators, teachers, and counselors to provide demographic information. The information that is presented is an accurate depiction of the participant’s views and perceptions. All information was voluntarily provided by each participant. Based on the current research and knowledge base, the educational success of students with disabilities, lies in part, with a strong teacher-teacher relationship.

Summary

The concern regarding the outcomes of students with disabilities has been in existence for many years. While specific “transition services” have only been legally mandated since 1990, special education has partnered with career and technical education in providing services for students long before then. Regardless of the efforts between the two educational systems, students with disabilities continue to have higher dropout rates and lower employment rates than their non-disabled peers after exiting from high school. This study investigated the current methods of communicating and collaborating between special education and CTE on behalf of students with disabilities. Though exploratory only, this study strived to provide current insight into the practices and perceptions between CTE and special education regarding this relationship. Information gathered was intended for local use to the researcher and to spur broader discussion in the fields of special education and career and technical education.
Chapter Two

Literature Review

Career and technical education (CTE) and special education are both designed to meet the individual needs of students. They both legally and philosophically look at the goals and outcomes that student’s obtain in high school and upon exiting. They are also both committed to providing students with the necessary skills to prepare them for the future. To create a cohesive educational experience for students with disabilities, CTE and special education must collaborate and communicate the knowledge base and needs of their respective educational systems. In addition, what has been experienced and gleaned from related challenges in the areas of inclusion, mainstreaming, and response to intervention (RtI) models should be explored in an effort to learn from the experiences of others. A comprehensive literature review of the legislation, educational and employment outcomes, and practices and perceptions that surrounds CTE and special education sheds light on the need for further study.

Literature Search

Studies and articles reviewed were selected from journals, databases, books, dissertations, websites and submitted papers. A thorough search was conducted at Ball State University’s Bracken Library within the reference, dissertation, and thesis sections. A computer-assisted search of educational databases using Academic Search Premier and EBSCO Host provided a variety of articles for review. Searches were also conducted using the following web search engines: Google, Yahoo, Bing, Alta Vista, and Lycos. Key words including a combination of the following were used: transition, vocational education, career education, technical education, career and technical education, special education, disabilities,

A variety of educational websites were also used throughout the literature search. Key sites included, but were not limited to, the National Center on Secondary Education and Transition (NCSET), the Association for Career and Technical Education (ACTE), the Indiana Association for Career and Technical Education (IACTED), The National Longitudinal Transition Study (NLTS) 1 and 2, Council for Exceptional Children (CEC), Division on Career Development and Transition, and The National Secondary Transition Technical Assistance Center (NSTTAC).

Federal and state legislative pieces and Department of Education (DOE) documents were also accessed in an effort to look at trends and mandates. These documents and corresponding websites included links to: The No Child Left Behind Act (NCLB) of 2001, Individuals with Disabilities Individual Education Improvement Act (IDEA) of 2004, The National Longitudinal Studies I and II (NLTS), Indiana Article 7 (2008), the 2006-07, 2007-08 Indiana Post School Follow Up Study, and The Carl D. Perkins Career and Technical Education Act of 2006. In addition governmental websites utilized included: The Indiana Department of Education (IDOE), The U.S. Department of Education (USDOE), The Office

While conducting the literature review four themes became evident when looking at career and technical education and special education in some combination. The major themes which emerged for further exploration include: 1) Legislative mandates and their impact on both CTE and special education; 2) Process and practices of CTE and special education, 3) Outcome trends for students with disabilities; and 4) Collaboration and communication (practice and perception) of educators (special education and career and technical education) in working together on behalf of students with disabilities. In addition, a related and supportive theme of inclusion and inclusionary models provided a framework of past needs and challenges faced by educational systems attempting to work together.

History

At various points in history, and prior to significant educational legislation, the transition of our youth with disabilities had become an educational and societal priority (Test, Fowler, White, Richter, & Walker, 2006). To fully understand its growth over the years, each educational system will briefly be explored in this introduction and expanded in later sections. As with many educational movements, an understanding of where transition and its connection to career and technical education and special education came from supports its current status and future needs.

Career and technical education had its historical roots in 1917 with the Smith-Hughes Act, which, in essence, created Vocational Education (Skinner & Apling, 2005). In 1963 the first Vocational Education Act (VEA) was signed into law, increasing support for vocational education and related programs (Skinner & Apling, 2005). Subsequent revisions and
renaming of the VEA act have continued to “grow” vocational education and the students it reaches. Special Education was legislatively mandated for the first time in 1975 with the passing of the Education for All Handicapped Children Act (EAHCA), also known as Public Law 94-142 (20 U.S.C. § 1401 et seq). Public Law 94-142 was philosophically linked to the Civil Rights Act of 1964. The major provision of PL 94-142 was that students with disabilities had the right to a Free and Appropriate Public Education (FAPE) in the most appropriate educational environment. The first major general education legislation, the Elementary and Secondary Education Act (ESEA) was passed in 1965 and established equal access to education as well as high academic standards (20 U.S.C. § 6103). Both of these pieces of legislation, like the VEA, have been re-authorized over the years and the mandates and expectations for students and educational programs have grown.

In 1983, “A Nation at Risk”, a Blue Ribbon Commission Report “raised serious questions as to whether students in the United States were academically prepared to compete in a global economy” (U.S. National Commission on Excellence in Education. 1983, p. 34). This report carried over into public education with concerns being voiced in regards to not only student preparation but overall high school completion. This report, perhaps more than any other event, pushed for more successful student outcomes in general education, special education, and vocational education (Webb, Metha, & Jordan, 2003). In order for students to be competitive in our local, state, national, and global work force, “A Nation at Risk” called upon education to create a more academic, vocational, and inclusive system to prepare students for life after high school (1983).

In the early 1980’s, coinciding with A Nation at Risk, Madeline Will, then Assistant Secretary of the United States Offices of Special Education and Rehabilitative Services
OSERS), proposed the “Bridges from School to Work” program. Bridges, according to Will, was a solid conceptual model for vocational education and special education to use to transition students with disabilities (Will, 1984). In articulating her program, Will used the 1984 OSERS definition of transition, which included the belief that “transition was a bridge between the security and structure offered by the school and the risks of life” (Will, 1984, p.2). In Bridges, Will identified different levels of services that were needed for students with disabilities to “cross the bridge” into adult life (Whetstone & Browning, 2002). Not unlike the collaboration that was called for to implement the Bridges Model, Will was also supporting the movement of a Regular Education Initiative (REI) which called for students with disabilities to have more access to education and services, as well as experiences alongside non disabled peers (Fuchs & Fuchs, 2005). The Regular Education Initiative required collaboration between general education and special education to successfully integrate students with disabilities.

In 1985 Andrew Halpern took a critical look at transition and proposed an expanded model of Will’s that included residential and employment services. Halpern suggested that transition needed to have a more comprehensive approach and include personal factors, including self-determination and self esteem (Whetstone & Browning, 2002). Halpern’s view partly came from the narrow concept of transition that was intact in the early 1980’s and was designed to encompass services that led to employment (Halpern, 1994). Broadening the general definition of transition even further was Donn Brolin, in 1989. Brolin used the “Bridge” model by linking elementary and secondary education to many areas of transition including employment, community living, and socialization (Greene & Kochhar-Bryant, 2003). Brolin was one of the first leaders in the field of transition to begin
discussing the need of “interagency cooperation” and career curriculum for students with disabilities (Whetstone & Browning, 2002).

During the 1990s a new transition education model was introduced by Paula Kohler (Kohler, Rusch, & Chadsey, 1998). Kohler’s model focused on the importance of a broad view of education and transitions services. She developed a taxonomy that included: a) student focused planning, b) family involvement, c) program structure, d) interagency collaboration, and e) student development (Kohler et al., 1998). Student focused planning was important in this model and the main vehicle for determining students goals and needs (Flexer et al., 2010). An additional model of transition was proposed in 1998 by Siegel. This model emphasized the integration of transition with school-to-work programs (Flexer, et al., 2010). Siegel’s premise was that students should have flexibility to adjust their individualized programs as their interests and needs changed (p. 49). As transition models have developed over time and a more inclusive general, special, and vocational education have surfaced, the impact on transition has been critical. It is important to look at how these changes have legislatively come about, as well as how they have been put into practice.

Legislative mandates and their impact

An understanding of the flow of federal legislation (NCLB, IDEA ’04, Carl D. Perkins Act, 2006) to state regulations (Indiana Article 7, 2008; Public Law (PL) 221) is important to adequately meet the needs of all students with disabilities. Specifically in the area of transition planning and secondary programming, stakeholders must be knowledgeable about the requirements and potential impact of past and current legislation. At the federal level the rules governing education come in the form of rules and measures, which pass from the House and Senate on to the President to become law (Congressional Directory, 2008).
The educational laws that are being referenced in this section primarily include the No Child Left Behind Act (2001), the Individuals with Disabilities Education Improvement Act (2004), and the Carl D. Perkins Career and Technical Education Act (2006), as well as the preceding versions of each of these regulations. Once federal education laws have been made, each state legislature must pass state law that is aligned with the federal regulations (Longley, n.d.). State laws that are specifically addressed in this section include State Board of Education Special Education Rules, Title 511, Article 7, Rules 32-47, and Public Law 221. Once federal and state education legislation is passed, the local education agencies (LEA) follow those regulations through the implementation of school or board policy, procedures, and practice.

**Federal Legislation: General Education**

General education services have been driven over the years by the Elementary and Secondary Education Act (ESEA), which was initially passed in 1965. At the time of its inception the ESEA was part of the “war on poverty” and emphasized equal access to education, high standards, and accountability (Webb, et al., 2003). Since that time, the ESEA has been reauthorized many times; the most recent reauthorization being The No Child Left Behind Act (NCLB) of 2001. Two of the major goals of NCLB are, in essence, the same as they were in 1965, 1) to raise the standards for ALL students to acquire a higher level of academic skills by maximizing early student learning and 2) for educators to be accountable for continued student growth (NCLB, 2001, PL 107-110). Individually, the culmination of acquiring these skills is found in the student passing a state’s proficiency examinations. Collectively, it is found by looking at each school building and each school
corporation’s meeting of Adequate Yearly Progress (AYP), which is not only the expected level of achievement, but a necessity for federal funding and support (Fletcher, 2006).

The focus of the NCLB Act (2001) has been to raise the achievement level of all students and to close the academic performance gaps that exist (Fletcher, 2006). In meeting this goal, NCLB has imbedded many levels of accountability, from teacher quality and performance to high stakes testing for students. No Child Left Behind requires that all students, including those with disabilities, meet higher standards of achievement and pass more rigorous tests for performance and graduation (Kymes, 2004). Within the parameters set by NCLB concern has arisen over what the increased measures of student assessment means for students with disabilities; students who not only fall under the guise of NCLB, but of the federal special education regulations, the Individuals with Disabilities Education Act (IDEA). Though inclusion appears to be increasing the amount of times students with disabilities are educated in a general education environment, that environment is often not focused on meeting their individual needs (Cook & Rumrill, 2000). Historically, students with disabilities have been held accountable for their performance based on their individual abilities and individual growth through the monitoring of an Individual Education Plan (IEP) and most recently also an Individual Transition Plan (ITP). Jean Gaona (2004) from Oklahoma State University expressed concern that “because of the reform movement that began with the publication of A Nation at Risk, it is now expressed in NCLB that students’ success will be measured by a standardized test” (para. 3). Gaona stated that students with disabilities would lose out on more relevant education, specifically vocational education, in the pursuit of the more academically driven (even if not always appropriate) program. She along with Cook and Rumrill (2000) are not alone in sharing this concern. The National
Council on Disability (NCD) (2004) reported that while NCLB has created a system of accountability to support IDEA; IDEA was built on individualization, not groups (p. 22). The council expressed concern that there would be some students with disabilities who would not see their way through the standardized tests and would get discouraged. They also noted that many students with disabilities might not get the types of services they actually need (p. 32). A review of the current unintended consequences of NCLB by Johnson, Thurlow, Cosio and Bremer (2005), reported that the fallout NCLB was facing included: 1) students with disabilities failing to receiving high school diplomas, 2) higher dropout rates, 3) lowered self esteem, and 4) dissatisfaction of students and parents. Students with disabilities, according to IDEA ’04 are entitled to an Individual Education Plan and services that take place in the Least Restrictive Environment (IDEA, 2004). Though a common misconception, IDEA does not mandate that all students with disabilities be included in general education for all of their school day (Cook & Rumrill, 2000). Fletcher (2006) expressed his opinion that as NCLB raises the academic stakes for students, that CTE might be literally left out of the curriculum, especially for students with disabilities who are trying to meet the raised core content standards (p. 6).

While there is concern that raised expectations will have negative un-intended consequences for students with disabilities, there is also literature supporting this movement and the transition outcomes that could be expected. Due to the inclusion movement and the raised academic accountability, the number of students with disabilities in general education environments has significantly increased (Cook & Rumrill, 2000). The U.S. Department of Education has added emphasis on students being educated in the Least Restrictive Educational Environment (LRE). LRE has been added as a monitored indicator (Indicator 5)
by both federal and state special education programs. The expectation is that at least 80% of students with disabilities are being educated in an environment that removes them from general education less than 21% of the school day (National Dissemination Center for Children with Disabilities). Lehr, Johnson, Bremer, Cosio, and Thompson report that the major reason students with disabilities leaving high school either don’t have, or lose, jobs is due to a lack of appropriate social and behavioral skills (2004). It is believed by some that the segregation of students in a special education environment, or lack of placing them in the least restrictive environment, keeps students from being exposed to the social demands and skills needed to be more successful in the work environment (Cook & Rumrill, 2000). Though advocates see this increased time in general education a positive for students with disabilities, it is equally met by opposition.

**Federal Legislation: Special Education**

While general education has been working to meet the requirements of NCLB and the impact that it has had on students with disabilities, the federal special education legislation was undergoing its own reauthorization. The Individuals with Disabilities Education Improvement Act, was re-authorized in 2004 (U.S.C. § 1400 et seq.). The requirements for students to have a Free and Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE) did not change in the new reauthorization. The area of transition and its potential impact on special education, general education, and vocational education did, however. Though transition had been a part of special education legislation since 1990, IDEA ’04 revised what was meant in the area of transition services and outcomes (Johnson et al., 2005). In the area of secondary transition IDEA ’04 defined and outlined transition services for students with disabilities to include a coordinated set of activities that was
focused on supporting the student in their movement from secondary education to post secondary settings. These transition services would be based upon the student’s needs, strengths, and interests, and would be met through instruction, related services, and activities (a full definition is found in Definition of Terms, pages 37-38). An important point of the new mandate for services was that vocational education was specifically listed as one of the identified outcome-based activities. In addition, IDEA 04 included a new mandate requiring that all students be provided with a Summary of Performance (SOP) before they exit from school (Sitlington, Neubert, Begun, Lombard, & Leconte, 2007). The SOP is a way for schools to compile the valuable, individual information that they have regarding students to support them as they advocate for their needs as they enter adulthood (Sitlington et al., p. 7). Clearly, the intent is that planning for a student at the secondary level is meant to be individually driven and holistically based. If CTE is a student’s choice, collaboration with vocational and special education is a must to ensure successful outcomes.

**Federal Legislation: Vocational Education**

In 1994 two major pieces of legislation were signed into law by President Bill Clinton. The Elementary and Secondary Education Act (ESEA) which was reauthorized as the Improving America’s Schools Act (1994) and the School to Work Opportunities Act (1994) both addressed the growing needs of America’s students. Though no longer in effect, the School to Work Opportunities Act (STWOA) of 1994 (PL 103-239) drew further attention to the need for transition planning for all youth (Sitlington, et al., 2007). Signed into law by President Clinton, the purpose of the STWOA was to support students by offering a strong tie between classroom and occupational learning, job training and work experiences, and a connection to community employers (The American Presidency Project,
The law was based upon the congressional findings that indicated that three-fourths of high schools students in the U.S. were entering the workforce without post secondary degrees. Those same students, the Act referenced, were not prepared with the academic or entry level skills needed to succeed (Paris, 1994). Congress specifically addressed the fact that “a substantial number of youths with disabilities in the United States do not complete high school” (The American Presidency Project, 1994). In addition, the belief surrounding the implementation of the STWOA was that the U.S. was lacking in a system to help youth transition from school to career-oriented work. The effect of this legislation was long lasting, with 48 states continuing to implement related programs and services even after the law had expired (Test, et al., 2006).

An additional legislative piece driven from the vocational side of education is the Carl D. Perkins Career and Technical Education Act (2006). The overall purpose of the Perkins Act has historically been to support Career and Technical Education programs in updating and expanding their programs for all students. The Perkins Act provides a money source to Career and Technical Education programs which includes developing teachers and programs designed to support students with and without disabilities (ACTE, Carl D. Perkins, Act, 2009). In step with NCLB, the Perkins Act of 2006 mandates that CTE define and agree to measures of student performance and accountability, including special populations (20 U.S.C. 2301 et seq.). The Act specifically states that the new mandates are committed to “ensuring access to career and technical education for special populations who face unique challenges, and to prepare those students for careers that will lead them to self-sufficiency” (Brustein, 2006).
State Interpretation and Implementation

Whether the federal legislation is NCLB, IDEA ’04, or the Perkins Act, individual states must develop plans to carry out the federal mandates while meeting the unique needs of locations, corporations, and students.

State Legislation: Special Education

State rules must adhere to the minimum IDEA requirements as outlined by federal legislation. In Indiana, the legal interpretation of IDEA ’04 is the Indiana State Board of Education Special Education Rules, Title 511, Article 7, Rules 32-47, which were reauthorized in August of 2008. Many states, Indiana being one, have often provided an even higher level of involvement and/or service than the federal statutes require. When the Indiana Division of Exceptional Learners crafted the reauthorized Article 7 in 2008, the challenge was to keep the concept of individualized education intact for students with disabilities, while raising the bar of academic and outcome standards (Nancy Zemaitis, personal communication, June, 2008). One area that Article 7 continues to exceed the federal regulations is in the timing of transition planning for students with disabilities. IDEA 04 requires that transition planning begin by age 16. Indiana’s Article 7 mandates that the planning for transition for students with disabilities must be in effect “when the student enters into grade 9, or becomes fourteen years of age 14” (511 IAC 7-43-4, sec 4a, 2008). This means that educators begin looking at outcome based activities and options even younger than the national average. Career and technical education is an often discussed program for students with needs and interests in the many work and career related fields.

When IDEA was reauthorized in 2004 individual states were required to monitor progress on certain defined federal indicators. In the area of transition, these annual
monitoring pieces are found in Indicator 13, Indicator 14, and the Summary of Performance (SOP) of federal regulations. Indicator 13 (Appendix H) is defined as:

Percent of youth with IEPs aged 16 and above with an IEP that includes appropriate measurable postsecondary goals that are annually updated and based upon an age appropriate transition assessment, transition services, including courses of study, that will reasonably enable the student to meet those postsecondary goals and annual IEP goals related to the student’s transition services needs. There also must be evidence that, if appropriate, the student was invited to the IEP Team meeting where transition services are to be discussed and evidence that, if appropriate, a representative of any participating agency was invited to the IEP Team meeting with prior consent of the parent or student who has reached the age of majority [20 U.S.C. 1416(a)(3)(B)].

In short, schools are required to develop annual Transition IEPs that address the courses of study and post-school outcomes that student’s hope to achieve. Students are also required to be invited to be participants in their IEP meetings, unless it is otherwise deemed not appropriate. Indicator 13 is technically a checklist to make sure that the definition of Transition Services in IDEA is being upheld. Monitoring of Indicator 13 is done annually by the Indiana Department of Education by reviewing cross sections of student Transition IEPs and using a checklist similar to that in Appendix H.

Indicator 14 is more succinct and is an outcome-based follow up indicator. It says that students who are no longer in secondary school will be monitored to see what percentage are employed and/or enrolled in some type of postsecondary school one year after they graduate (The National Dissemination Center for Children with Disabilities, 2007). In Indiana, this has been monitored by the Indiana Post School Graduate Follow-up Studies, which have been reported within this text. The final federally regulated and state administered monitoring piece is the Summary of Performance (SOP) (Appendix I). The SOP must be provided by the school when a student with a disability is exiting. The SOP
includes a summary of the student’s academic achievement and functional performance, and also includes recommendations of how to assist the student in meeting their post secondary goals (National Secondary Transition Technical Assistance Center, 2009). Flexer et al., (2008) stresses the importance of student involvement in completing this exiting tool. It is, technically, a resume for the student with a disability as they enter post secondary education, training, or employment. All of these state regulation and monitoring pieces ensure that students with disabilities have a plan in place while they are in high school that will support them as they transition into adulthood.

**State Legislation: General Education**

On the general education side, there are also state monitoring pieces put into place to determine the progress that schools are making in meeting the requirements of NCLB. In the state of Indiana, Public Law (PL) 221, which was enacted in 1999, is the education reform law that meets that end. The long term goal of PL 221 mirrors that of NCLB, for schools and students to achieve at a higher standard (IDOE, Public Law 221 Fact Sheet, 2006). Each school corporation and building is required to have a plan in place that addresses building, corporation, and state education needs. There is a natural impact for students with disabilities where PL 221 is concerned. PL 221 plans typically have an academic goal of students meeting federal and state standards. This most always includes assessments where students with disabilities are expected to take the regular statewide assessment (ISTEP in the state of Indiana) and achieve passing scores. Even with accommodations and alternative assessments for students with significant disabilities, PL 221 may have some of the same unintended consequences for students with disabilities.
**State Legislation: Career and Technical Education**

From the federal level to the state level, each state Department of Education has a division that is designed to support Career and Technical Education. In Indiana that is the Division of College and Career Preparation. Just as PL 221 supports NCLB and Article 7 supports IDEA, The Indiana CTE Performance Improvement Plan supports the legislative mandates of the Carl D. Perkins Career and Technical Education Act of 2006 (Indiana Department of Education, Division of College and Career Preparation). These plans are created by each CTE center and outline the methods and monitoring that will take place to meet the national standards (Indiana Association for Career and Technical Education). Part of each state and local CTE Performance Improvement Plan is dedicated to how students with disabilities will be given access to, and supported in, career and technical education.

Legislatively, the literature supported that both federal and state regulations require organized effort to plan for the transition needs of students with disabilities. An understanding of the overall premise of the legislation and specifically how it comes to life in each state and school corporation is imperative in meeting the diverse needs of students with disabilities. When a legal framework is established it leads to educational change. When we are required to raise the academic stakes and accountability for all students we are led to look at the impact on students with disabilities. When we are required to develop a Transition IEP that addresses student outcomes we should be led to look at what the current outcomes are for students with disabilities, nationally, state-wide, and locally. When we are required to look at a coordinated set of services, including career and technical education, we are led to look at how coordinated are our activities and who are we coordinating them with. Legislation surrounding transition services for students with disabilities leads to a review of
current practice and student outcomes, which leads to related research and studies, which ultimately should impact change.

**Related Research: Inclusion & Inclusionary Practices**

There is not a significant body of literature that is directly related to the relationship between CTE teachers and special education teachers and how they work on behalf of student with disabilities. There is, however, a large base of information and research discussing related educational partnerships on behalf of students with disabilities. As has been mentioned, throughout the years many changes have been made regarding the education of students with disabilities. In the 1980’s the Regular Education Initiative (Will, 1984) and the 1990’s inclusion movement were built around students with disabilities being educated in an environment with their non-disabled peers. Students being educated in a general education environment, naturally, required general and special education teachers to work together. Similarly, the current practices of co-teaching and response to intervention have also put general and special education teachers in the position of needing to collaborate and communicate on behalf of students with disabilities. The lessons learned, and still being faced, should provide insights for CTE and special education teachers as they work together to meet the needs of students.

The Education for All Handicapped Children Act (EAHCA) of 1975 required that students with disabilities be educated in the least restrictive environment, meaning that students should be educated where they required the least amount of special education support. In the early 1980’s, some individuals and advocacy groups challenged that the least restrictive environment for all students was in the general education classroom (Kauffman & Hallahan, 2005). This led to a movement of fully including students with disabilities; not a
legal mandate, but a philosophical belief. This change in some educational thinking put
special education and general education in the position of sharing students, spaces, and
accountability. One of the main concerns of the inclusion movement was that general
classroom teachers would become more responsible for the education of students with
disabilities without the benefit of proper training (Mock & Kauffman, 2002). Perhaps one of
the greatest lessons learned in the 1980’s was that asking general educators to primarily meet
the needs of all students without proper support and training can lead to anger, hard feelings,
and the loss of focus on students (Mock & Kauffman, 2002). A more moderate approach to
inclusion has been in the form of mainstreaming. Mainstreaming typically has meant that a
student with a disability is integrated with their non-disabled peers for a portion of the school
day (Kauffman & Hallahan, 2005). Mainstreaming has historically been less difficult for
general educators to support since students with disabilities often continue to have a more
fully support special education environment to fall back on.

In the last decade, the concept of the least restrictive environment (LRE) has taken on
a more collaborative meaning. Special education and general education have moved toward
environments of co-teaching and team-teaching, which build on the strengths of each
educational system. Co-teaching is defined by Friend and Cook (2010) as providing special
education or related services to students with disabilities while they remain in their general
education classes (p. 109). Co-teaching is a teaching partnership, typically between a general
educator and special educator, which relies on strong collaborative and communication skills
(Friend & Cook, 2010). Not unlike working together as a special educator and career and
technical educator, co-teaching strives to keep students with disabilities in an environment
with core content teachers while receiving adequate support from special education teachers.
Many of the challenges that have been faced in the co-teaching environment may prove to be similar to those faced in a career and technical education environment.

Even more recently, as an outcome of NCLB and IDEA, education is moving toward the concept of Response to Intervention (RtI). Though there are a variety of definitions, it is commonly held that RtI is the process of identifying students who are struggling academically and/or behaviorally and implementing scientifically based instructional interventions to meet those needs (Bender & Shores, 2007). Response to Intervention has come about for a variety of reasons. When NCLB put in place the expectation that all students must be making substantial improvements in meeting the goals of the general education curriculum, schools were put in the position of needing to address the needs of students at risk for academic failure (Hall, 2008). IDEA, which also requires accountability, placed some focus on reducing the over-identification of students with disabilities. This was imbedded in IDEA and included schools providing research-based instructions and interventions prior to identification of a disability (Hardcastle & Justice, 2006). With respect to its relationship to this study and the collaboration between special education and vocational education, many parallels can be drawn. RtI has required a great deal of professional development for all teachers in the areas of curriculum, intervention strategies, and progress monitoring. Career and technical education and special education need to learn to share knowledge of those same areas to meet the needs of students with disabilities. Response to Intervention requires commitment and buy-in from teachers as well as strong communication among all stakeholders (Hall, 2008). Simply put, RtI is another example of a collaborative effort to meet the variety of needs of struggling learners.
Not unlike mainstreaming and inclusion, students with disabilities are often educated in the career and technical education environment without a direct connection between special education and career and technical education. Friend and Cook (2010) indicated that IDEA 04 has, in essence, made collaboration a required part of special education (p. 20). They interpret that collaboration is either mandated or implied in many areas, including identifying students with disabilities, delivering instruction, working with parents, and providing transition services (p. 21). With a strong history of collaborative needs, as education stakeholders move forward to meet the transition needs of students with disabilities, the lessons that have been learned through earlier initiatives should serve as a guide.

**Process and Practice of CTE and Special Education**

Federal legislation establishes the laws that must be followed in education. States take those laws and interpret them through state regulations, or rules, that must be followed to be compliant with the law. Though driven by mandate, it is the process, best practice, and implementation at the local level that truly impacts individual students. The National Council on Disability (NCD) published an extensive study in 2004 titled “Improving Educational Outcomes for Students with Disabilities.” The NCD’s interest was to look at how legislation was being put into action to improve the outcomes of students. The Council concluded that “particularly for students with disabilities, it is important to find ways to allow them to express their abilities and to find avenues for them to benefit from developing workplace competencies” (p. 6). In addition the council concluded that to help students with disabilities transition out of secondary education, they needed to develop skills in vocational
education. The NCD specifically pointed out the benefit of “participation in vocational education classes during the last two years of high school” (p. 8).

The overall goal of CTE programs is to prepare youth and adults for a wide range of careers (ACTE, 2009a). The National Association of State Directors of Career Technical Education Consortium (NASDCTE, 2010a) recently addressed the unified vision of CTE; a vision that fits with NCLB and educational legislation. Overall, CTE is committed to developing common objectives and standards that will prepare students for postsecondary education and career (NASDCTE, 2010a). CTE’s national vision fits with Obama’s priority that every student graduates from high school well prepared for college and a career (U.S. DOE, Blueprint for Reform, 2010). CTE is also committed to meeting the needs of students with disabilities in the career preparation environment which aligns well with Obama’s call for increased support for the inclusion and improved outcomes for students with disabilities (U.S. DOE, Blueprint for Reform, 2010).

According to the Indiana Department of Education Action Plan (IDOE, 2010), the vision for Indiana Schools, including career and technical education is that “The academic achievement and career preparation of all Indiana students will be the best in the United States and on par with the most competitive countries in the world” (p. 1). Like all of education, and under the federal and state regulations, CTE continues to raise the bar for performance, accountability, and outcomes. The Mission of CTE in the state of Indiana as reported by the National Association of State Directors of Career Technical Education Consortium (2010b) is the following:

CTE in Indiana will be known for high quality and innovative programs. High quality will consist of rigorous courses and student performance above state and national indicators. Innovation will consist of programs that are aligned with the economic
demands of the community and that are constantly improving for a better student experience (p. 3).

Currently, there are over 15 million secondary and post secondary students being served by career and technical education in the United States. This includes over 1,400 Area, or stand-alone, CTE centers, which serve students from “sending” high schools (FAQ, ACTE, 2010). In the state of Indiana, there are currently 29 area career centers along with various local career programs serving approximately 110,000 high school aged students (Association for Career and Technical Education: Indiana State CTE Profile, 2009). Of all students with disabilities between the ages of 15-22, who are receiving special education services in the United States (National Center for Education Statistics, 2006-07), 49.6% received some level of Career, Occupational, or Vocational Education (NLTS2, Student School Program Survey, 2005).

According to the Association for Career and Technical Education (n.d.), the number of students enrolled in CTE programs rose 157% between 1999 and 2004. Since that time, however, concerns have arisen regarding the relationship between CTE enrollment and the raised course and completion mandates as required by NCLB and state and local PL 221 school improvement plans. Camp and Camp (2007) believe that the increased academic courses needed by secondary students have resulted in a loss of opportunity for many students to enroll in CTE classes and programs. Daggett (2002) stated that CTE programs need to show that they are contributing to the academic success of students and that they are motivating students to stay in school. Otherwise, Daggett concludes “CTE will be increasingly squeezed off the plate in terms of student enrollment” (2002, para. 2).
One of the key factors leading to federal legislation and state regulations becoming best practice is in the development of the Individual Transition Plan (ITP) or Transition Individual Education Plan (Transition IEP). Since 1990, IDEA has required that ITP’s/Transition IEP’s be written for students, either beginning at age 14 or 16. The decisions made at student case conferences where outcomes and transitions are discussed culminate in these written plans designed to assist students in meeting their short and long term goals. In the process of developing an ITP/Transition IEP, students discuss their long term post secondary goals. These are typically in the form of “I will” statements: I will get a full time job as an auto mechanic; I will live independently in an apartment. Once students have expressed what they hope to accomplish on a long term basis, short term goals can be developed to build toward those long term desired outcomes. For example, if a student wanted to get a job as an auto mechanic, a short term goal might be to develop reading skills to adequately read needed manuals and instructions. In addition, transition activities to meet those short and long term goals are also developed. Using the same scenario above, a transition activity for that student could be to attend the auto mechanics program at the local CTE center. The National Center on Secondary Education and Transition (2009) reported that the success of students with disabilities in CTE programs depends largely on the care and integrity that transition plans for students are developed and implemented. Harvey (2001a) recommended that student transition plans need to be built not only around individual student needs but also the labor market they may be entering after completing high school. As part of the transitional planning process, Harvey recommended, vocational education should be considered an option (2001a, p. 111). Test et al., (2006) found that when special education professionals involve CTE professionals in planning for students,
especially in the area of choosing appropriate courses of study and appropriate accommodations, students have a greater chance of achieving their desired outcomes (p. 231). A significant part of the process and practice used by special education is found in the Transition IEP planning process; a critical element for success in that process is the inclusion of CTE staff.

**Outcome Trends for Students with Disabilities**

Legislation sets the legal parameters for special education and career and technical education, and local process and practices put those guidelines into place. How then, is it known whether or not the regulations and/or practices are having the desired effect? When addressing transition outcomes for students with disabilities, it is important to identify the various forms of information that might be generated. One of the major outcomes that impact the individual, local, state, and federal level is the level of high school completion that is obtained by a student, including whether or not students with disabilities enroll in post-secondary education. Another outcome is the level of employment (entry, skilled, full-time, part-time) that students with disabilities have obtained. Within employment the outcome of financial gain is notable, as well as independence in living. What has the impact been of CTE programming and what are the outcomes that were secured by students with disabilities? The outcomes met by students with disabilities are guided by the transition IEP and monitored through federal and state indicators as well as by state and local follow-up studies.

The National Longitudinal Study (NLTS) conducted between 1984 and 1993 was the first national database reporting on outcomes for students with disabilities (NLTS2 homepage, n.d.) A second study (NLTS2) began in 2001 and was intended to provide a
more current view of vocational outcomes. The purpose of both studies has been to get a broad picture of students with disabilities while they were still in high school and during their initial years entering adulthood. There were many themes/trends that came to the surface through the NLTS, some of them directly in relation to career and technical education, special education, and student outcomes. The NLTS I found that “although academic courses dominated their high school programs, most students with disabilities had some vocational education” (NLTS2 homepage, n.d.). The study reported that virtually all students with disabilities had some kind of vocational education while in high school, with some having a concentrated training in a particular job/skill area.

**High School Completion**

The NLTS2 data brief (2005) reported that of the 8,000 parents/students that were interviewed, 72% of students out of school had completed high school with either a diploma or a certificate of completion. In 2007 the national average of all students (disabled and non-disabled) age 16-24 that dropped out of school was 8.7% (Cataldi, Larid, & KewalRomana, 2009). Keffeler (2008) reported that students with disabilities were twice as likely to drop out of high school as their general education peers. The NLTS2 (2005) reported that 38% of students with disabilities left school by dropping out. It also supported that students enrolled in Career and Technical Education programs were significantly less likely to drop out of school than those who were not. Harvey (2001a) agreed that secondary vocational education was a logical and practical intervention for students with disability that could help them complete school. Plank, DeLuca, and Estacion (2005) concluded that students with disabilities having the option of being able to participate and concentrate on CTE programs while in high school results in more staying in school because of the individually relevant
choices that are then available. In a Carnegie Corporation Report (Jerald, 2006), 81% of students who dropped out of school said that if they had more real world learning they might have stayed in school. The National Association of State Directors of Career Technical Education Consortium universally believes that CTE is one of the long-term solutions to reducing the drop-out rate (2010).

Looking at high school completion trends closer to home, the Indiana Department of Education, Center for Exceptional Learners and Ball State University have conducted ongoing reviews and analysis through post school outcome studies for students who received special education services while in high school (2008). These results are a product of the Indiana Post School Follow-Up System (INPSFS) which included an analysis of student Individual Education Plans (IEPs), exit interviews with students, and surveys of former students about their plans for post school life and post school adjustment. In the 2005-06 summary report 74% of the students interviewed had earned a high school diploma, 17% a certificate of completion and 7% had dropped out of high school. In regards to employment 51.5% of students who were exiting in 05-06 were employed (Harvey & Choi, 2007). Of the 2006-07 exit responders 74.6% had participated in some type of high school job or work experience, though only 49.1% were gainfully employed upon exiting from school (Harvey & Choi, 2008). In addition, of the 2006-07 respondents, 70.2% received a high school diploma while 14.2% received a certificate and 14.7% dropped out of high school. The most recent INPSFS (2009) reporting on the 2007-08 school year indicated a shift in the exiting patterns of those responding. Of those interviewed from the 2007-08 year, only 66.8% earned a high school diploma, in comparison with 74% in 2005-06. In addition, 18.1% received a certificate of completion and 10.1% of respondents had dropped out of school.
Less than half (44.3%) of the 2007-08 exiting students interviewed were employed, while 61.7% of those who had been out of school for a year had employment (Harvey & Choi, 2009). As is seen through these statistics, the state of Indiana is seeing an increase in dropout rates, an increase in those receiving a certificate of achievement, and a decrease in those students with disabilities receiving a high school diploma. As high school requirements and high stakes testing are increased and opportunities for students to be involved in career and vocational programs decreases, students with disabilities are more and more at risk for dropping out of high school.

**Employment**

One of the ultimate outcomes for all students who exit high school (whether immediately or after further education or training) is employment. The 2008 Disability Status Report (Erickson, Lee, & von Schrader, 2009) offered the following prevalence and sobering employment statistics for individuals with disabilities.

- In 2008 the prevalence of people with disabilities between 5 and 20 was 10.7%. (The prevalence in Indiana was 11.6%)
- The employment rate for working age people with disabilities between the ages of 24 and 64 was 39.5%. (The employment rate in Indiana was 39.8%)

The NLTS2 Youth Employment data brief (2005) reported that 46% of students with disabilities out of school up to two years were competitively employed. These statistics compared to the 74% employment rate in 2008 of individuals in the same age range who were not disabled indicate a significant employment need for individuals with disabilities (United States Summary, 2008). Test et al. (2006) found that when students with disabilities
had access to CTE with appropriate supports, and successfully completed a CTE program, they were able to obtain employment at a similar rate to students without disabilities (p. 231).

Indiana’s Post School Follow-up Study (2009) reported that at the time of leaving high school less than half (44.3%) of the 2007-08 respondents were currently employed. The same question posed to the 2006-07 students found 49% employed, and those in 2005-06 yielded a 51.5% employment rate. Data indicates that students with disabilities in the state of Indiana are becoming less and less likely to be employed upon graduation. When surveyed after they had been out of high school for one year, statistics were even lower. The 2006-07 respondents indicated that at one year 24% were unemployed and 31% were employed full time.

In a review of the literature regarding the efficacy of career and technical education for students with disabilities, Harvey (2001b) concluded that “vocational education has been reported to make a significant difference in post school employment for students with disabilities when it was occupationally specific and directed at labor market needs” (p. 111). Wonacott (2001) reported that students with disabilities who had access to regular CTE programs not only obtained paid competitive jobs more often, but were better prepared to keep those jobs. According to Sitlington et al. (2007) CTE is effective because students engage in classroom-based and community-based activities, which provided them with greater employment stability later on (p. 19).

Post high school data has also concluded that students with disabilities who had a concentrated vocational program in high school were earning an average of $6,200 more per year than those with no vocational training (Training and Technical Assistance Center at the College of William and Mary (T/TAC), 2006). The T/TAC (2006) further interpreted that
the results of the NLTS I suggest that “students with disabilities should engage in learning that integrates academics and vocational instruction, emphasizing post school outcomes and adult roles and responsibilities” (p. 4). For students to compete in the increasingly knowledge based work force, high school completion paired with career and vocational education is an important element.

The literature supports that students with disabilities are 1) participating in career and technical education, 2) need to be participating in career and technical education, and 3) can potentially benefit from career and technical education. Questions remain, however, as to what makes a good vocational education match, how do, and should, career and technical educators and special educators collaborate, and how can we make the system stronger?

**Collaboration and Communication (practice and perception) of Educators (special and career and technical education) in Working with Students with Disabilities**

Regardless of what legislation mandates and in spite of what outcome data indicate, the ultimate effectiveness of any two related programs comes down to the communication and collaboration of key personnel. Not only does the educational communication and collaboration play a part in the outcomes for students with disabilities who participate in CTE; teacher perceptions can have an equally encouraging or discouraging role. Nietupski (2008) stated that “desirable outcomes for students with disabilities don’t just happen…success is dependent upon strong school programs that provide personalized, intensive opportunities and supports” (p. 29). Collaborative support for students with disabilities needs to come from CTE, special education, and general education. DeFur and Taymans (1995) defined four components that are needed for educational collaboration:

1) All individuals need to have an understanding of local resources
2) All involved need to have skills and a willingness to work with various people, cooperatively.

3) Individuals have to be willing to share what they bring to the table.

4) Individuals need to accept responsibility for the decisions made by a collaborative group and be accountable for their part (p. 40).

Special population students enrolled in CTE, including those with disabilities, have unique and challenging instructional needs that CTE educators must address (Clark & Kolstoe, 1995). The National Center on Secondary Education and Transition (NCSET) agrees with that and supports that collaboration is essential at the local level to meet those unique needs and ensure the success of students with disabilities involved in career and technical education (2009). Wonacott (2001) further supported that CTE teachers needed to be aware of the rights of students with disabilities, the planning process, and the role they play in meeting the student’s needs (p. 7). Haber and Sutherland (2008) found that the best way for CTE programs to make good placement decisions for students with disabilities is to have the CTE teacher or a representative attend the IEP meetings (p. 5). If that is not possible, then creating clear, communicative, and cooperative relationships with case conference committees will help support student success (Haber & Sutherland, p. 6). The National Center on Secondary Education and Transition (Students with Disabilities in CTE, 2009) found that only 40% of vocational teachers participated actively in the transition planning process for students with disabilities who planned to attend a career and technical education program. Likewise, only 61% of school counselors are actively involved in the transition planning process for students with disabilities. Active involvement is needed for all support systems to feel ownership in planning, programming, and outcomes.
For special education teachers, an understanding of CTE programs and requirements and regular communication with CTE staff is imperative. One very important communication piece is the sharing of the Individual Education Plans (IEP) and Individual Transition Plans for students with disabilities, especially if involved stakeholders were not present during the planning process. Hall (2007) found that CTE teachers had concerns about not receiving copies of student IEPs until late in the school year. One teacher reported that they “did not know who has a disability in my class at the start of every year” (Hall, p. 21). Cotton (2000) also found that CTE teachers felt a lack of involvement in the development and awareness of student IEPs.

Another important piece of collaboration for special educators and general educators is an understanding of CTE programs, their requirements, and desired outcomes. The Michigan Office of Career and Technical Education (2009) reported that special education teachers often do not understand the context and requirements of the CTE programs, which can lead to unrealistic expectations of both teacher and students. DeFur (1997) provided a very pertinent example when she explained that a special educator thinks in “special education” terms and may schedule a student for a vocational program, without consulting with the vocational educator, who thinks in “vocational education” terms. The end result may be that the student receives a vocational education, but it may not be successful, since no common understanding or collaboration between to two took place. DeFur stated that educators needed to work to get away from that type of single disciplinary approach to problem solving and serving students (1997). Wonacott (2001) outlined the role of the CTE teacher as being one member of the team that plans for students with disabilities. However, he went on to state that the CTE teacher plays the primary role in providing the on-site
instruction and is able to provide information on specific classroom demands (2001). CTE teachers are responsible for not only implementing their curriculum but meeting the goals and objectives as well as making accommodations for individual students with disabilities; all of this needing knowledge and input from special education. This is the type of collaboration that needs to take place when developing an appropriate plan for students with disabilities who will be attending CTE programs. Again, the lack of appropriate communication and collaboration about programming and IEPs/ITPs can lead to students not being successful in the CTE environment. The goal of the team of people developing the transition IEP is to collaborate on behalf of the student and create an achievable, individually driven, plan. To increase student success, the two educational fields need to form a connected, working relationship (Michigan Department of Education, 2009). Educators and other professionals must recognize the necessity and value of working as a team with mutual interest in all students learning to live and work in their communities (DeFur, 1997). Test (2006) indicated that the goal of all collaborative planning between CTE and special education should be for students to receive the maximum benefit from participating in CTE (p. 234).

Custer and Panagos (1996) found that CTE teachers had mostly positive feelings about the degree of support that they were receiving from special education personnel, indicating that collaboration and communication were evident. This appeared to be quite different from what Okolo and Sitlington (1988) reported. Their findings concluded that, at that time, the reported communication between vocational and special educators was very limited and that very little training had taken place between the two regarding students with disabilities (p. 228). In the 1988 study, Okolo and Sitlington reported 56% of CTE
respondents communicated with special education teachers only when necessary. Harvey, Cotton and Koch (2007) found that CTE instructors felt that they would need a higher level of assistance (then they were currently receiving) from the sending special education staff to adequately meet the needs of students with disabilities in their programs.

Perception, as they say, is one person’s reality. One reality that CTE teachers face is that of knowledge and practical experience in working with students with disabilities. Cotton (2000) reported that many Indiana CTE teachers believed that including students with disabilities in their classrooms was the appropriate thing to do. They felt, however, that they needed more assistance and training in both working with students with special needs and in writing and understanding individual education plans for those same students (p. 37). Custer and Panagos (1996) reported that CTE teachers were less confident and saw themselves as less effective when working with students with disabilities than their colleagues did (p. 23). An important note in the Custer and Panagos (1996) study was that 45% of vocational educators did not have bachelor’s degrees. This would indicate a different level of training for a significant number of staff, notably in the area of students with disabilities. In 2007, Harvey, Cotton, and Koch found that the majority of surveyed CTE staff in the state of Indiana had received limited or no training in the area of special education and students with disabilities (p. 19). This was previously the case as well, as reported by Okolo and Sitlington (1988), who found that 38% of vocational educators had little or no preparation to work with students with disabilities.

Not only is knowledge base and professional development a factor in the success of students with disabilities in the CTE environment, the overall attitude and perception that educators display can have a significant impact. Harvey and Pellock (2003) found that CTE
instructor’s attitudes and perceptions of students themselves is a contributing factor to student success. Marsha Rehm noted that career and technical education teachers must sometimes learn to adapt their interpersonal approaches regarding communication, interaction, and cooperation to meet the needs of students (2008). Hall (2007) confirmed the need for professional development in regards to personal comfort and attitude in her study titled *The Effects of Disability Awareness Trainings with Career and Technical Educators Teaching in High Need Rural Area*. She concluded that career and vocational teachers with no previous knowledge about individuals with disabilities became more aware of their own attitudes as a result of attending disability awareness workshops. This, in turn, changed the educator’s comfort levels when working with students with disabilities (Hall, p. 23). The education of all staff who are given the task of meeting the needs of students with disabilities in the CTE setting leads to more positive interactions and attitudes.

**Summary**

When planning for students with disabilities in the career and technical education environment, there are many influences that must be considered. Legislative mandates must be adhered to. The Individual Education Plan and Individual Transition Plans that are written for students need to be followed not only inside the typical high school building, but out into vocationally oriented programs. Outcome trends and community needs must also be a consideration. It is becoming more and more necessary to plan specifically and individually for each student in an attempt to help them meet not only personal goals, but societal goals in reaching independence. The receiving CTE teacher’s expectations, perceptions, and attitudes become critical in the ultimate outcome for students with disabilities. The sending special education teacher potentially has the most knowledge about
a student with disabilities and the necessary components that lead to their success. Their ability to communicate and collaborate with the CTE teacher is essential. Appropriate procedures and processes are necessary to allow teachers time to prepare and support individual student needs. Training and education in meeting the needs of students can lead to better education for all and lessen the frustration of both instructors and students.
CHAPTER THREE

Methodology

Purpose

The purpose of this study was to investigate the practices used by career and technical educators and special educators to collaborate and communicate in regards to shared students identified with disabilities in the state of Indiana. In addition, this research reviewed the perceptions that each educational unit had regarding the current practices used to communicate and collaborate, as well as the role they play in educating and supporting identified students with disabilities. The intent was to investigate the relationship between CTE teachers and special education teachers and to provide insight into current practices, processes, and perceptions of each educational system. Ultimately, this study was conducted to determine what methods of communication and collaboration are currently utilized between CTE center staff and secondary special educators and secondary guidance counselors in select school settings in the state of Indiana.

Sample

Career and Technical Education in the state of Indiana is organized by 14 Regions across the state. There are a total of 49 CTE Centers identified in the state, which include those who are stand alone, as well as those “attached” to a secondary school building. There are currently 12 stand alone CTE Centers in Indiana (Julie Yeater, personal communication, January, 2008), which is 50% of the population of interest. A stand alone CTE center is identified as being a CTE site that is not attached to a secondary or post-secondary building or campus and where “feeding” high schools send students to the center for programs and services.
The population chosen for this study included CTE teachers and administrators from six identified stand alone CTE centers in the state of Indiana. CTE participants included teachers and administrator working in CTE centers that were “stand alone” centers. To select CTE participants the 2007-08 Indiana Association for Career and Technical Education (IACTED) website was used (http://www.iacted.org). Six initial potential participating sites were chosen in the section of the state of Indiana that were within a one hundred mile radius to the researcher’s location, and met the stand-alone criteria. The researcher had a specific interest in identifying CTE and special education communication and collaboration patterns, means, and methods within the stated generalized region where she is an administrator for a special education cooperative in Indiana. Once these potential sites were identified, CTE Directors were contacted by phone and asked to participate (see script in Appendix E). Upon initial contact all six CTE centers were willing to participate in the proposed study. A second contact to officially begin distribution of surveys took place four months following the initial inquiry. At that time, two centers were not able to participate due to changes in the system allowing surveys to be distributed in school settings; part of the classroom teacher’s master contract agreement. As was explained to the researcher, the governing body of the CTE centers involved were following the directive from the participating school corporation(s) that surveys outside of the school corporation were not allowable. A third center informed the researcher at the time of survey distribution that LEA (local educational agency) School Board approval had become necessary before surveys could be distributed. The researcher contacted the administrative personnel necessary, submitted a request to the Board of Education with oversight to the CTE center, and was denied the opportunity to distribute surveys within that CTE center. Of note in this situation was that other than the CTE center’s
oversight school corporation, all other corporations that fed into that CTE center were willing to participate. Of the initial six sites identified, three became participants. Faced with these developments (prohibited participation) with the CTE participating sites, the researcher determined that three additional replacement sites would be needed to refresh the CTE sample to conduct a valid study. The researcher contacted a staff member at the Division of Career and Technical Education for the Indiana Department of Education to ask for technical assistance in identifying additional stand alone CTE centers in the state. The researcher reviewed the participation criteria with the DOE staff member. This staff member proceeded in identifying three additional CTE centers meeting the researcher’s criteria. The three additional centers reflected different regions throughout the state and changed the focus of the study from a regionalized study to one with broader representation. The Directors of the three identified CTE centers were contacted, and all agreed to participate in the research study. This adjustment required widening the participation area. The final participating sites represented CTE centers serving six CTE regions across the state. Appendix A displays a map of the CTE regions in the state of Indiana. Table 1 displays the CTE regions by phase 1 (original sites) and phase 2 (additional sites) who participated.

Table 1

*Participating Regions by Phase 1 and Phase 2 Recruitment*

<table>
<thead>
<tr>
<th>Participating Regions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 displays the breakdown of the CTE population and sample. Of the 49 CTE sites in the state of Indiana, 12 sites housed the population of interest, stand-alone CTE centers. Of those 12, six were selected based upon their location within the area of interest. Three of the six within the chosen geographical area agreed to participate. To achieve the goal of six total sites, three additional sites were contacted based on input from the Indiana Department of Education. Each of the three additional sites agreed to participate in the study, resulting in a total of six CTE sites.

Table 2

<table>
<thead>
<tr>
<th>Population of Interest</th>
<th>Final Sample</th>
<th>Agreed to Participate &amp; Included in the Study</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE</td>
<td>49</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

Stand alone CTE Centers are designed to have several “feeding secondary schools.” Those schools are typically in the geographical vicinity of the center and send students to the center to attend classes and/or programs. After the six participating CTE Centers were committed to participate, the second step of identification of potential participants required locating the feeding school corporations. The 2007-08 IACTED (http://www.iacted.org) website was again used to identify the feeding school corporations. Once the corporations were identified, the Indiana Department of Education website that contains school corporation data (http://www.doe.in.gov/data/) was utilized to identify the Superintendent of Schools for each feeding corporation and the specific high schools located within each corporation. Table 3 displays the corporation population, sample and respondents. Within the six sampled CTE Centers, there were a total of 43 school corporations. Of those 43, 31
agreed to participate in the study (72%). Nineteen of the 31 sampled school corporations actually responded to the survey and participated in the research (61% participation).

Table 3

*Study Participants by Corporation Defined Population, Sample, and Respondents*

<table>
<thead>
<tr>
<th>Corporations</th>
<th>Population</th>
<th>Population of Interest</th>
<th>Sample</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>43</td>
<td>43</td>
<td>31</td>
<td>19</td>
<td>61%</td>
</tr>
</tbody>
</table>

From the corporation level, feeding high schools were identified. Table 4 displays this information. Within the 43 school corporations, there were 47 high schools identified. Of those 47, 31 were sampled and 19 became respondents, yielding a 66% response rate of those high schools that were sampled. (66% agreed to participate and 61% responded)

Table 4

*Study Participants by High Schools Defined Population, Sample, and Respondents*

<table>
<thead>
<tr>
<th>High Schools</th>
<th>Population</th>
<th>Population of Interest</th>
<th>Sample</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>47</td>
<td>47</td>
<td>31</td>
<td>19</td>
<td>61%</td>
</tr>
</tbody>
</table>

Drilling down even further, the teacher rosters located within the school data on the same IDOE website were used to identify specific teachers who met the position requirements (CTE teachers and administrators, special education teachers and guidance counselors). Table 5 displays the breakdown of the population by position and sample. The population number is representative of all who met the defined criteria by position. The sample number indicates those who when contacted, agreed to be sampled. The table shows that special education teachers made up the largest group of sampled participants by position.
comprising 37.3% of the total 314 individuals sampled. Close to that number were CTE teachers, making up 36.6% of the total. The smallest sample by position was CTE Administrators with 3.2%.

Table 5

*Study Participants Defined by Position*

<table>
<thead>
<tr>
<th>Position</th>
<th>Population</th>
<th>Sample</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE administrators</td>
<td>10</td>
<td>10</td>
<td>3.2%</td>
</tr>
<tr>
<td>CTE teachers</td>
<td>115</td>
<td>115</td>
<td>36.6%</td>
</tr>
<tr>
<td>Secondary special education teachers</td>
<td>148</td>
<td>117</td>
<td>37.3%</td>
</tr>
<tr>
<td>Secondary guidance counselors</td>
<td>103</td>
<td>72</td>
<td>22.9%</td>
</tr>
<tr>
<td>Totals:</td>
<td>376</td>
<td>314</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Sampling Method**

The initial participant selection method (identified as Phase I) was a sampling of convenience, including CTE Centers and feeding high schools in a 100 mile geographical radius in Indiana from where the researcher is located (Northeast Region). Of the initial recruitment (Phase 1) CTE Centers in Region 2, Region 3 and Region 7 agreed to participate. After the Phase 1 sites had agreed and were confirmed as participating sites, the 2007-08 IDOE School Data Website Teacher Rosters (http://www.in.doe.gov/data/) were used to identify specific CTE administrator and CTE teacher names. Phase 1 recruitment yielded seven CTE administrators and 65 CTE teacher participants. Phase 2 of CTE recruitment, with centers identified by a staff member from the IDOE, Office of Career and Technical Education, yielded participants in a broader area representing more of a state-wide region, including CTE Centers in Regions 8, 10, and 12. Phase 2 CTE participant numbers included
three CTE administrators and 50 CTE teachers. CTE Sampling included a total of 115 CTE teacher participants and 10 CTE Administrator participants.

The total identified CTE Centers yielded feeding school corporations between four and ten. Each feeding school corporation then included anywhere from one to two secondary schools. A total of 47 secondary schools feeding into the six identified CTE Centers were identified as the defined population. Of the 47 schools, 31 gave approval to become sample participants. Of the 31 who were identified as the approved sample, staff from 19 of the participating corporations actually completed and returned surveys to become respondents.

Table 6 displays the identified CTE region, the number of feeding schools, and the number of schools who actually participated. Region 3 had the highest percentage of participating schools at 42.1%. Regions 2 and 7 had 15.8% participation rate, while 12 and 10 had 10.5%. Region 8 had the lowest rate participating at 5.3%. Of the 31 sampled corporations, the 19 who participated yielded a 61% participation rate. Table 1 breaks down the regions participating in Phase 1 and Phase 2 CTE recruitment.

Table 6

*Participating CTE Center Regions and Feeding School Corporations*

<table>
<thead>
<tr>
<th>Region</th>
<th>Defined Corporations</th>
<th>Sampled Corporations</th>
<th>Defined High Schools</th>
<th>Sampled High Schools</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>15.8</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>9</td>
<td>11</td>
<td>8</td>
<td>42.1</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>15.8</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>5.3</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>31</td>
<td>47</td>
<td>19</td>
<td>100%</td>
</tr>
</tbody>
</table>
Following the identification of CTE Centers, CTE Administrators, and CTE teachers, specific secondary education participants were identified. Within the identified participating feeding secondary schools, all special education teachers and guidance counselors were part of the defined population of participants. Using the IDOE Website which provides school data, each feeding school corporation was located first. Within each corporation, all feeding secondary schools were identified. Drilling down even further within the IDOE website, teacher rosters for the 2007-08 school year were used to identify specific special educator and guidance counselor names. Using the corporations that gave approval to participate, the special education teachers sampled totaled 117 and the guidance counselors sampled totaled 72 (table 5). The sampling method was a purposive sample. This method indicates that a large group meeting established criteria was identified, and then the portion who satisfied all of the criteria (including consent to be sampled) is utilized (Huck, p. 110).

Survey Instrument

The researcher had reservations regarding the use of an emailed or web based survey due to the firewalls and spam blockers that many public school systems have in place. When the combined words of “firewall issues”, “public schools”, “blocked emails in schools” were searched on google.com, anywhere between 100,000 and 500,000 sites were found. Many of them were people looking for ways to get around the firewalls in public schools that block unknown sites and email, and many of them were discussing the difficulty of getting outside information into public schools. In a personal communication with Barry Conrad (January, 2008), Technology Director for the Metropolitan School District of Wabash County, he stated that surveys emailed directly to staff within a school corporation are often blocked. He also commented that it would be very time consuming to attempt to “white list” or allow all
of the survey addresses utilized for that purpose. Having then determined that a paper/pencil survey would be utilized, two parallel surveys (CTE / Secondary Special Education & Guidance) were constructed with guidance from the researcher’s committee chairman (Appendix B & C). Each survey was divided into five (5) sections. Section I gathered demographic information, Section II addressed current methods of communication; Section III used a 4 point likert type scale (1=strongly agree, 2= agree, 3= disagree, 4=strongly disagree) to look at perceptions regarding collaboration efforts; Section IV presented additional process questions, and Section V presented follow-up scaled response questions regarding current perceptions.

Each survey was coded to ensure confidentiality. A six digit numerical coding system was used to represent: the school or center, the respondent’s position, and the number of respondents for that specific building. Only the researcher and faculty advisor had access to the coding design.

Section I: The first section of the survey collected demographic data including gender, age, position, level of education, years in education, and the respondent’s position specific data. Position specific data included the teaching position and environment of each respondent, the caseload (special education) or class size (CTE), and number of students with disabilities that attend the specific CTE Center and program. This information was used as a snapshot of the complexion of the population.

Section II: The second section of the survey posed questions regarding how information was provided to the CTE Centers regarding students with disabilities and who was responsible for the communication that takes place between the two educational units. Respondents were given four choices for each question and asked to check only one response
per question. The choices of how information about students with disabilities was provided to the CTE Center included: 1) IEPs are sent to the Career Center, 2) A list of students with disabilities is sent, 3) summary sheets are provided, and 4) I don’t know. Regarding who is responsible for the communication that takes place between special education and CTE, the following choices were given: 1) special education teacher, 2) CTE teacher, 3) guidance counselor, and 4) CTE administrator/coordinator. The information was used to look at consistency in understanding the process that is in place to communicate and who spearheads that communication.

Section III: Section III of the survey instrument consisted of questions regarding the participant’s perception in regards to collaborative efforts between special education and career and technical education. A 4-point Likert type scale was used. Participants were asked to circle their degree of agreement or disagreement for each statement presented (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree). Questions in Section III included whether or not the participants felt that regular communication took place, if they were given adequate student information, who attends planning case conferences, and whether or not professional development was provided regarding working with students with disabilities.

Sections IV and V: These sections asked additional questions regarding when and how information was shared and when and how communication took place. Section IV specifically looked at when information about students is provided to the CTE center, and the various forms of communication that took place throughout the year/ (Survey Questions: 1, 2) The final section of the survey instrument presented additional 4 point Likert type scale
responses regarding where responsibility lies for communicating, collaborating, and working with students with disabilities.

**Jury Panel**

Both of the survey instruments were disseminated to a jury panel of six educational professionals to acquire feedback on its face, content, and construct validity. Feedback was also given regarding consistency and alignment with subject area needs. Reviewers included professionals in the field of transition, career and technical education, and special education throughout the state of Indiana and the United States. These professionals work for the Indiana Department of Education, Indiana Universities, and other Universities throughout the country. Reviewers were chosen based upon their current contributions to the areas of career and transition education, transition planning, and secondary special education for students with disabilities. Each panel member provided feedback on formatting, question design, readability, and overall usefulness of the instrument. Using feedback from the jury panel, minor survey question adjustments were made. Adjustments included wording changes for clarification as well as the creation of a matrix which assured the alignment between survey questions and research questions (Appendix D).

**Pilot Testing**

To gather additional input and assurance that the survey instrument would yield the needed information, a pilot was conducted. One CTE Center, which consisted of 22 teachers and 3 CTE Administrators were given the survey. The survey was given on site, in a group setting, and collected immediately following. The six secondary schools feeding into the pilot CTE center were also surveyed. Twenty four secondary special education teachers and 16 secondary guidance counselors were mailed copies of the survey with self addressed
return envelopes. The pilot test data were not used in the dissertation research study, but was used to further gain insight into validity of the instrument and to test the research study’s data analysis plan.

Using the Statistical Program for Social Sciences (SPSS 17.0, 2008) a statistical computer software program, responses from all pilot respondents were analyzed. Following this analysis it was determined that the instrument would provide the needed data to answer the proposed research questions. No additional modifications were made to the survey instrument based on the pilot.

Survey Procedures

In Phase 1 the researcher made initial contact by calling the CTE Program Directors of six CTE stand-alone centers within a 100 mile radius of the researcher’s location. Using a prepared script (see Appendix E) permission was sought to conduct a survey with both teachers and administrators. When the initial contacts were made, all six CTE centers were agreeable to participate. When a follow up call was made to confirm participation, three of the initial six CTE Centers were then able to participate. Three of the initial six CTE Centers contacted were unable to participate due to contractual stipulations for survey disbursement. Two of the sites changes were due to teacher/school board contract language. One site, which implemented a need for Board of Education approval included multiple school corporations who were willing to participate. However, the CTE center was governed by an LEA (Local Education Agency) where the policy had changed. When the research area needed to be expanded, three additional CTE centers, recommended by a staff member of the Indiana DOE Center for Career and Technical Education, were contacted by phone utilizing
the same scripted request for participation (Phase 2). All of the Phase 2 CTE centers contacted agreed to participate.

Once the CTE centers were identified, the IACTED website was used to identify the secondary school corporations that fed into each CTE center. Using each school corporation, the researcher utilized the Indiana Department of Education’s School Data site to identify the corporation superintendent and all feeding high schools.

Superintendents of feeding school corporations were then contacted by phone and email (if phone contact was unsuccessful). Again, a script (see Appendix E) was used both verbally and in writing to explain the researcher’s study and request for participation. If initial contact was not successful, two additional emails and one additional phone call were made. Of the 43 feeding school corporations, 31 agreed that surveys could be sent to secondary special education teachers and secondary guidance counselors in their buildings. There were 16 corporations who did not respond to repeated contacts. When superintendent permission was granted, individual special education teachers and guidance counselors of feeding high schools were identified on the IDOE website using the 2007-08 teacher rosters found within the corporation/building data summaries. A total of 117 special education teachers and 72 guidance counselors were identified based upon corporation approval for participation.

Phase I: Distribution of surveys to CTE centers was conducted in two ways, on-site and by mail. For CTE centers in Phase 1, overview letters (see Appendix F), consent forms (see Appendix G), and surveys (see Appendix B and C) were delivered in person (1 site) or by mail (2 sites). CTE Directors were instructed to distribute the sealed surveys and consent forms at a staff meeting, then have participants put their completed survey and signed
consent form in provided individual envelopes and seal them. These were then returned to
the researcher in a provided envelope which was sealed by the collector and returned by the
U.S. postal system.

Phase II: The second set of identified CTE centers were in a larger radius, and it was
not possible for the researchers to hand deliver the surveys. The remaining CTE centers
received a packet of overview letters, consent forms, and surveys for the identified number of
CTE teachers and administrators. Again, these were provided in individually sealed
envelopes, which staff members received indirectly by the CTE administrator. In addition,
individual envelopes were provided for teachers to put their completed surveys and consent
forms in, and seal. These surveys were then mailed back to the researcher in individually
provided stamped envelopes.

Surveys for special education teachers and guidance counselors in both Phase 1 and
Phase 2 were mailed individually. Using the identified staff names from the Indiana
Department of Education 2007-08 school data and teacher roster, individual overview letters,
consent forms, surveys, and a self-addressed stamped return envelope were mailed to each
identified participant. Mailings to the schools feeding into the original three CTE Centers
went out first (Phase I delivery); identified staff for the remaining 3 sites received mailings
from a separate bulk mailing (Phase II delivery) approximately one month later.

Each survey was coded using a six digit numerical code. The first two numbers
identified the CTE center or high school building. The second two numbers identified
participating respondent’s position. The final two numbers identified how many individuals
there were in each position. For example # 010304 would indicate building # 1, special
education teacher, and the 4th teacher in that specific building. The code was designed to
protect the identity and ensure the confidentiality of the participants while allowing for response tracking and follow-up. After the initial mailing, one reminder email was sent to those who had not responded initially. This was the only follow up reminder sent to potential participants due to the fact that there was limited time remaining in the school year. Surveys were distributed in March (phase 1) and April (phase 2), a reminder was sent at the end of April and schools were out for the summer at the end of May.

**Participation Rates**

Table 7 displays the overall response rates by position. Participants in the study were placed in four categories. The first category identified those participants who returned valid survey responses. A survey was considered valid if the individual agreed to participate, completed, and returned the survey. The study produced one hundred and thirty one valid surveys that provided usable data for analysis. This total survey number included 64 valid CTE teacher surveys, five valid CTE administrator surveys, 42 valid secondary special education surveys, and 20 valid secondary guidance counselor surveys. CTE teachers had the highest overall valid response rate of the total sample (20.3%). Special education teachers were represented by a 13.3% overall response, secondary guidance counselors with 6.3% and CTE administrators with 1.6%. The lower participation rate for CTE administrators is to be expected given the limited identified population.

An additional three (3) categories were used for those individuals that did not participate in the study. The categories for non responses included 1) No Participation (corporation did not respond to request for participation); 2) No Response (survey sent but not returned); and 3) Declined (survey was returned along with consent form marked “choose
not to participate”). It should be noted that the No Participation category was factored out of the study and sample design for inclusion in this study.

Table 7

**Overall Response Rates for Study Participation by Position**

<table>
<thead>
<tr>
<th></th>
<th>CTE Administrators</th>
<th>CTETeachers</th>
<th>Secondary Education</th>
<th>Guidance Counselors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>% of Total</td>
<td>n</td>
<td>% of Total</td>
<td>n</td>
</tr>
<tr>
<td>Valid Responses</td>
<td>5</td>
<td>1.6</td>
<td>64</td>
<td>20.3</td>
<td>42</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>1.6</td>
<td>50</td>
<td>15.9</td>
<td>72</td>
</tr>
<tr>
<td>Declined</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>3.2</td>
<td>114</td>
<td>36.2</td>
<td>148</td>
</tr>
</tbody>
</table>

Table 8 displays how participants responded within their positions, again factoring out the No Participation category. The table indicates that CTE teachers had the highest valid return rate of 56.1% and guidance counselors had the lowest valid return rate of 27% within their position. It is important to note that CTE teachers also had a No Response rate of 43.9%, while guidance counselors had the highest No Response rate at 73%. While possible participant numbers were all above 100 individuals for CTE teachers, secondary special education teachers, and guidance counselors, it should be noted that the possible participant numbers for CTE administrators was only 10.

Table 8

**Overall Response Rates for Study Participants within Positions**

<table>
<thead>
<tr>
<th></th>
<th>CTE Administrators</th>
<th>CTE Teachers</th>
<th>Secondary Education</th>
<th>Guidance Counselors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Valid Responses</td>
<td>5</td>
<td>50</td>
<td>64</td>
<td>56.1</td>
<td>42</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>50</td>
<td>50</td>
<td>43.9</td>
<td>72</td>
</tr>
<tr>
<td>Declined</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Sample Total</td>
<td>10</td>
<td>100</td>
<td>114</td>
<td>100</td>
<td>117</td>
</tr>
</tbody>
</table>
Due to low numbers of CTE administrator participants, CTE administrators and CTE teachers were combined into one response group. Secondary guidance counselors and secondary special education teachers comprised the other two participant groups that will be used from this point forward for analysis. Table 9 represents the response rates within position with the collapsed groupings. When the four groups are collapsed into three, CTE respondents continue to have the highest participation rate at 55.6%. Special education teachers participated at 35.9% and guidance counselors at 27%.

Table 9

_Overall Response Rates for Study Participants within Position by the Collapsed Groups_

<table>
<thead>
<tr>
<th></th>
<th>CTE</th>
<th>Secondary Education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Valid Responses</td>
<td>69</td>
<td>55.6</td>
<td>42</td>
</tr>
<tr>
<td>No Response</td>
<td>55</td>
<td>44.4</td>
<td>72</td>
</tr>
<tr>
<td>Declined</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100</td>
<td>117</td>
</tr>
</tbody>
</table>

To determine whether or not participation was effected by the two different phases of delivery, respondents were broken down by CTE Region/feeding schools and response rates. Table 10 displays respondents by region, position and participation using the three identified groups. An asterisk (*) denotes Phase I of survey delivery. When collapsed into the two broader groups, Phase I participation was greatest from Region 3, with 32.9% overall participation from CTE and secondary education. The lowest participation rate came from Region 10, with 5.8% CTE response and 3.2% secondary education response and an overall response rate of 4.6%.
Table 10

Respondents by Indiana Association for Career and Technical Education Regions

| Region | CTE | | Secondary Education | | | | | Total |
|--------|-----| | Special Education | | Guidance Counselors | | | |
|        | n   | % | n   | % | n   | % | n   | % |
| 2*     | 14  | 20.3 | 9   | 6.9 | 2   | 1.6 | 25  | 19.1 |
| 3*     | 18  | 26.1 | 16  | 12.2 | 9   | 6.9 | 43  | 32.9 |
| 7*     | 14  | 20.3 | 3   | 2.3 | 3   | 2.3 | 20  | 15.2 |
| 8      | 10  | 14.5 | 3   | 2.3 | 1   | 0.8 | 14  | 10.7 |
| 12     | 9   | 13.0 | 10  | 7.6 | 4   | 3.1 | 23  | 17.6 |
| 10     | 4   | 5.8 | 1   | 0.8 | 1   | 0.8 | 6   | 4.6 |
| Total  | 69  | 52.6 | 42  | 32.1 | 20  | 15.3 | 131 | 100 |

Note. * Designates phase 1 regions/feeding schools.

Table 11 further collapses participation by overall percentages of delivery phases 1 and 2 by position. Participation by phase 1 identified centers and schools was approximately double in each position category. The overall participation rate of Phase I delivery participants was 67.2% compared to 32.8% of Phase II deliver participants. In both phases, CTE teachers had the highest participation rate. There is no specific determination that can be made that the delivery phase was the only impacting indicator for this data. Phase 1 delivery had more direct involvement from the researcher and building based administrator whereas phase 2 delivery was conducted through indirect methods (US Mail and CTE survey distribution) which may have led to an increased percentage of participation for Phase I respondents.
Table 11

Respondents by Phase 1 Delivery and Phase 2 Delivery by Position

<table>
<thead>
<tr>
<th>Phase</th>
<th>CTE Administrators</th>
<th>CTE Teachers</th>
<th>Secondary Education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>2.3</td>
<td>43</td>
<td>32.8</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1.5</td>
<td>21</td>
<td>16.0</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>3.8</td>
<td>64</td>
<td>48.8</td>
</tr>
</tbody>
</table>

Table 12 displays response rates using the three groups CTE, special education and guidance counselors. Phase I CTE response rate was 35.1% compared to 17.6% of Phase II delivery CTE respondents. Similarly, Phase I special educators responded with a 21.4% rate, while Delivery Phase 2 responded at 10.7%. Phase 1 Guidance Counselors had a 10.7% response rate, while Phase 2 had a 4.6% rate.

Table 12

Response Rate by Delivery Phase for the Collapsed Groups

<table>
<thead>
<tr>
<th>Phase</th>
<th>CTE</th>
<th>Special Education</th>
<th>Guidance Counselors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
<td>35.1</td>
<td>28</td>
<td>21.4</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>17.6</td>
<td>14</td>
<td>10.7</td>
</tr>
<tr>
<td>Sample Total</td>
<td>69</td>
<td>52.7</td>
<td>42</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Independent Variables

An independent variable is an antecedent that can be manipulated, controlled or has some logical impact on the dependent variable (Jaegar, 1993; “Independent and Dependent Variables”, 2006). The participant or independent variable should be allowed to respond freely and not be compelled to answer according to “guidelines” (Mansfield, 1986; Fassett, 2006). The independent variables within the study were the employed positions held by the
participants. The three positions surveyed were: 1) career and technical education (teachers and administrators), 2) secondary special education teachers, and 3) secondary guidance counselors.

Table 13 displays the demographics of the study participants who completed valid surveys. Demographics were used to look at whether or not there were any influences between demographics variables and responses. Female participants had a higher rate of study participation compared to male participants (59.2% to 40.8%). Of all participants, 56.6% were between the ages of 30 and 50, while 34% of participants were over the age of 50 and only 9.3% were under the age of 30. As indicated earlier, CTE teachers made up the largest participation group (48.9%), while special education teachers followed with 32.2%. Of all participants, 70% had either a bachelor’s degree or higher level of education, while 30% held either a high school diploma, Associates Degree or Occupational Specialist Certificates. The 30% in that category were all representative of CTE Centers since special education teachers and guidance counselors must hold a minimum of a bachelor degree. Of the valid responses, 36% of respondents had been in their current position 5 years or less while 44% had been in their position between six and 15 years, and 19% sixteen years or more. The total years in education indicated that 30% of respondents had been in the field 16 years or more. Twenty one percent (21.4%) had been in education five years or less, while 48.1% had served in the field between six and 15 years.
Table 13

**Participant Demographics**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Administrators</th>
<th>Teachers</th>
<th>Secondary Education</th>
<th>Guidance Counselors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>60.0</td>
<td>39</td>
<td>61.9</td>
<td>9</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>40.0</td>
<td>24</td>
<td>38.1</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100</td>
<td>63</td>
<td>100</td>
<td>42</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>0</td>
<td>0.0</td>
<td>6</td>
<td>9.7</td>
<td>4</td>
</tr>
<tr>
<td>30-39</td>
<td>1</td>
<td>20.0</td>
<td>19</td>
<td>30.6</td>
<td>9</td>
</tr>
<tr>
<td>40-49</td>
<td>2</td>
<td>40.0</td>
<td>21</td>
<td>33.9</td>
<td>11</td>
</tr>
<tr>
<td>50+</td>
<td>2</td>
<td>40.0</td>
<td>16</td>
<td>25.8</td>
<td>18</td>
</tr>
<tr>
<td>Not Specified</td>
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<td>0.0</td>
<td>1</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100</td>
<td>62</td>
<td>100</td>
<td>42</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Diploma</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>7.9</td>
<td>1</td>
</tr>
<tr>
<td>AA/AS Degree</td>
<td>0</td>
<td>0.0</td>
<td>7</td>
<td>11.1</td>
<td>2</td>
</tr>
<tr>
<td>Occupational Certificate</td>
<td>0</td>
<td>0.0</td>
<td>24</td>
<td>38.1</td>
<td>0</td>
</tr>
<tr>
<td>BA/BS</td>
<td>0</td>
<td>0.0</td>
<td>23</td>
<td>36.5</td>
<td>16</td>
</tr>
<tr>
<td>MA/MS</td>
<td>4</td>
<td>80.0</td>
<td>4</td>
<td>6.3</td>
<td>23</td>
</tr>
<tr>
<td>PhD/EdD</td>
<td>1</td>
<td>20.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100</td>
<td>63</td>
<td>100</td>
<td>42</td>
</tr>
<tr>
<td>Years in Current Position</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>2</td>
<td>40.0</td>
<td>13</td>
<td>20.3</td>
<td>5</td>
</tr>
<tr>
<td>3-5 years</td>
<td>1</td>
<td>20.0</td>
<td>14</td>
<td>21.9</td>
<td>8</td>
</tr>
<tr>
<td>6-10 years</td>
<td>1</td>
<td>20.0</td>
<td>14</td>
<td>21.9</td>
<td>13</td>
</tr>
<tr>
<td>11-15 years</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>15.6</td>
<td>6</td>
</tr>
<tr>
<td>16+ years</td>
<td>1</td>
<td>20.0</td>
<td>13</td>
<td>20.3</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100</td>
<td>64</td>
<td>100</td>
<td>42</td>
</tr>
<tr>
<td>Years in Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>0</td>
<td>0.0</td>
<td>10</td>
<td>15.6</td>
<td>2</td>
</tr>
<tr>
<td>3-5 years</td>
<td>0</td>
<td>0.0</td>
<td>12</td>
<td>18.8</td>
<td>3</td>
</tr>
<tr>
<td>6-10 years</td>
<td>0</td>
<td>0.0</td>
<td>19</td>
<td>29.7</td>
<td>16</td>
</tr>
<tr>
<td>11-15 years</td>
<td>3</td>
<td>60.0</td>
<td>10</td>
<td>15.6</td>
<td>5</td>
</tr>
<tr>
<td>16+ years</td>
<td>2</td>
<td>40.0</td>
<td>13</td>
<td>20.2</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>100</td>
<td>64</td>
<td>100</td>
<td>42</td>
</tr>
</tbody>
</table>

**Note.** Percentages represent data reported by category.

Table 14 displays the participant demographics by the collapsed three groups of CTE, special education, and guidance counselors. With this grouping, CTE male representation was 61.8% in comparison to female CTE representation of 38.2%. Female participation, overall however, indicated 40.8% male and 59.2% female. CTE was the only group that had a larger representation from males versus females. The largest representation of age, overall, was in the 50+ range, with 34.1%. Within the CTE group, the age range of 40-49 was the
largest represented age, with 34.3%. The smallest age group was 20-29 year olds at 9.0%. In regards to education level, the collapsed CTE group was evenly represented between those holding an Occupational Certificate (35.3%) and those with a Bachelors Degree (33.8%). While in the special education and guidance counselor groups, the largest representation was 54.8% (special education) and 100% (guidance counselors) holding a Masters Degree. Years that respondents held their current position in CTE was evenly split with 21.7% in 1-2 years, 3-5 years, and 6-10 years, indicating that 65.1% of participants had been in their current position for 10 years or less. The largest representation was in the 16+ category, which yielded 20.3% of respondents. In special education and guidance counselors, the large group for both was in the 6-10 years (special education = 31.0%, guidance = 45%). The overall years that participants had been in the field of education reflected that 28.8% of CTE teachers had been in the field 11-15%, while 59.4% had been in the field 10 years or less. Special education respondents reported that 50% had been in the field 10 years or less, while 38.1% had been in the field 16 years or more. The largest majority of guidance counselors (45%) had been in the field 16 years or more, while 50% had been in the field between 6 and 15 years.
Table 14

Participant Demographics for the Collapsed Groups

<table>
<thead>
<tr>
<th></th>
<th>CTE</th>
<th>Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
<td>61.8</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>26</td>
<td>38.2</td>
<td>51</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100</td>
<td>62</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>6</td>
<td>9.0</td>
<td>6</td>
</tr>
<tr>
<td>30-39</td>
<td>20</td>
<td>29.9</td>
<td>13</td>
</tr>
<tr>
<td>40-49</td>
<td>23</td>
<td>34.3</td>
<td>17</td>
</tr>
<tr>
<td>50+</td>
<td>18</td>
<td>26.9</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100</td>
<td>62</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS Diploma</td>
<td>5</td>
<td>7.4</td>
<td>1</td>
</tr>
<tr>
<td>AA/AS Degree</td>
<td>7</td>
<td>10.3</td>
<td>2</td>
</tr>
<tr>
<td>Occupational Certificate</td>
<td>24</td>
<td>35.3</td>
<td>0</td>
</tr>
<tr>
<td>BA/BS</td>
<td>23</td>
<td>33.8</td>
<td>16</td>
</tr>
<tr>
<td>MA/MS</td>
<td>8</td>
<td>11.8</td>
<td>43</td>
</tr>
<tr>
<td>PhD/EdD</td>
<td>1</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100</td>
<td>62</td>
</tr>
<tr>
<td><strong>Years in Current Position</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 years</td>
<td>15</td>
<td>21.7</td>
<td>6</td>
</tr>
<tr>
<td>3-5 years</td>
<td>15</td>
<td>21.7</td>
<td>12</td>
</tr>
<tr>
<td>6-10 years</td>
<td>15</td>
<td>21.7</td>
<td>22</td>
</tr>
<tr>
<td>11-15 years</td>
<td>10</td>
<td>14.5</td>
<td>11</td>
</tr>
<tr>
<td>16+ years</td>
<td>14</td>
<td>20.3</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100</td>
<td>62</td>
</tr>
<tr>
<td><strong>Years in Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 ears</td>
<td>10</td>
<td>14.5</td>
<td>2</td>
</tr>
<tr>
<td>3-5 years</td>
<td>12</td>
<td>17.4</td>
<td>4</td>
</tr>
<tr>
<td>6-10 years</td>
<td>19</td>
<td>27.5</td>
<td>20</td>
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<tr>
<td>11-15 years</td>
<td>13</td>
<td>28.8</td>
<td>11</td>
</tr>
<tr>
<td>16+ years</td>
<td>15</td>
<td>21.7</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100</td>
<td>62</td>
</tr>
</tbody>
</table>

*Note.* Percentages represent data reported by category.
Predictor Variables

Table 15 displays the variables, acronyms, and definitions used for the regression analyses. Logistic regression analysis was used to determine if any specified demographic variables had an impact on respondent’s perceptions regarding the communication and collaboration that takes place between special education and CTE as well as their perceptions regarding position responsibilities for meeting the needs of students with disabilities. A regression model looks to make a prediction of the dependent variable with an independent variable (Jaegar, 1993; Bauserman, 2008). Below is a description of the predictor variables that were analyzed and how they were constructed from the demographic data that was collected.

Respondent position has been defined on the basis of his current employed position within an Indiana public school system, including stand-alone career and technical education centers. Position is divided into three sub-categories: CTE (administrators and teachers), secondary special education teachers, and secondary guidance counselor. The study found that CTE administrators had small numbers and could not be analyzed in a single group.

Dependent Variables

The dependent variable is the response the researcher is measuring from the study (Norusis, 1994). The three dependent variables in the study were respondent’s perceptions that: 1) CTE teachers are given adequate information regarding individual student adaptations and modification, 2) CTE teachers are provided professional development opportunities regarding student specific needs, and 3) Special education teachers are provided professional development opportunities regarding CTE programs.
Table 15

Variable Names, Acronyms, and Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE is given adequate information</td>
<td>LoGRgCTEINFO</td>
<td>CTE teachers are given adequate information regarding individual student adaptations and modifications [1 = strongly agree &amp; agree; 0 = all others (strongly disagree &amp; disagree)]</td>
</tr>
<tr>
<td>CTE is provided professional development</td>
<td>LoGRGCTESPEC</td>
<td>CTE teachers are provided professional development opportunities regarding student specific needs [1 = strongly agree &amp; agree; 0 = all others (strongly disagree &amp; disagree)]</td>
</tr>
<tr>
<td>Special education is provided professional development</td>
<td>LogRgSPCEDPD</td>
<td>Special education teachers are provided professional development opportunities regarding career &amp; technical education programs [1 = strongly agree &amp; agree; 0 = all others (strongly disagree &amp; disagree)]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary guidance counselors</td>
<td>LogRgKWPositGUIDANCE</td>
<td>Persons in the position of guidance counselor in a secondary (high school) setting</td>
</tr>
<tr>
<td>Secondary special education teacher</td>
<td>LogRgKWPositSPED</td>
<td>Certified special education teaching staff at the secondary level</td>
</tr>
<tr>
<td>CTE Administrators &amp; teachers</td>
<td>LogRgKWPositCTE</td>
<td>Administrators and instructors in stand alone CTE Centers (RC)</td>
</tr>
</tbody>
</table>
Table 15 continued

<table>
<thead>
<tr>
<th>Variable</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>LogRgGender</td>
<td>1 = female respondents, 0 = all others RC = male respondents</td>
</tr>
<tr>
<td>Age</td>
<td>LogRgAGE2029</td>
<td>1 = respondents in age group 20-29</td>
</tr>
<tr>
<td></td>
<td>LogRgAGE3039</td>
<td>1 = respondents in age group 30-39</td>
</tr>
<tr>
<td></td>
<td>LogRgAGE4049</td>
<td>1 = respondents in age group 40-49</td>
</tr>
<tr>
<td></td>
<td>LogRgAGE50</td>
<td>RC = respondents in age group 50+</td>
</tr>
<tr>
<td>Education Level</td>
<td>LogRgEdLev1</td>
<td>1 = respondents who have earned a HS diploma or occupational certificate, 0 = all others</td>
</tr>
<tr>
<td></td>
<td>LogRgEdLev2</td>
<td>1 = respondents who have earned an Associates Degree, 0 = all others</td>
</tr>
<tr>
<td></td>
<td>LogRgEdLev4</td>
<td>1 = respondents who have earned a BA/BS, 0 = all others</td>
</tr>
<tr>
<td></td>
<td>LogRgEdLev</td>
<td>RC = respondents who have earned a MA/MS</td>
</tr>
<tr>
<td>Years in current position</td>
<td>LogRgYrsCurr1</td>
<td>1 = respondents who have been in their current position 1-5 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsCurr3</td>
<td>1 = respondents who have been in their current position 6-10 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsCurr4</td>
<td>1 = respondents who have been in their current position 11-15 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsCurr</td>
<td>RC = respondents who have been in their current position 16+ years</td>
</tr>
<tr>
<td>Years in education</td>
<td>LogRgYrsEduc1</td>
<td>1 = respondents who have been in the field of education 1-5 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsEduc3</td>
<td>1 = respondents who have been in the field of education 6-10 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsEduc4</td>
<td>1 = respondents who have been in the field of education 11-15 years</td>
</tr>
<tr>
<td></td>
<td>LogRgYrsEduc</td>
<td>RC = respondents who have been in the field of education 16+ years</td>
</tr>
</tbody>
</table>

Note. RC = Reference Category.

In addition to general demographic information, each educational group was asked to provide position specific demographical data. For special education staff this included the teaching environment they were currently working in. Choices included co/team teaching, resource room, direct service/pull out, self-contained, and other. In addition, special education teachers were asked to identify their current caseload of students, and how many students on their case load were currently attending either a morning (a.m.) or afternoon
(p.m.) session at the local CTE center. Table 16 reports this gathered data. Since the questions were position specific, the table reports those responses provided by the special education participants only. The majority of special education respondents (45.2%) reported that their primary teaching environment was a resource room. The following environments were fairly evenly split with 21.4% co/team teaching, 14.3% direct instruction or pull out, and 16.7% self contained. The largest average caseload reported was 21 or more students identified with disabilities. This was reported by 57.1% of respondents. A combined 31 of the 42 respondents, or 73.8%, indicated that they had between 6-15 students attending a program at the local CTE center. Almost 19% had between 2-5 students attending, while no teachers reported that they had 0-1 students.
Table 16

**Special Education Teacher Specific Demographics by Frequencies and Percentages**

<table>
<thead>
<tr>
<th>Current Teaching Environment</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co/Team</td>
<td>9</td>
<td>21.4</td>
</tr>
<tr>
<td>Resource</td>
<td>19</td>
<td>45.2</td>
</tr>
<tr>
<td>Pull Out</td>
<td>6</td>
<td>14.3</td>
</tr>
<tr>
<td>Self</td>
<td>7</td>
<td>16.7</td>
</tr>
<tr>
<td>Contained</td>
<td>1</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caseload</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>6-10</td>
<td>2</td>
<td>4.8</td>
</tr>
<tr>
<td>11-15</td>
<td>11</td>
<td>26.2</td>
</tr>
<tr>
<td>16-10</td>
<td>5</td>
<td>11.9</td>
</tr>
<tr>
<td>21+</td>
<td>24</td>
<td>57.1</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students Attending a CTE Program</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>2-5</td>
<td>8</td>
<td>19.0</td>
</tr>
<tr>
<td>6-10</td>
<td>15</td>
<td>35.7</td>
</tr>
<tr>
<td>11-15</td>
<td>16</td>
<td>38.1</td>
</tr>
<tr>
<td>16+</td>
<td>3</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100</td>
</tr>
</tbody>
</table>

As with the special education teachers, there were also specific demographic questions posed to CTE staff. This information included the number of high schools feeding into the CTE Center, the AM and PM class sizes of the CTE Teacher, and the number of students identified with disabilities in both their morning and afternoon classes. Table 17 displays these results. The majority of the CTE staff (64.7%) reported that they had between six and ten high schools feeding into their center. The majority also indicated that the
average class size was between 11 and 15 for both the morning (a.m.) and afternoon (p.m.) classes. Within those classes, 85% reported that they had between two and ten students in their morning classes who were identified with a disability. Over 90% of the afternoon sessions reported to have between two and ten identified students as well.

Table 17

**CTE Specific Demographics by Frequencies and Percentages**

<table>
<thead>
<tr>
<th>Number of High Schools feeding into CTE</th>
<th>CTE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>1-5</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>6-10</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>11+</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>68</td>
</tr>
<tr>
<td><strong>AM Class Size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>1-10</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>11-15</td>
<td>32</td>
<td>49.2</td>
</tr>
<tr>
<td>16+</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100</td>
</tr>
<tr>
<td><strong>PM Class Size</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>1-10</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td>11-15</td>
<td>27</td>
<td>42.9</td>
</tr>
<tr>
<td>16+</td>
<td>20</td>
<td>31.7</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>100</td>
</tr>
<tr>
<td><strong>AM Students with Disabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>3</td>
<td>4.8</td>
</tr>
<tr>
<td>2-5</td>
<td>26</td>
<td>41.3</td>
</tr>
<tr>
<td>6-10</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td>11+</td>
<td>6</td>
<td>9.5</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>100</td>
</tr>
<tr>
<td><strong>PM Students with Disabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>2-5</td>
<td>31</td>
<td>50.0</td>
</tr>
<tr>
<td>6-10</td>
<td>26</td>
<td>41.9</td>
</tr>
<tr>
<td>11+</td>
<td>3</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>100</td>
</tr>
</tbody>
</table>
Research Questions / Data Analysis

In this section a brief explanation of the analyses used for each research question is provided. The analysis was conducted using the computer software program, The Statistical Program for Social Sciences (SPSS 17.0, 2008). A more in-depth analysis is found and illustrated in Chapter 4.

Question 1: What are the most commonly used methods of providing information to CTE teachers regarding students with disabilities?

Question 2: How often do CTE staff and secondary education staff (special education teachers, guidance counselors) communicate regarding students with disabilities?

Question 3: Are CTE teachers and/or administrators invited to attend Case Conferences for current and/or projected students with disabilities?

Question 4: Are CTE teachers provided professional development or training opportunities regarding students with disabilities?

Question 5: Are special educators provided with professional development or training opportunities regarding CTE programs?

Question 6: What are the perceptions of CTE teachers regarding their role and responsibilities in collaboratively working and communicating with special educators when working with students with disabilities in their programs?

Question 7: What are the perceptions of special education teachers regarding their role and responsibilities in collaboratively working and communicating with CTE teachers when working with students with disabilities in their programs?
Questions 1 and 2 analyzed and reported the frequency of respondent responses, both the numbers and percentages. These frequencies were reported by responses within position, for each of the three groups, as well as by knowledge of respondents (factoring out I don’t know responses).

Questions 2 through 7 were analyzed using Kruskal Wallis Tests. This non-parametric test was used instead of an one-way analysis of variance (ANOVA) due to: 1) the small study sample n’s; 2) the data did not need to meet the assumptions of parametric statistical analysis, and 3) the researcher was not using the data to generalize findings to a larger population given the exploratory nature of the study. Questions 2-7, then, were reported by Means and Standard Deviations as descriptive data.

Those questions found to have statistical significance were further analyzed using a logistic regression model to identify potential predictor variables that would have influenced respondent’s perceptions.
CHAPTER FOUR

Results and Discussion

There were 131 participants in this study, representing six stand-alone career and technical education (CTE) centers and their feeding secondary schools in the state of Indiana. The percentage of participants represents a geographical cross section of individuals meeting the participation requirements and therefore should be considered an exploratory study. There were seven research questions answered by a four point Likert-type scale and/or multiple choice responses, presented in parallel survey questionnaires. Descriptive and inferential statistics were used to analyze the data. These included frequencies, percentages, Kruskal-Wallis tests, and logistic regression models. The analysis of study data were done using the Statistical Program for the Social Sciences 17.0 (2008).

Research Question # 1: What are the most commonly used methods of providing information to CTE teachers regarding students with disabilities?

Given a four choice Likert scale option, and using the collapsed three groupings (CTE, special education, guidance counselors), participant responses are shown in Table 18. As outlined earlier, the original respondent groups included CTE teachers, CTE administrators, secondary special education teachers, and secondary guidance counselors. Due to the low number of CTE administrators, they were combined with CTE teachers to make one group = CTE, culminating in three reported response groups. Of the 131 valid participants (CTE = 69, special education = 42, guidance counselors = 20) when asked what the most commonly used method of providing information to CTE Centers regarding students with disabilities, the majority of respondents in all three groups indicated that Individual Education Plans (IEPs) were most commonly sent to the career centers
(CTE = 76.8%, special education = 51.2% and guidance counselors = 65%). Special educator responses were more evenly distributed with 19.5% who felt that summary sheets, and 19.5% who felt student lists were provided to the CTE centers. Important to note is the fact that a total of 28.5% (CTE = 8.7%, special education = 9.8%, and guidance counselors = 10%) of respondents had no knowledge of how student information was provided to CTE.

Table 18

**Overall Frequencies and Percentages of Most Commonly Used Method of Communication by Position**

<table>
<thead>
<tr>
<th>Commonly used methods of Providing Information</th>
<th>CTE</th>
<th>Secondary Education Special Education</th>
<th>Secondary Education Guidance Counselors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEPs sent to CTE Center</td>
<td>53 (76.8%)</td>
<td>21 (51.2%)</td>
<td>13 (65.0%)</td>
<td>87 (70.0%)</td>
</tr>
<tr>
<td>List of students sent to CTE Center</td>
<td>5 (7.2%)</td>
<td>8 (19.5%)</td>
<td>4 (20.0%)</td>
<td>17 (13.0%)</td>
</tr>
<tr>
<td>Summary sheets provided</td>
<td>5 (7.2%)</td>
<td>8 (19.5%)</td>
<td>1 (5.0%)</td>
<td>14 (10.8%)</td>
</tr>
<tr>
<td>I don't know</td>
<td>6 (8.7%)</td>
<td>4 (9.8%)</td>
<td>2 (10.0%)</td>
<td>12 (9.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>69 (100%)</td>
<td>41 (100%)</td>
<td>20 (100%)</td>
<td>130 (100%)</td>
</tr>
</tbody>
</table>

As noted, of concern was that almost 10% of each of the three groups did not know how information was provided to the CTE center. Looking further at who was able to respond with knowledge, “I don’t know” responses were factored out. Figure 1 shows the respondents who indicated that they had knowledge as to what method of communication was most commonly used to provide information about students with disabilities to CTE centers. Of those indicating they had knowledge of the method, CTE staff overwhelmingly (84.1%) believed that the information was sent to the CTE center in the form of the students Individual Education Plan (IEP). The majority of secondary education respondents (special education = 56.8%, guidance = 72.2%) also indicated that this was the most commonly used method of providing information.
In relation to Question 1, participants were asked when key student information was provided to the CTE centers (Table 19). A large majority (CTE = 80.6%, special education = 56.1%, guidance counselors = 40%) indicated that information was provided to the CTE center in the fall, or at the beginning of the school year. Guidance counselor respondents were more closely split with those who believed the information was sent in the fall (40%) and those who believed it was sent in the spring (50%). The least frequent responses were that the information was sent to the CTE center in the summer (CTE = 3.0%, special education = 0%, guidance counselors = 5%). Respondents who did not know in response to
that question included: CTE (10.4%), special education (19.5%), and guidance counselors (5%).

Table 19

*Overall Frequencies & Percentages of Timeframe When Information is Provided to CTE by Position*

<table>
<thead>
<tr>
<th>When is student information provided to CTE Center?</th>
<th>CTE</th>
<th></th>
<th>Secondary Education</th>
<th></th>
<th>Guidance Counselors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>Special Education</td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Summer</td>
<td>2</td>
<td>3.0</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
</tr>
<tr>
<td>Fall (beginning of year)</td>
<td>54</td>
<td>80.6</td>
<td>23</td>
<td>56.1</td>
<td>8</td>
<td>40.0</td>
</tr>
<tr>
<td>Spring (end of year)</td>
<td>4</td>
<td>6.0</td>
<td>10</td>
<td>24.4</td>
<td>10</td>
<td>50.0</td>
</tr>
<tr>
<td>I don't know</td>
<td>7</td>
<td>10.4</td>
<td>8</td>
<td>19.5</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100</td>
<td>41</td>
<td>100</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

The number of respondents who did not know when information was provided to CTE was even higher than those who did not know what information was provided. A total of 34.9% of overall respondents did not know when information was provided to the CTE centers. Figure 2 displays the percentages based upon those who did have knowledge as to when information was provided to the CTE center. Of those who knew when information was provided to the CTE center, an overwhelming 90% of CTE respondents believed that student information was provided in the fall. Seventy percent of special education respondents reported that they also felt information was provided in the fall, and 30% of respondents felt it was provided in the spring. Guidance counselors were more split with their responses, 42% responding fall and 52.7% responding spring.
In addition to how and when information was disseminated to the CTE centers, respondents were asked who they felt was responsible for seeing that the needed information was provided. Table 20 displays the respondent data. Different response options were given for CTE (administrators and teachers) and for secondary education (special education and guidance counselors). Given specific choices CTE staff was divided in their responses. Twenty six point one percent of CTE staff believed that it was the special education teacher’s responsibility while another 26.1% believed that it was the guidance counselors’ responsibility. Fifteen point nine percent of CTE felt respondents felt that it was the CTE administrator, and an identical 15.9% felt it was the special education coordinators or
department heads responsibility. An additional 11 respondents (15.9%) did not know who held this responsibility.

Table 20

Overall CTE Respondents’ Frequencies and Percentages of Responsibility for Providing Student Information by Position

<table>
<thead>
<tr>
<th>Who is responsible for getting student information to the CTE Center?</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education Teacher</td>
<td>18</td>
<td>26.1</td>
</tr>
<tr>
<td>Guidance Counselor</td>
<td>18</td>
<td>26.1</td>
</tr>
<tr>
<td>CTE Administrator</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>SPED Coordinator/Department Head</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>I don't know</td>
<td>11</td>
<td>15.9</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100</td>
</tr>
</tbody>
</table>

I don’t know responses were then factored out (Figure 3) to show the percentages of responses from those CTE staff who did have knowledge as to who was responsible for getting student information to the CTE center. Of those who had knowledge, responses were evenly split between the belief that the special education teacher and guidance counselor were responsible (31% each) and the CTE administrator and special education department head being responsible (19%).
Figure 3

*Overall CTE Respondents’ Percentages of Responsibility for providing Student Information by Position*

When secondary education (special education and guidance counselors) staff was posed the same question, they were given the following response choices: special education teacher, guidance counselor, special education department head, transition coordinator, special education administrator/central office staff, and I don’t know. Table 21 displays the data for the responses to this question. The majority (50%) of special educators felt that it
was their responsibility to provide student information to the CTE centers, while 38.1% of the same group felt it was the responsibility of the guidance counselors. Conversely, guidance counselors overwhelmingly (73.7%) indicated that they felt it was their own responsibility to provide the information to CTE, while only 10.5% felt it was the special education teacher’s responsibility. A small percentage of special education teachers (4.8%) did not know who was responsible for providing this information while all guidance counselor respondents felt that they had some knowledge of who had that responsibility.

Table 21

*Overall Secondary Education Respondents’ Frequencies and Percentages for Providing Student Information by Position*

<table>
<thead>
<tr>
<th>Who is responsible for getting student information to the CTE Center?</th>
<th>Secondary Education</th>
<th></th>
<th>Guidance Counselors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education Teacher</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Guidance Counselor</td>
<td>21</td>
<td>50.0</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>SPED Department Head</td>
<td>16</td>
<td>38.1</td>
<td>14</td>
<td>73.7</td>
</tr>
<tr>
<td>Transition Coordinator</td>
<td>3</td>
<td>7.1</td>
<td>1</td>
<td>5.3</td>
</tr>
<tr>
<td>I don’t know</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>10.5</td>
</tr>
<tr>
<td>SpEd Administrator/Central Office</td>
<td>2</td>
<td>4.8</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>42</strong></td>
<td><strong>100.0</strong></td>
<td><strong>19</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Figure 4 displays the percentages for the respondents who did feel that they had knowledge regarding who was responsible for providing student information to the CTE centers. Since 100% of the guidance counselors believed they had some knowledge, the figure only represents special education teacher respondents. Of the special education respondents who reported to have knowledge regarding who was responsible for providing student information to the CTE center, more than half (52.5%) believed it was their
responsibility, while 40% responded that it was the responsibility of the guidance counselor and 7.5% felt it was the responsibility of the special education department head.

Figure 4

*Overall Secondary Education Respondents’ Percentages of Responsibility for Providing Student Information by Position*

Research Question 2: How often do CTE Staff and Secondary Education Staff (Special Education Teachers & Guidance Counselors) communicate regarding students with disabilities?
When CTE staff were posed questions as to how often they communicate with the special education teachers from the home schools of students with disabilities in their programs, 39.1% indicated only as needed, and 21.7%, not at all. Of the 69 responses, 20.3% reported that they communicated quarterly, while 5.8% communicated monthly and 8.7% weekly. Table 22 displays the percentages of those responses.

Table 22

*Overall CTE Respondents’ Frequencies and Percentages of How Often Communication with Special Education Takes Place*

<table>
<thead>
<tr>
<th>How often do you communicate with the special education teachers of students in your program(s)?</th>
<th>CTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly</td>
<td>6</td>
</tr>
<tr>
<td>Monthly</td>
<td>4</td>
</tr>
<tr>
<td>Quarterly</td>
<td>14</td>
</tr>
<tr>
<td>Semester</td>
<td>3</td>
</tr>
<tr>
<td>Annually</td>
<td>0</td>
</tr>
<tr>
<td>Only as needed</td>
<td>27</td>
</tr>
<tr>
<td>Not at all</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
</tr>
</tbody>
</table>

When asked how the communication between themselves and special education teachers took place, CTE staff had split responses. The highest percentage (39.7%) indicated that they communicate through mid-term reports while 31% said the most common form of communication was email. Mid-term reports can be defined as reports that take place at a half way point of a given grading period. Phone communication was reported by 20.7%. The two least reported methods of communication were on site visits (5.2%) and conferences (3.4%). Table 23 reports those results.
Table 23

*Overall CTE Respondents’ Frequencies and Percentages of the Most Frequent Method of Communication with Special Education*

<table>
<thead>
<tr>
<th>Most frequent method of that communication</th>
<th>CTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid term reports</td>
<td>23</td>
</tr>
<tr>
<td>Email</td>
<td>18</td>
</tr>
<tr>
<td>Phone</td>
<td>12</td>
</tr>
<tr>
<td>On site visits</td>
<td>3</td>
</tr>
<tr>
<td>Conference</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
</tr>
</tbody>
</table>

When special education and guidance counselors were asked a similar question regarding how often they felt they communicated with the CTE teachers who had students with disabilities in their programs, the response given most often was the same as that of the CTE teachers, “only as needed” (special education = 42.5%, guidance counselors = 36.8%). Ten percent of special education staff (1 out of 10) felt that no communication took place, versus the opinion of CTE teachers who felt that there was no communication 21.7% of the time. The highest percentage reported by guidance counselors was that communication took place monthly (42.1%). No guidance counselor respondents reported that there was no communication taking place. Table 24 reports the frequency of responses and percentages.
Table 24

*Overall Secondary Education Respondents’ Frequencies and Percentages of How Often Communication with CTE Takes Place*

<table>
<thead>
<tr>
<th>How often does SPED teacher communicate with CTE?</th>
<th>Secondary Education</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Special Education</td>
<td>Guidance Counselors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Weekly</td>
<td>2</td>
<td>5.0</td>
<td>0</td>
</tr>
<tr>
<td>Monthly</td>
<td>3</td>
<td>7.5</td>
<td>8</td>
</tr>
<tr>
<td>Quarterly</td>
<td>14</td>
<td>35.0</td>
<td>2</td>
</tr>
<tr>
<td>Semester</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
</tr>
<tr>
<td>Annually</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Only as needed</td>
<td>17</td>
<td>42.5</td>
<td>7</td>
</tr>
<tr>
<td>Not at all</td>
<td>4</td>
<td>10.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100</td>
<td>19</td>
</tr>
</tbody>
</table>

In determining what form the communication between special education and CTE takes, secondary education was asked a parallel question. Table 25 displays these results. Compared to the 39.7% of CTE staff who reported mid-term reports as the number one form of communication, secondary education felt that email was the number one method (special education = 54.1%, guidance counselors = 57.9%). Mid-term reports received the next highest percentages, with special education reporting 24.3% and guidance counselors reporting 31.6%. The least utilized methods of communicating reported were on site visits (special education = 2.7%, guidance counselors = 0.0%) and conferences (IEP reviews, annual case reviews, case conferences), which were not reported by either group.
In looking at perceptions and survey questions related to Research Question 2, it was important to explore the perception of the three groups in regards to whether or not they felt that regular communication took place between special education and CTE, which was a specific survey question with a Likert-type response (1-4). Using the three groups (CTE, special education, guidance counselors) a Kruskal Wallis test was run to look at potential differences among the study respondent groups. Table 26 reports the results of the analysis for questions related to regular communication. CTE respondents leaned toward disagreeing (M = 2.32) that regular communication took place. Special education responded even less favorably, disagreeing with a mean of 1.98. High school guidance counselors had ratings (M = 2.42) that more closely aligned with CTE respondents. There were no statistically significant differences found among respondent groups ($\chi^2 = 3.33$, df = 2, $p > .05$). Special education disagreed while CTE and guidance counselors indicated lesser levels of disagreement that regular communication took place between CTE and special education.
Table 26 displays related responses to questions regarding communication. When asked whether or not the groups felt that CTE was given adequate information about adaptations and modifications for students, special education and guidance counselors responded with ratings in the agree range with respective means of 3.19 and 3.20. CTE, however, showed a lesser level of agreement with a mean of 2.77. A significant difference was found between CTE and secondary education responses ($\chi^2 = 8.42$, df = 2, $p < .05$). In regard to whether or not the groups believed that special education is provided with adequate information about CTE programs, the groups were very closely aligned (Mean ratings: CTE = 2.70, special education = 2.64, guidance counselors = 2.75). This demonstrated that all study groups had ratings leaning toward agreement that this information was adequately available to special education. No statistically significant differences were reported among respondent groups ($\chi^2 = 0.41$, df = 2, $p > .05$).
Table 26

*Overall Mean Ratings of Respondents’ Perceptions of CTE and Secondary Education Communication and Information by Position*

<table>
<thead>
<tr>
<th>Regular Communication Takes Place</th>
<th>CTE</th>
<th>Secondary Education</th>
<th>Guidance Counselors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Regular communication between CTE and special education</td>
<td>n: 69, M: 2.32, SD: 1.15</td>
<td>n: 42, M: 1.98, SD: 0.78</td>
<td>n: 19, M: 2.42, SD: 0.84</td>
</tr>
<tr>
<td>2. CTE given adequate information regarding students</td>
<td>n: 69, M: 2.77, SD: 0.88</td>
<td>n: 42, M: 3.19, SD: 0.71</td>
<td>n: 20, M: 3.20, SD: 0.62</td>
</tr>
<tr>
<td>3. Special education is adequately informed about CTE</td>
<td>n: 69, M: 2.70, SD: 0.81</td>
<td>n: 42, M: 2.64, SD: 0.85</td>
<td>n: 20, M: 2.75, SD: 0.55</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p*** < .001.
Figures 5 provides a visual representation of responses regarding the belief of each group regarding regular communication taking place. Though the special education mean = 1.98 and is in clear disagreement, and CTE and guidance counselors report varying levels of disagreement, no statistical significance was indicated. Even though it is not statistically significant, of note is that special education respondents believe that regular communication is not taking place.

Figure 5

*Overall Mean Ratings of Perception of Regular Communication by Position*

![Bar chart showing overall mean ratings for CTE, SPED, and Guidance Counselors.]

*Note.* Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.

Figure 6 displays the results from the perception as to whether or not CTE receives adequate information regarding students with disabilities. Statistical significance was found
in the responses at a \( p < .05 \) level. CTE was in less agreement (2.77) than special education (3.19) and guidance counselors (3.20), both who felt more favorably (agreed) that adequate information was provided. Of note is that CTE does not think they are getting adequate information from secondary education, while secondary education respondents feel that they are.

Figure 6

*Overall Mean Ratings of Perception of CTE Receiving Adequate Student Information*

![Bar chart showing mean ratings of CTE, SPED, and Guidance Counselors.](image)

*Note.** Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.*

Figure 7 provides a visual display of response as to whether or not the groups felt that special education was adequately informed about CTE programs and services. All three
groups (CTE, special education, and guidance counselors) had ratings leaning toward agreement with means of 2.70, 2.64, and 2.75 respectively.

Figure 7

*Overall Mean Ratings of Perception of Adequate Information about CTE provided to Special Education by Position*

<table>
<thead>
<tr>
<th>Position</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE</td>
<td>2.70</td>
</tr>
<tr>
<td>Special Education (SPED)</td>
<td>2.64</td>
</tr>
<tr>
<td>Guidance Counselors</td>
<td>2.75</td>
</tr>
</tbody>
</table>

*Note.* Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.

**Research Question 3:** Are CTE Teachers and/or Administrators invited to attend Case Conferences for current and/or projected students with disabilities?

When looking at representation of CTE staff at case conferences for both current and projected students with disabilities attending a CTE program, the results of the Kruskal
Wallis Test indicated that all three groups responded consistently. Special education and guidance counselors were more likely to disagree that this took place for current students attending CTE programs. Special education had a reported mean of 2.12 in response to whether or not CTE representatives are invited to attend conferences for current students with disabilities, indicating more likely disagreement that this took place. Guidance counselors also indicated ratings that leaned toward the disagree range with a mean of 2.25. CTE staff responded somewhat more favorably in regards to invitations to attend conferences for current students, with a mean of 2.57, indicating that they were leaning toward agreement with this statement. There were not statistically significant differences found among respondent groups ($\chi^2 = 5.01$, df = 2, $p > .05$).

When asked about CTE representation at conferences for students who were projected to be in CTE programs, special educators reported a mean of 2.00, clearly in the disagree range. Guidance counselors (2.20) and CTE (2.18) were also leaning toward disagreement with this statement. There were no statistically significant differences were reported among respondent groups ($\chi^2 = 1.64$, df = 2, $p > .05$). Table 27 displays responses related to CTE representation at conferences.
Table 27

*Overall Mean Ratings of Respondents’ perception of CTE Representation at Conferences*

<table>
<thead>
<tr>
<th>CTE Representation at Conferences</th>
<th>CTE</th>
<th></th>
<th>Secondary Education</th>
<th></th>
<th>Guidance Counselors</th>
<th>df</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>n M SD</td>
<td></td>
<td>n M SD</td>
<td></td>
<td>n M SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTE representatives are invited to and attend conferences for current students with disabilities</td>
<td>68 2.57 1.05</td>
<td></td>
<td>42 2.12 1.01</td>
<td></td>
<td>20 2.25 1.02</td>
<td>2</td>
<td>5.01</td>
</tr>
<tr>
<td>2</td>
<td>CTE representatives are invited to attend conferences for projected students with disabilities</td>
<td>68 2.18 0.88</td>
<td></td>
<td>42 2.00 0.98</td>
<td></td>
<td>20 2.20 1.01</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* *p < .05, **p < .01, ***p <.001.*
Figure 8 indicates that respondents from secondary education (special education & guidance counselors) disagreed that CTE teachers are represented at conference for current students with disabilities. In practical terms CTE leaned toward agreeing that CTE was represented in conferences compared to special education and guidance counselors even though no statistical significance was found between respondent groups.

Figure 8

*Overall Mean Ratings of CTE Representation at Conferences for Current Students by Position*

*Note.* Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.
Figure 9 shows that all three groups disagree when asked if CTE is invited to attend conferences for projected students.

Figure 9

*Overall Mean Ratings of CTE Representation at Conferences for Future Students by Position*

![Bar chart showing mean ratings of CTE representation at conferences for future students by position.]

Note. Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.

**Research Question 4:** Are CTE Teachers provided professional development or training opportunities regarding students with disabilities?

Table 28 report findings in response to Likert-type survey questions asking each respondent group whether or not they felt that professional development opportunities were
provided for CTE in regards to disabilities and also for student specific needs. Table 28 displays these responses. When given the statement that CTE instructors are provided professional development opportunities regarding disabilities all groups tended to disagree (CTE = 2.47, special education = 2.28, and guidance counselors = 2.06). There were no statistically significant differences found among the responding groups ($\chi^2 = 3.68$, df = 2, $p > .05$). When the statement was that CTE instructors are provided professional development for student specific needs, however, a significant difference was reported ($\chi^2 = 7.58$, df = 2, $p < .05$). Special education (M = 2.05) and guidance (M = 2.00) indicated more solid ratings of disagreement compared to CTE (M = 2.47).
### Overall Mean Ratings of Respondents’ Perceptions of Professional Development Opportunities for CTE

<table>
<thead>
<tr>
<th>Professional Development Opportunities for CTE</th>
<th>CTE</th>
<th>Secondary Education</th>
<th></th>
<th></th>
<th></th>
<th>df</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CTE instructors are provided professional development opportunities regarding disabilities</td>
<td>n: 68</td>
<td>M: 2.47</td>
<td>SD: 0.87</td>
<td>n: 40</td>
<td>M: 2.28</td>
<td>SD: 0.91</td>
<td></td>
</tr>
<tr>
<td>2 CTE instructors are provided professional development for students specific needs</td>
<td>n: 68</td>
<td>M: 2.47</td>
<td>SD: 0.95</td>
<td>n: 41</td>
<td>M: 2.05</td>
<td>SD: 0.77</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.
Figure 10 provides a visual representation of the mean responses regarding professional development opportunities for CTE regarding disabilities. No significant differences were seen, all groups rating in the disagree range (CTE = 2.47, special education 2.28, and guidance counselors = 2.06). Though no significance was indicated, in practical terms, guidance counselors’ higher level of disagreement that professional development for CTE is taking place could indicate a lack of awareness of professional development activities that take place in the CTE environment.

Figure 10

*Overall Mean Ratings of CTE Professional Development Regarding Disabilities* by Position

![Bar chart showing mean ratings](chart.png)

*Note.* Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.
Figure 11 generated lower means for both special education (2.05) and guidance counselors (2.00). CTE responded at the same level (2.47) as they had for the previous professional development question. As noted in table 28, a significant difference was seen between respondent groups with special education and guidance counselors having stronger levels of disagreement compared to CTE respondents on this question.

Figure 11

*Overall Mean Ratings of CTE Professional Development Regarding Student Specific Needs by Position*

![Bar chart showing mean ratings (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree): 2.47 for CTE, 2.05 for SPED, 2.00 for Guidance Counselors.]
Research Question 5: Are Special Educators provided with professional development or training opportunities regarding CTE Programs?

Table 29 shows the results of the Likert-type response question posed to participants as to whether or not they believed that professional development opportunities were provided to special education teachers regarding CTE programs and services. Special education and guidance counselors responded to this statement with clear disagreement (means = 2.02 and 2.11). CTE had an overall mean of 2.58, indicating a lesser level of disagreement (leaning toward agreement). Significance was noted between respondent groups ($\chi^2 = 11.05$, df = 2, $p < .01$).
Table 29

*Overall Mean Ratings of Respondents’ Regarding Professional Development Opportunities for Special Education*

<table>
<thead>
<tr>
<th>Professional Development Opportunities for Special Education</th>
<th>CTE</th>
<th></th>
<th></th>
<th>Secondary Education</th>
<th></th>
<th></th>
<th></th>
<th>df</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Special education teachers are provided professional development regarding CTE programs</td>
<td>67</td>
<td>2.58</td>
<td>0.91</td>
<td>42</td>
<td>2.02</td>
<td>0.92</td>
<td>18</td>
<td>2</td>
<td>11.05**</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p** < .001.
Figure 12 provides a visual representation of the mean differences between groups regarding professional development opportunities for special educators regarding CTE programs. As is seen, special education has a higher level of disagreement compared to CTE when it comes to whether or not special education is provided professional development regarding CTE programming and services.

Figure 12

*Overall Mean ratings of Professional Development Opportunities for Special Education Regarding CTE by Position*

Note. Likert-type scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.
Research Question 6: What are the perceptions of CTE teachers regarding their role and responsibilities in collaboratively working and communicating with special educators when working with students with disabilities in their programs?

Table 30 shows CTE staff (administrators and teachers) perceptions regarding the importance of the collaboration between CTE and special education as well as their perception regarding their own personal responsibility/role within the delivery of services. Of the 69 CTE respondents, over 75% either agreed or strongly agreed with each level of perception or responsibility that was posed, indicating that the majority of CTE staff felt it was important for them to know about their students with disabilities (31.9% = agree, 53.6% = strongly agree), communicate with their special education teacher (43.5% = agree, 46.4% = strongly agree), and take responsibility for making the necessary adaptations and modifications (42% = agree, 36.2% = strongly agree). Less than 15% of respondents appeared to have a negative perception of either communicating with the special education teacher (4.3% = disagree, 5.8% = strongly disagree), or the importance of making adaptations and accommodations for students in their programs (14.5% = disagree, 7.2% = strongly disagree). In general terms these responses indicate that CTE staff understand the importance of knowing about disabilities and also largely feel responsible for adapting and modifying for students in their programs.
Table 30

*Overall Frequencies and Percentages of CTE Perceptions of Communication/Roles/Responsibility*

<table>
<thead>
<tr>
<th>CTE Perceptions of Communication and Collaboration</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is important to have student information prior to the beginning of the school year.</td>
<td>n 69</td>
<td>% 7.2</td>
<td>5</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>I would like for the special education teacher to communicate with me throughout the year.</td>
<td>n 69</td>
<td>% 5.8</td>
<td>4</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>It is necessary for me to know the adaptations modifications for students in my programs.</td>
<td>n 69</td>
<td>% 5.8</td>
<td>7.2</td>
<td>7.2</td>
<td>30.4</td>
</tr>
<tr>
<td>It is my responsibility to make IEP adaptations and modifications for students in my programs.</td>
<td>n 69</td>
<td>% 7.2</td>
<td>14.5</td>
<td>42.0</td>
<td>36.2</td>
</tr>
</tbody>
</table>

*Research Question 7: What are the perceptions of Special Education teachers regarding their role and responsibilities in collaboratively working and communicating with CTE teachers when working with students with disabilities in their programs?*

Given very similar questions as were posed to CTE staff, Table 31 shows secondary education’s (special education teachers & guidance counselors) perceptions regarding the importance of the collaboration between CTE and special education as well as their perception regarding their own personal responsibility/role within the delivery of services. The majority of respondents (68.9%) strongly agreed that it was important for CTE teachers to have specific student information prior to the start of the school year. Secondary education respondent’s also felt strongly (34.4%=agree, 49.2%=strongly agree) that it was their responsibility to provide this information to the CTE Center. When looking at the possible direct role of the secondary educator when it came to responsibility for monitoring that IEP adaptations and accommodations were being made at the CTE center or their responsibility for assisting CTE with the accommodations, responses were in less agreement.
Forty one (41%) either strongly disagreed (11.5%) or disagreed (29.5%) that they were responsible for monitoring that IEP adaptations and accommodations were being made at the CTE center. A similar percentage (37.7%) either strongly disagreed (9.8%) or disagreed (27.9%) that they should be responsible for assisting CTE teachers with making the needed adaptations or accommodations for students identified with disabilities in CTE programs. A very consistent 42.6% were in agreement with both statements. In looking at these items secondary education was looked at holistically instead of broken into two groups.

Table 31

Overall Frequencies and Percentages of Secondary Education Perceptions of Communication/Roles/Responsibility

<table>
<thead>
<tr>
<th>Secondary Education Perceptions of Communication/Collaboration</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is my responsibility to monitor that adaptations and modifications are being made at CTE.</td>
<td>n</td>
<td>0</td>
<td>1</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0.0</td>
<td>1.6</td>
<td>29.5</td>
<td>68.9</td>
</tr>
<tr>
<td>It is my responsibility to assist CTE with adaptations and modifications for students at CTE.</td>
<td>n</td>
<td>2</td>
<td>8</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>3.3</td>
<td>13.1</td>
<td>34.4</td>
<td>49.2</td>
</tr>
<tr>
<td>It is my responsibility to provide specific student information to the CTE Center.</td>
<td>n</td>
<td>1</td>
<td>11.5</td>
<td>29.5</td>
<td>42.6</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>1.6</td>
<td>18.0</td>
<td>26.2</td>
<td>26.2</td>
</tr>
<tr>
<td>It is important for CTE to have student information prior to the beginning of the school year.</td>
<td>n</td>
<td>6</td>
<td>17</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>9.8</td>
<td>27.9</td>
<td>42.6</td>
<td>19.7</td>
</tr>
</tbody>
</table>

Predictor Variables – Logistic Regressions

Logistical regression was used to explore the predictive value of specific variables that might have influence on respondents’ perceptions for specific survey items found to be statistically significant. These data are exploratory in nature. Logistic regression models are used to “predict the category of outcome”, such as a respondent perceptions of their role and responsibilities for students with disabilities in CTE programs. The model looks at different variables (i.e. gender, age, education level, years experience) and gauges the probability of
the way respondents will respond to a dependent variable (Logistic Regression, 2002).

Logistic regression analysis was used in those instances when significance was noted through
the Kruskal Wallis analysis for specific survey items presented above.

The dependent variable for this set of analysis is the respondent’s answers to the four
point Likert-type scale ratings. The scale ranged from 1 = strongly disagree to 4 = strongly
agree. In order to run the specified logistic regression analysis, two new categories were
created: strongly disagree and disagree versus agree and strongly agree. The two new
categories were then coded as (0 for disagree and 1 agree respectively) in the database for
SPSS analysis. The recoded dataset was then used to complete the analysis (see Table 15 for
variable construction). Significance was found within the logistic regression models for
specified variables by using the Wald statistic from the analysis. In logistic regression, the
Wald statistic is “used to test the significance of each variable” (Lani, 2009). This is done by
creating a Z statistic, and looking at normal distribution with mean scores of 0 and standard
deviations of 1 (Lani, 2009).

Table 32 presents findings from the logistic regression model for question 2, that
CTE was given adequate information about the adaptations and modifications needed for
students with disabilities. Predictor variables correctly classified approximately 70% of
participants regarding CTE being given adequate information about the adaptations and
modifications needed for students with disabilities. The overall model was significant (-2 log
likelihood = 127.972, df = 15, $\chi^2 = 30.853, \ p = .009$) and accounted for approximately 21%
of variance of the model (Cox & Snell $R^2 = .211$).

The analysis found that secondary special education teachers were more likely to
agree that CTE was given adequate information regarding the adaptations and modifications
for students with disabilities compared to CTE (reference category). Guidance counselors did not show any significance when compared to the reference category (CTE). The analysis also found that respondents who had been in their current position between 6 and 10 years had a higher probability to agree that CTE was given adequate information compared to those with 16 years or more in their current position (reference category). There were not statistically significant differences for other respondent groups by years in current position (1-5, 6-10, 11-15) compared to those with 16 years or more in their current position (reference category). There were no statistically significant differences for females when compared to males (reference category). There was no statistically significant difference for age categories of 20-29, 30-39, and 40-49 when compared with the reference age category (50-59) that CTE was given adequate information regarding the adaptations and modifications for students with disabilities. In regards to education level, no significant differences were found between the reference category (MS/MA degree) and the other education levels of high school diploma/occupational certificate, associates degree, or bachelor’s degree. The number of years a respondent had spent in the field of education did not produce any statistically significant differences between respondent groups (1-5, 6-10, 11-15) when compared to the reference category of 16 years or more.
Table 32

Parameter Estimates for CTE being Given Information Regarding Student Adaptations and Modifications Predictor Variables Logistic Regression Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>Exp (B)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>LogRgGender</td>
<td>0.325</td>
<td>0.263</td>
<td>1.519</td>
<td>1.383</td>
<td>0.218</td>
</tr>
<tr>
<td>LogRgAGE2029</td>
<td>0.484</td>
<td>1.093</td>
<td>0.196</td>
<td>1.623</td>
<td>0.658</td>
</tr>
<tr>
<td>LogRgAGE3039</td>
<td>0.414</td>
<td>0.697</td>
<td>0.353</td>
<td>1.513</td>
<td>0.552</td>
</tr>
<tr>
<td>LogRgAGE4049</td>
<td>-0.740</td>
<td>0.615</td>
<td>1.444</td>
<td>0.477</td>
<td>0.229</td>
</tr>
<tr>
<td>LogRgEdLev1</td>
<td>0.277</td>
<td>0.791</td>
<td>0.123</td>
<td>1.319</td>
<td>0.726</td>
</tr>
<tr>
<td>LogRgEdLev2</td>
<td>-1.272</td>
<td>0.971</td>
<td>1.719</td>
<td>0.280</td>
<td>0.190</td>
</tr>
<tr>
<td>LogRgEdLev4</td>
<td>0.455</td>
<td>0.712</td>
<td>0.408</td>
<td>1.576</td>
<td>0.523</td>
</tr>
<tr>
<td>LogRgYrsCurr1</td>
<td>0.929</td>
<td>1.128</td>
<td>0.679</td>
<td>2.533</td>
<td>0.410</td>
</tr>
<tr>
<td>LogRgYrsCurr3</td>
<td>2.498</td>
<td>1.185</td>
<td>4.444</td>
<td>12.153</td>
<td>0.035*</td>
</tr>
<tr>
<td>LogRgYrsCurr4</td>
<td>0.269</td>
<td>1.098</td>
<td>0.060</td>
<td>1.308</td>
<td>0.807</td>
</tr>
<tr>
<td>LogRgYrsEduc1</td>
<td>0.321</td>
<td>1.294</td>
<td>0.061</td>
<td>1.378</td>
<td>0.804</td>
</tr>
<tr>
<td>LogRgYrsEduc3</td>
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<td>1.157</td>
<td>2.205</td>
<td>0.179</td>
<td>0.138</td>
</tr>
<tr>
<td>LogRgYrsEduc4</td>
<td>0.761</td>
<td>1.105</td>
<td>0.475</td>
<td>2.141</td>
<td>0.491</td>
</tr>
<tr>
<td>KWpositioSPCED</td>
<td>1.606</td>
<td>0.668</td>
<td>5.792</td>
<td>4.985</td>
<td>0.016*</td>
</tr>
<tr>
<td>KwpositionGuidance</td>
<td>1.687</td>
<td>1.063</td>
<td>2.521</td>
<td>5.405</td>
<td>0.112</td>
</tr>
<tr>
<td>Constant</td>
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<td>0.764</td>
<td>1.110</td>
<td>0.447</td>
<td>0.292</td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.

Table 33 presents findings from the logistic regression model for Question 4 as to whether or not respondent groups felt that professional development opportunities were provided to CTE teachers regarding the specific needs of students. Predictor variables correctly classified approximately 61% of participants regarding whether professional development opportunities were provided to CTE teachers regarding the specific needs of students. The overall model was significant (-2 log likelihood = 140.942, df = 15, $\chi^2 =$
25.466, \( p = .044 \) and accounted for approximately 19% of variance of the model (Cox & Snell \( R^2 = .186 \)). The regression model indicated there were few significant differences among various variables.

The analysis found that secondary special education was significantly more likely to disagree that CTE instructors were provided professional development regarding student specific needs compared to the reference category of CTE. Guidance counselors did not show any significance when compared to the reference category (CTE). There were no statistically significant differences for females when compared to the male reference category. There was also no statistically significant difference for age categories of 20-29, 30-39, and 40-49 when compared with the reference category of 50-59. In regards to education level, no significant differences were found between the reference category (MS/MA degree) and the other education levels of high school diploma/occupational certificate, associate degree, or bachelor’s degree that CTE instructors were provided professional development regarding student specific needs. The number of years the respondent had been in their current position (1-5, 6-10, 11-15) were also not statistically significant when compared to the reference category of 16 years of more in the respondent’s current position. The number of years a respondent had spent in the field of education also did not produce any statistically significant differences (1-5, 6-10, 11-15) when compared to the reference category of 16 years or more.
Table 33

Parameter Estimates for CTE being Provided Professional Development for Student Specific Needs Predictor Logistic Regression Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>Exp (B)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>LogRgGender</td>
<td>-0.364</td>
<td>0.253</td>
<td>2.065</td>
<td>0.695</td>
<td>0.151</td>
</tr>
<tr>
<td>LogRgAGE2029</td>
<td>1.158</td>
<td>0.977</td>
<td>1.405</td>
<td>3.183</td>
<td>0.230</td>
</tr>
<tr>
<td>LogRgAGE3039</td>
<td>0.938</td>
<td>0.668</td>
<td>1.975</td>
<td>2.555</td>
<td>0.160</td>
</tr>
<tr>
<td>LogRgAGE4049</td>
<td>1.016</td>
<td>0.634</td>
<td>2.568</td>
<td>2.762</td>
<td>0.109</td>
</tr>
<tr>
<td>LogRgEdLev1</td>
<td>0.611</td>
<td>0.767</td>
<td>0.636</td>
<td>1.843</td>
<td>0.425</td>
</tr>
<tr>
<td>LogRgEdLev2</td>
<td>-0.776</td>
<td>1.050</td>
<td>0.546</td>
<td>0.460</td>
<td>0.460</td>
</tr>
<tr>
<td>LogRgEdLev4</td>
<td>0.212</td>
<td>0.642</td>
<td>0.109</td>
<td>0.809</td>
<td>0.742</td>
</tr>
<tr>
<td>LogRgYrsCurr1</td>
<td>1.120</td>
<td>0.965</td>
<td>1.348</td>
<td>3.066</td>
<td>0.246</td>
</tr>
<tr>
<td>LogRgYrsCurr3</td>
<td>0.786</td>
<td>0.939</td>
<td>0.701</td>
<td>2.195</td>
<td>0.402</td>
</tr>
<tr>
<td>LogRgYrsCurr4</td>
<td>0.236</td>
<td>1.041</td>
<td>0.052</td>
<td>1.267</td>
<td>0.820</td>
</tr>
<tr>
<td>LogRgYrsEduc1</td>
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<td>1.173</td>
<td>3.038</td>
<td>0.129</td>
<td>0.081</td>
</tr>
<tr>
<td>LogRgYrsEduc3</td>
<td>-0.930</td>
<td>0.925</td>
<td>1.011</td>
<td>0.395</td>
<td>0.315</td>
</tr>
<tr>
<td>LogRgYrsEduc4</td>
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<td>1.002</td>
<td>1.022</td>
<td>0.363</td>
<td>0.312</td>
</tr>
<tr>
<td>KWpositioSPCED</td>
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<td>0.578</td>
<td>4.472</td>
<td>0.294</td>
<td>0.034*</td>
</tr>
<tr>
<td>KwpositionGuidance</td>
<td>-1.204</td>
<td>0.852</td>
<td>1.997</td>
<td>0.300</td>
<td>0.158</td>
</tr>
<tr>
<td>Constant</td>
<td>0.016</td>
<td>0.737</td>
<td>0.000</td>
<td>1.016</td>
<td>0.983</td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.

When the final logistic regression model was run, the overall model was not viable with the specified 15 variables included in the analysis. The variables of years in current position (LogRgYrsCurr) and years in education (LogRgYrsEduc) were systematically eliminated from the analysis. In order to meet the goodness of fit, the final analysis was run using 9 specified variables. Table 34 presents findings from the logistic regression model for Question 5 concerning whether special educators were provided with professional
development opportunities regarding CTE programs. Predictor variables correctly classified approximately 60% of participants regarding whether special educators were provided with professional development opportunities regarding CTE programs. The overall model was significant (-2 log likelihood = 152.005, df = 9, $\chi^2 = 18.069, p = .034$) and accounted for approximately 13% of variance of the model (Cox & Snell $R^2 = .134$).

Secondary special education was more likely to disagree that they were provided professional development regarding CTE compared to career and technical educators (reference category). Guidance counselors did not show any significance when compared to the reference category (CTE). There was no significant difference between females and males (reference category). There was no significant difference between the age ranges of 20-29, 30-39, or 40-49 in comparison with the age group of 50-59 (reference category) regarding whether special educators were provided with professional development opportunities regarding CTE programs. There was also no difference found between the education levels of high school/occupational certificate, associates degree, or bachelors degree compared to the reference category of those respondents having a masters degree.
Table 34

Parameter Estimates for Special Education being Provided Professional Development about CTE Predictor Variables Logistic Regression Model

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>Exp (B)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
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<td>0.258</td>
<td>1.713</td>
<td>1.402</td>
<td>0.191</td>
</tr>
<tr>
<td>LogRgAGE2029</td>
<td>0.529</td>
<td>0.751</td>
<td>0.496</td>
<td>1.697</td>
<td>0.481</td>
</tr>
<tr>
<td>LogRgAGE3039</td>
<td>0.716</td>
<td>0.507</td>
<td>1.990</td>
<td>2.045</td>
<td>0.158</td>
</tr>
<tr>
<td>LogRgAGE4049</td>
<td>-0.097</td>
<td>0.511</td>
<td>0.036</td>
<td>0.907</td>
<td>0.849</td>
</tr>
<tr>
<td>LogRgEdLev1</td>
<td>0.430</td>
<td>0.692</td>
<td>0.386</td>
<td>1.537</td>
<td>0.534</td>
</tr>
<tr>
<td>LogRgEdLev2</td>
<td>-1.480</td>
<td>1.032</td>
<td>2.059</td>
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<td>0.151</td>
</tr>
<tr>
<td>LogRgEdLev4</td>
<td>0.253</td>
<td>0.569</td>
<td>0.198</td>
<td>1.288</td>
<td>0.656</td>
</tr>
<tr>
<td>KWpositioSPCED</td>
<td>-1.521</td>
<td>0.558</td>
<td>7.436</td>
<td>0.218</td>
<td>0.006**</td>
</tr>
<tr>
<td>KwpositionGuidance</td>
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<td>1.800</td>
<td>0.359</td>
<td>0.180</td>
</tr>
<tr>
<td>Constant</td>
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<td>0.619</td>
<td>0.604</td>
<td>0.618</td>
<td>0.437</td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.

Summary

Analysis of survey responses pointed out that there were both similarities and differences between respondent’s knowledge base and perceptions. There were a significant number of participants who did not know the “how, when, and who” regarding the sharing of information between special education and career and technical education regarding students with disabilities. Surprisingly, CTE appeared to have a stronger sense overall of the methods used to communicate and how this takes place. There was not a strong sense from either group in regards to who is responsible for providing information about students to the CTE centers. A significant number of CTE respondents felt that little or no regular communication took place between the special education teacher and the CTE teachers, as did a significant number of special education teachers and counselors.
When looking at predictor variables to gain insight as to what might predict a respondent’s perception or what might account for significant differences in responses, little significance was noted. Special education respondents appeared to be more in disagreement when it came to professional development opportunities being provided for both their own group and CTE staff. On the other hand, special education was more likely to agree that CTE was provided adequate information regarding students with disabilities than the recipients of that information, CTE. Staff that had been in their current teaching position between 6 and 10 years also was more in agreement that adequate student information was provided. These finding were informative; however, there was not a significant number of, or consistent variables indicated from the analysis. Findings, concerns, and researcher recommendations will be discussed further in Chapter 5.
CHAPTER FIVE

Overview, Discussion and Recommendations

Study Overview

This exploratory study investigated the communication and collaboration that takes place between career and technical education staff, secondary special education teachers, and secondary guidance counselors in regards to shared students with disabilities. Specifically, it investigated the processes used to share information and communicate on behalf of students with disabilities. The perceptions held by each educational system in regards to the current practices of communication and collaboration was also investigated. A mailed survey was designed and sent to six stand-alone CTE centers and feeding secondary special education teachers and guidance counselors. The data were analyzed using descriptive and inferential statistics. There were seven research questions developed for this study. These questions investigated the process, practices, and perceptions held by CTE instructors and administrators in stand-alone CTE centers and secondary special education teachers and guidance counselors who were participants in those CTE centers.

Sample and Returns

Two parallel surveys were designed and disseminated by two methods, on site and by U.S. Postal Service. The CTE surveys were distributed to 115 CTE teachers and 10 CTE administrators in six stand-alone CTE Centers throughout the state of Indiana. The secondary education surveys were distributed to 117 special education teachers and 72 guidance counselors representing 31 secondary high schools. A total of 314 individuals were surveyed. The study period was a 12 week time period with one follow up email two-three weeks after surveys were disseminated. The follow up email was a reminder to those
sampled participants who had not completed the survey. Due to the distribution taking place at the end of the school year, only one reminder was sent.

The study sent out 314 surveys resulting in 131 respondents for an overall 41.7% response rate. CTE teachers & administrators (combined) had the highest response rate at 52.7% (n = 69), followed by secondary special education teachers 32.1% (n = 42) and guidance counselors 15.3% (n = 20). All of the information/data collected from the survey process was analyzed using descriptive and inferential statistical methods produced by Statistical Program for Social Sciences software (SPSS 17.0, 2008).
Discussion

Practices of Communication

This study focused primarily on exploring the areas of communication and collaboration that takes place between CTE teachers and secondary education staff (special education teachers and guidance counselors) regarding shared students with disabilities. Communication is the building block for collaboration (Friend & Cook, 2010). Though educators might consider themselves experts in communicating with students and parents, often their communication with one another is lacking (Friend & Cook, 2010). Literature has found that CTE and special educators believe that communication is important, but are not always able to communicate regularly or effectively (Nietupski, 2008; DeFur & Taymans, 1995; & Wonacott, 2001). Results of this study support the understanding of both educational systems regarding the importance and need to communicate on behalf of students with disabilities. Data also identifies a lack of knowledge and process that impedes the success of the desired communication.

Data were analyzed using descriptive statistics, frequencies, and percentages to answer questions regarding the most common methods of providing information from secondary education to CTE regarding shared students with disabilities. It was found that CTE teachers and administrators, secondary special education teachers and secondary guidance counselors primarily agreed that the student IEP’s were most often sent to the CTE Center. It was noteworthy, however, that 8.7% (CTE), 9.8% (special education) and 10% (guidance counselors) responded that they did not know how student information was provided to CTE Centers. When asked when that student information was provided to the CTE center, the larger percentage of all three groups believed that the information was
provided in the fall, or at the beginning of the school year. Again, of note was that 10.4% of CTE, 19.5% of special education, and 5% of guidance counselors had no knowledge of when this information was provided. Hall (2007) reported similar concerns in her conclusion that many CTE teacher were not aware of students with disabilities and had not seen any Individual Education Plans.

In relation to who was responsible for providing information to CTE centers regarding the students identified with disabilities, there was again, a significant percentage (15.9%) of CTE staff who did not know who provided that information. A much smaller percentage of special education teachers and guidance counselors did not have knowledge of this. Responses were split in regards to who was providing student information to the CTE Center. CTE respondents believed that it was either the special education teacher or guidance counselor responsibility a large percentage of time. Secondary special education teachers primarily believed it was the responsibility of their position to provide the information, while guidance counselors largely felt it was their (guidance) responsibility. Again, of concern, is the lack of a clear cut understanding of how information is provided and who is providing it. Of note is also the fact that when secondary education was surveyed, depending on the respondent’s position (guidance counselor or special education teacher), each group felt that they held the responsibility for providing student information. In addition, the function of each position is obviously not clearly delineated within the secondary setting in many of the respondent’s situations. This would pose a serious concern as to whether or not a process is in place to provide information and whether or not all involved are informed of the process. Legally, Indiana Article 7 (2008) and IDEA (2004) both indicate that the special education teacher of record is responsible for informing general
education teachers regarding students with disabilities and their specific needs. This legal obligation should be strongly considered in a decision making process for who and how information is shared.

Looking further at the level of communication that takes place between the two educational systems, participants were asked how often special education teachers communicated with CTE staff regarding the shared students with disabilities. CTE respondents believed at a high rate that communication either took place only as needed, or not at all. A small percentage felt that it took place on a quarterly basis. Special education teachers agreed with CTE that communication mainly took place as needed or not at all. A slightly higher percentage of special education teachers felt that communication happened quarterly. Secondary guidance counselors had a somewhat different set of responses. The highest percentage of counselors felt that communication happened monthly. The second largest response was as needed. No guidance counselors felt that there was no communication taking place. Though ultimately, no statistical significance was found in the responses to the questions surrounding the practices of communication, there is a need for concern in practical terms. Approximately one fifth of the CTE respondents felt that they had no communication with special education and one out of every ten special education respondent felt that no communication was taking place. Similarly, Okolo and Sitlington (1988) reported that 56% of CTE respondents in their study indicated that they communicated with special education teachers only when necessary. The federal and state regulations (IDEA, Article 7) require that the Teacher of Record for a student with a disability monitor the implementation of the student’s IEP. If CTE staff and special
education staff are not communicating, there is a great need for concern regarding whether or not student’s needs are being met outside of the high school setting.

**Practices of Collaboration**

The importance of participation of CTE staff when it comes to planning for students with disabilities in CTE programs is well documented (Wonocott, 2001; Test et al., 2006). Haber and Sutherland (2008) reported that CTE programs would have a difficult time making good decisions regarding the placement of students with disabilities if they were not involved and represented at planning meetings. The results of this study indicate that this needed level of participation is not happening at a high rate.

In terms of collaboration that is, or is not, taking place, participants were asked whether or not CTE was involved in the case conferences for students with disabilities either currently attending a program, or projected to attend a program in the future. There was clear disagreement from special education that CTE was representative at conferences for current or projected students. CTE and guidance both also disagreed, but at a lesser level. These results were similar to those found by the National Center on Secondary Education and Transition (NCSET) (2009). It was reported by NCSET that only 40% of vocational teachers and 61% of guidance counselors were involved in the transition planning process (2009). Again, when CTE teachers are asked to meet the needs of students with disabilities in their programs, attendance at the conferences where those decisions are made would appear to be a natural venue to collaborate and communicate.

**Professional Development Provided**

Knowledge regarding students with disabilities and their needs in the classroom is imperative, especially in a CTE environment where the education level of staff is quite varied
(Custer & Panagos, 1996). CTE teachers have been reported as acknowledging this need and looking for assistance through professional development and one-on-one support from special education teachers (Cotton, 2000). Okolo and Sitlington (1988) found that very little training took place between special education and CTE regarding student needs. Harvey, Cotton, and Koch (2007) found that CTE teachers needed a higher level of support from special education teachers than they were currently receiving to meet student specific needs. Both of these studies support the researcher conclusions. A need for better understanding by each educational group (CTE, guidance counselors, special education teachers) regarding what the learning needs are and how they are being met is needed, as indicated by the results of this study.

In looking at CTE instructors being provided professional development opportunities regarding disabilities in general, CTE staff responded at a level of disagreement that professional development took place. This is supported by the findings of Harvey, Cotton, and Koch (2007). They found that a large majority of CTE staff in the state of Indiana felt that they had limited or not training in working with students with disabilities. Secondary special education and guidance counselors responded with an even higher probability of disagreement compared to CTE. Even though no significance was found within these responses, the disparity of means is noteworthy. Guidance counselors had the lower mean of all three groups, indicating a clear level of disagreement. It should be noted that, given the discrepancy, guidance counselors may or may not have access or knowledge of the professional development that takes place in the stand-alone CTE center. This may account for the varying responses. A more in-depth question asking whether or not CTE was provided professional development regarding student specific needs saw even more
discrepancy of responses. Significance was noted in the fact that CTE was in less
disagreement then special education and guidance counselors. Again, it should be further
explored whether or not special education and guidance have a full awareness of the
professional development that takes place in the CTE environment.

When asked whether or not special education teachers were provided professional
development regarding CTE programs, special education and guidance counselors were in
clear disagreement. CTE responded at a lesser level of disagreement (leaning toward
agreement) with this statement. It appears, as in all the questions related to professional
development that secondary education and CTE staffs are in some level of disagreement as
the extent that this is not taking place. Practically speaking, the fact that special education
and guidance feel that professional development is not happening at their level, again
suggests that no consistent plan for collaboration or communication is taking place in many
of the educational settings. This conclusion is similar to that found by the Michigan Office
of Career and Technical Education (2009), who reported that special education teachers often
do not understand CTE programs, their content, and requirements. DeFur (1997) also
supported the need of professional development to increase the understanding between the
CTE system and secondary education.

**CTE and Secondary Education Perceptions**

Each group was asked to respond to questions regarding their perceptions of the
importance of collaboration between CTE and secondary special education as well as their
perception of their own personal responsibility/role in delivering services to students with
disabilities. Of the CTE respondents (n=69) the majority either agreed or strongly agreed
that it was important for them to have student information prior to the start of the year. In
addition the largest majority also strongly agreed or agreed that it was necessary for them to know adaptations and modifications for the students in their programs. Almost all CTE respondents were in agreement that they would like to have communication with the special education teacher throughout the year. These responses are supported by Cotton (2000), who found that CTE teachers in Indiana believed in supporting the students with disabilities in their programs. Hall (2007) also found that teachers in the CTE setting are willing to work with students with disabilities, given the appropriate level of education and training in meeting those needs.

Given similar perception based questions, secondary educators were asked to rate their perceptions. The majority of respondents strongly agreed that it was important for CTE teachers to have student information prior to the start of the school year. Secondary education felt that it was their responsibility to provide that student information to CTE.

When looking at direct responsibility of special education to CTE centers and students, there was a higher level of disagreement. When asked if they had responsibility to monitor IEP adaptations and modifications and assist with those at CTE centers, more than half were in disagreement. On the practical side, of note in this series of questions is the fact that all respondents believe it is important to have student information and a level of communication. However, when looking at the direct responsibility for that taking place, no clear cut level of responsibility was noted. Interpretation of the legal responsibilities of special education teachers for students with disabilities when they are “outside” the high school building is important to determine where teacher responsibilities lay.
**Logistic Regression Models**

Since few areas of significance were noted, a logistic regression analysis was conducted to determine if there were any variables that impacted responses. Three logistic regression models were run on the following three questions where significance was noted through the Kruskal Wallis analysis. The logistic regression models ultimately proved that there were very few variables that had any predictive value concerning group differences based on the models run, and reported below, in relationship to the reported Kruskal Wallis significances.

*Question 2: CTE teachers are given adequate information regarding individual student adaptations and modifications.* When further analysis was conducted on this question, it was noted that secondary special education teachers were more likely to agree that CTE was given adequate information in comparison with CTE respondents. In addition, respondents that had been in their current position between 6 and 10 years had a higher probability to agree that CTE was given adequate information, in comparison to the reference category of those with 16 years of more experience.

*Question 4: CTE Instructors are provided professional development for student specific needs.* Analyzing further the responses for this question, secondary special education respondents were more likely to disagree that professional development was provided for CTE staff than CTE itself.

*Question 5: Special education teachers are provided professional development regarding CTE programs.* The final question that received further analysis found that secondary special education again was more likely to disagree that this was provided then the reference group of CTE.
Summary

There were three significant areas of concern that emerged from this study. When each of those three areas was further explored, however, the comparison groups were often in a level of agreement. The level of ambiguity or unknown was of great concern to the researcher. A large percentage of special education respondents (19.5%) did not know when student information was sent to the CTE Center. There was also some disparity in who thought they were responsible for providing that information. Though most special education teacher respondents felt it was important for CTE to have student information, not all felt that they held responsibility in monitoring that IEPs were being implemented at the CTE Center. According to Indiana Article 7, Indiana’s rules that interpret the IDEA mandates, it is the teacher of records (special education teacher) responsibility to “1) monitor the implementation of the student’s IEP and 2) ensure that each of the student’s teachers who are responsible for implementing the student’s IEP a) have access to a copy of the IEP, b) are informed of their specific responsibilities related to implementing the IEP and c) are informed of the specific accommodations, modifications, and supports that must be provided for the student” (511 IAC 7-42-8, 2008). This makes it quite clear that the special education teacher’s responsibilities do not end when students leave the building to attend a stand-alone CTE Center. This section of the law also addresses the concern from CTE that adequate student information is not provided to them. CTE respondents were in a greater level of disagreement that they received adequate student information, while special education and guidance counselors believed that they did. Communication and collaboration regarding what CTE teachers need to most effectively work with their students with disabilities is needed. The perceptions of all three groups regarding many presented questions indicate that
the responsibilities and the outcomes are often viewed differently based upon the position they served.

Though statistical significance was not noted, attendance of CTE representatives at case conferences also needs addressed. Indiana Article 7 states that at each case conference, one of the participants must be “a representative who is knowledgeable about the general education curriculum” (511 IAC 7-42-3, 2008). Levels of disagreement from both CTE and secondary education exists as to whether or not CTE representatives are invited to case conferences for current and/or future students with disabilities who are or may be, attending a CTE program. The CTE representative is the person who can best discuss the curriculum that the student would be accessing. Their representation is important to make sure that appropriate placements are made.

To support the lack of consistency and understanding between the two education systems (CTE and secondary education), professional development would seem a possible solution. When questioned regarding professional development opportunities for both CTE and special education, significance was noted between response groups. To make this a more consistently utilized method to support communication and collaboration an understanding of what both groups need to better serve students is important to explore.

**Limitations**

This study was exploratory; it was designed to provide insights into the issue of collaboration and communication between two education systems. The information provided is both needed and helpful. Any conclusions, however, cannot be projected beyond the participants of this study. In addition, there are several limitations within the scope of this
study and include: 1) changes in the overall study, 2) sample size and response rate, 3) survey type and barriers, and 4) follow up.

In regards to the sample size and response rate, one of the greatest impacts on the study was the adjustment from the original intended sample and the actual sampled sites and schools. The change from the original CTE Centers and feeding schools significantly decreased the number of potential participants. It also changed the geographical scope of the respondents, moving it from a centralized area to a state wide cross section. Through the change in sites, came a smaller defined population given the size of the new CTE centers and the size and number of feeding high schools. Two of the initial stand alone sites chosen were two of the larger CTE stand alone centers in the state of Indiana. For this reason, I believe the response rate was smaller than had been originally planned.

Connected to the limitations of the sample and respondents were the barriers that were encountered in obtaining participants. A pencil/paper survey was chosen, which required direct delivery to staff members. Due to increased parameters of some school corporations in respect to staff completing surveys, the locations changed. Since the surveys were dependent upon a CTE Center first, and the feeding school second, when the CTE Center changed, so did the greater participant pool of feeding schools. It is a concern that schools are beginning to discourage research from being conducted by placing greater restrictions on the process. Research into local and state-wide practices is important to effectively impact current practices and procedures in education. In addition, with the changes in the overall study from a regional sample to a revised sample, there was a time lag between the initial contact for study participation and follow up for actual participation.
An additional area of concern is the limited number of follow up notifications from the researcher to the participants. Given the time frame, and the end of the school year calendar, very little follow up or reminder notices were given to potential participants. This may have impacted the overall response rate negatively.

**Recommendations**

Recognizing that this study was exploratory, generalizations could not be made about the perceptions of CTE teachers and administrators, secondary special education teachers or secondary guidance counselors in the state of Indiana from the limited respondents. However, the study shows that there is a level of ambiguity regarding the practices that exist to support a connection between CTE staff and secondary special education and guidance counselors. This level of ambiguity and/or inconsistency indicates a need for more organized efforts for collaboration and communication between the two educational systems. As a current Director of Special Education and a former Transition Coordinator and Secondary Special Education Teacher, concerns and recommendations also come from personal experience. It is my experience, which has also been supported by the referenced literature, that both CTE and secondary education are committed to supporting students with disabilities. However, given the time constraints and the added responsibilities in the field of education, a growing disconnect exists. The communication and collaboration pieces have, in essence, become an area where all parties just hope the other side is doing their job. What is forgotten is the very specific field related knowledge that each position represents and the need for that to be shared with one another. Career and technical education is a tremendous fit for students with disabilities and provides an array of real-world experiences. For students to get the most benefit from those experiences and to raise the level of expected performance,
CTE staff and special education and guidance staff must work together to develop local plans as well as advocate for state and federal support.

**Course of Action (Local)**

1. Local CTE administrators and local special education administrators should meet to create a similar local survey for their CTE center and feeding high schools. The survey produced through this research should be used as a starting point, along with the concerns that were expressed. Local practices, policies, concerns, and needs should be intertwined into the survey. Parents should also be included as survey participants to determine what their level of knowledge and participation are in regards to their students attending CTE programs.

2. The developed survey should be distributed to CTE staff and secondary special education teachers (discussion should be held whether or not to include guidance counselors or to develop a separate survey more specific to their position).

3. Collected surveys should be analyzed for both positive and negative practices and perceptions.

4. Parallel to the survey, local CTE centers and departments of special education should review any current/local practices or policies that are in place.

5. Following the gathering and analysis of this data, and review of any local practices, an overview of findings should be prepared and shared with CTE and secondary staff.

6. From this information, an inter-educational team (CTE and secondary special education, guidance, students, parents, etc…) should be created to review and revise or create local practices, and/or professional development opportunities.
dealing with communication and collaboration on behalf of shared students with disabilities.

7. In addition, exploration of alternative ways to include CTE staff in case conferences for students with disabilities should be explored (Skype, conference calls).

**Course of Action (State)**

1. The Indiana Department of Education Office of Career and Technical Education, the Indiana Association for Career and Technical Education (IACTE), and the Center for Exceptional Learners create a core team of representatives to look more closely into the practices used to support students with disabilities in the CTE environment.

2. This team develops a state-wide survey to look more thoroughly at current practices of communication between secondary special education and all CTE systems (stand alone centers, programs attached to high schools, programs within high schools).

3. Results of this survey would then be shared both regionally and by career & technical delivery sites.

4. Results would then be used to support the development of regional training sessions, webinars, or pod-casts addressing response concerns, issues, and areas of significance.

5. Final outcome on an individual basis is that CTE Centers and their feeding schools have in place a written plan for communication and collaboration regarding information and support related to the shared students with disabilities.
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Appendix A: CTE Regional Map

Indiana Career & Technical Education

Area CTE Districts

Workforce Region Boundaries
Survey of Special Education Teachers & Secondary Guidance Counselors who have Students with Disabilities Attending Programs In Indiana Career &Technical Education Centers

I appreciate you taking a few minutes to complete the following survey. The purpose of this survey is to look at the collaboration and communication that takes place between Career and technical education (CTE) teachers and Special Education teachers regarding students with disabilities who attend CTE Centers in Indiana. Your responses will be used not only in partial completion of a dissertation, but to hopefully build collaborative and successful partnerships between vocational educators and special educators. Results of the study will be shared with building level staff to work toward building more coordinated efforts.

Your support is appreciated regarding this critical issue

Section I - Demographic Information: (please respond as indicated)

Gender: ___ Male    ___ Female     Age:  ____20-29  ____30-39   ____40-49   ____50 +
Position: ___ Special Education Teacher   ___ Guidance Counselor
Level of Education: ___ BA/BS    ___ MA/MS   ___ PhD/EdD
Current Position: ___ Guidance   ___ LD Tchr   ___ ED Tchr   ___ MiMH Tchr   ___ MoMH Tchr   ___ Sev. Dis.   ___ Other
Years in Current Position:  ____1-2 years     ____ 3-5 years     ____ 6-10 years    ____ 11-15 years   ____ 16+
Years in education:  ____1-2 years ___ 3-5 years ___ 6-10 years ___ 11-15 years ___ 16+

If you are currently a Special Education Teacher please respond to the following:
Teaching Environment (please check your PRIMARY teaching assignment):

- Co/Team Teaching
- Resource Room
- Direct Instruction Pull Out
- SelfContained
- Other

Current Caseload (TOR): ____ 1-5     _____ 6-10     _____ 11-15     _____ 16-20     _____ 21+

Number of those students who attend a Career & Technical Program: ____ 0-1    ____ 2-5     ____ 6-10    ____ 11-15    ____ 16

Section II - Survey Questions

Please take a moment to respond to the questions below. Please check only one (1) response for each question:

1. What is the most commonly used method of providing information to CTE teachers regarding students with disabilities?
   
   _____ IEPs are sent to the Career Center
   
   _____ A list of students with disabilities is provided to the Career Center
   
   _____ Summary sheets are provided
   
   _____ I don’t know
2. Who is responsible for the communication that takes place between special education teachers and CTE teachers?

_____ Special education teacher

_____ CTE Teacher

_____ Guidance Counselor

_____ CTE Administrator/Coordinator

Section III – Perceptions: Questions in this section ask for your perceptions regarding collaborative efforts between Special Education and Career and technical education. Please respond to the following statements by circling the degree of agreement/disagreement you would place on each statement (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

Rating Scale

1. Regular communication takes place between Special Education teachers and CTE Teachers:

2. CTE Teachers are given adequate information regarding individual student adaptations and modifications:

3. Special Education teachers are adequately informed regarding CTE programs and requirements:

4. CTE representatives are invited to attend case conferences for students
APPENDIX B: Special Education Teacher & Guidance Counselor / Transition Survey

with disabilities who are currently in a CTE program:

5. CTE representatives are invited to attend case conferences for students with disabilities who are projected to be in a CTE program:

6. CTE teachers are provided professional development opportunities regarding individuals with disabilities:

7. CTE teachers are provided professional development opportunities regarding student specific needs:

8. Special Education Teachers are provided professional development opportunities regarding Career and Technical Education programs:

Section IV – Additional Questions:

1. When is student information provided to the CTE Center?

   ___ Summer   ___ Fall (beginning of the school year)   ___ Spring (at end of school year for next years students)

   ___ I don’t know

2. Who is responsible for seeing that this information is provided?

   ___ special education teacher   ___ guidance counselor   ___ special education department head

   ___ transition coordinator   ___ I don’t know   ___ special education administrator/central office staff
3. How often do you communicate with the CTE teachers who serve the students with disabilities that you work with in your secondary building?
   ___ weekly  ___ monthly  ___ quarterly  ___ semester  ___ annually  ___ only as needed  ___ not at all

4. What is the most frequent method of that communication?
   ___ mid term reports  ___ email  ___ phone  ___ on site visits  ___ conference

5. How often do you communicate with the Special Education Coordinator and/or Transition Coordinator?
   ___ weekly  ___ monthly  ___ quarterly  ___ semester  ___ annually  ___ only as needed  ___ not at all

6. What is the most frequent method of that communication?
   ___ mid term reports  ___ email  ___ phone  ___ on site visits  ___ conference

Section V – Additional Perceptions: The following questions ask for your perceptions regarding collaborative efforts between Special Education and Career and technical education. Please respond to the following statements by circling the degree of agreement/disagreement you would place on each (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

Rating Scale

1. I believe that it is important for the CTE Teacher to have specific student information prior to the beginning of the school year:

   1--------2--------3--------4
2. I believe that it is my responsibility as a special education teacher / guidance counselor (please circle) to send or provide the specific student information to the CTE Center:

3. I believe it is my responsibility to monitor that student adaptations and modifications are being made in the CTE programs they attend:

4. I believe it is my responsibility to assist CTE teachers with making the necessary adaptations and modifications needed for individual students with disabilities who are in a CTE program(s):

I sincerely appreciate you taking time to respond to this questionnaire. I believe that Career and technical education Centers provide limitless opportunities for all students, including those with disabilities. I am hopeful that the collaboration between CTE and Special Education will continue to grow. Thank you for your help.
Survey of Career and Technical Education (CTE) Teachers & Administrators Serving Students with Disabilities In Indiana

Career and Technical Education Centers

I appreciate you taking a few minutes to complete the following survey. The purpose of this survey is to look at the collaboration and communication that takes place between CTE teachers and Special Education teachers regarding students with disabilities who attend CTE Centers in Indiana. Your responses will be used not only in partial completion of a dissertation, but to hopefully build collaborative partnerships between CTE and special educators. Results of the study will be shared with building level staff to work toward building more coordinated efforts. Your support is appreciated regarding this critical issue.

Section I - Demographic Information: (please check as appropriate)

Gender: ___ Male ___ Female Age: ____20-29 ____30-39 ____40-49 ____50 +

Position: ___ CTE Teacher ___ CTE Administrator

Level of Education: ___ HS Diploma ___ AA/AS ___ Occupational Certification ___ BA/BS ___ MA/MS ___ PhD/EdD

Current Position: ______________________________ (ie: CTE Director, Automotive Teacher, ICE Coordinator, etc…)

Years in current position: ___1-2 ___ 3-5 ___6-10 ___11-15 ___16+

Years in Education: ___1-2 ___ 3-5 ___6-10 ___11-15 ___16+

CTE Teachers (Please answer the following questions):

Number of schools feeding into your CTE Center: ___ 1-5 ___ 6-10 ___ 11+
Appendix C: CTE/Transition Survey

Current class size for your program (a.m.) ___ 1-10  ___ 11-15  ___ 16+  (p.m.)  ___ 1-10  ___ 11-15  ___ 16+

Number of students in your current program who are identified with a disability (a.m.) ___ 0-1  ___ 2-5  ___ 6-10  ___ 11+
(p.m.) ___ 0-1  ___ 2-5  ___ 6-10  ___ 11+

Section II - Survey Questions (for both CTE Teachers and Administrators):

Please take a moment to respond to the questions below. Please check only one (1) response for each question:

3. What is the most commonly used method of providing information to CTE teachers regarding students with disabilities?
   ____ IEPs are sent to the Career Center
   ____ A list of students with disabilities is provided to the Career Center
   ____ Summary sheets are provided
   ____ I don’t know

4. Who is responsible for the communication that takes place between special education teachers and CTE teachers?
   ____ Special Education teacher
   ____ CTE Teacher
Appendix C: CTE/Transition Survey

_____ Guidance Counselor

_____ CTE Administrator/Coordinator

Section III – Perceptions:

Questions in this section ask for your perceptions regarding collaborative efforts between Special Education and Career and technical education. Please respond to the following statements by circling the degree of agreement/disagreement you would place on each statement (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

Rating Scale:

1. Regular communication takes place between Special Education teachers and CTE Teachers: 1--------2--------3--------4

2. CTE Teachers are given adequate information regarding individual student adaptations and modifications: 1--------2--------3--------4

5. Special Education teachers are adequately informed regarding CTE programs and requirements: 1--------2--------3--------4

4. CTE representatives are invited to attend case conferences for students with disabilities who are currently in a CTE program: 1--------2--------3--------4
5. CTE representatives are invited to attend case conferences for students with disabilities who are projected to be in a CTE program: 1-2-3-4

6. CTE teachers are provided professional development opportunities regarding individuals with disabilities: 1-2-3-4

7. CTE teachers are provided professional development opportunities regarding student specific needs: 1-2-3-4

8. Special education teachers are provided professional development opportunities regarding Career and technical education programs: 1-2-3-4

9. CTE teachers are provided professional development opportunities regarding adaptations and accommodations for students with disabilities: 1-2-3-4

Section IV – Additional Questions:

7. When is student information provided to the CTE Center?
   ___ Summer   ___ Fall (beginning of the school year)   ___ Spring (at end of school year for next years students)
   ___ I don’t know

8. Who is responsible for seeing that this information is provided?
   ___ special education teacher   ___ guidance counselor   ___ CTE Administrator
Appendix C: CTE/Transition Survey

___ special education coordinator or department head ___ I don’t know

9. How often do you communicate with the special education teachers from the home schools of students with disabilities who attend your program(s)?
   ___ weekly ___ monthly ___ quarterly ___ semester ___ annually ___ only as needed ___ not at all

10. What is the most frequent method of that communication?
    ___ mid term reports ___ email ___ phone ___ on site visits ___ conference

11. How often do you communicate with the Special Education Coordinator and/or Transition Coordinator?
    ___ weekly ___ monthly ___ quarterly ___ semester ___ annually ___ only as needed ___ not at all

12. What is the most frequent method of that communication?
    ___ mid term reports ___ email ___ phone ___ on site visits ___ conference

Section V – Additional Perceptions: The following questions ask for your perceptions regarding collaborative efforts between Special Education and Career and technical education. Please respond to the following statements by circling the degree of agreement/disagreement you would place on each (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

Rating Scale

1. I believe that it is important for me to have specific student information 1------2--------3-------4
Appendix C: CTE/Transition Survey

prior to the beginning of the school year:

2. I would like for the special education teachers to communicate with 1-2-3-4
me throughout the year:

3. I believe it is necessary for me to know the adaptations and modifications 1-2-3-4
that I might need to make for students in my program(s):

4. I believe it is my responsibility to make the necessary IEP adaptations and 1-2-3-4
modifications needed for individual students with disabilities who are in my
my program(s):

I sincerely appreciate you taking the time to respond to this questionnaire. I believe that Career and technical education
Centers provide limitless opportunities for all students, including those with disabilities. I am hopeful that the collaboration
between CTE and Special Education will continue to grow. Thank you for your help.
## Research Question(s) / Survey Matrix

**Key:**  
- **B** = both surveys  
- **C** = CTE survey only  
- **S** = Secondary Ed survey only

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<tr>
<td>1. What is the most commonly used methods of providing information to CTE teachers regarding students with disabilities?</td>
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<td>2. How often do CTE Staff and Secondary Special Education Staff (Special Education Teachers, Guidance Counselors) communicate regarding students with disabilities?</td>
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<td>3. Are CTE teachers invited to attend case conferences for current and/or projected special education students?</td>
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<td>4. Are CTE teachers provided professional development or training opportunities regarding students with disabilities?</td>
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<td>5. Are special educators provided with professional development or training opportunities regarding CTE programs?</td>
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<td>6. What are the perceptions of CTE teachers regarding their role and responsibilities in collaboratively working and communicating with special educators when working with students with disabilities in their programs?</td>
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<tr>
<td>7. What are the perceptions of special education teachers regarding their role and responsibility in collaboratively working and communicating with CTE teachers when working with students with disabilities in their programs?</td>
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Recruitment Script for School/Career Center Permission

Study Title: Special Education and Career and technical education (CTE) Collaboration: Process, Perception, and Practice

The information below was provided via phone calls requesting permission to conduct the researcher’s survey. Phone calls were made to Career and Technical Education Director’s, school corporation Superintendents, and secondary building Principals.

Script:

Hello. My name is Joni Schmalzried and I am currently the Director of Special Education for the Wabash-Miami Area Program for Exceptional Children, which is a special education cooperative. I am also currently a doctoral student at Ball State University. I have completed all of my course work and am working on preparing the research for my dissertation. For my study I will be looking at the communication and collaboration that takes place between secondary special education teachers and guidance counselors and career and technical education teachers and administrators. I hope to use area career centers and the high schools that feed into them to conduct my work. I will be using short surveys to complete my research. I am hoping to use (your career and technical education center, or) the high schools in your corporation as part of my study. All identifying information, of course, will be strictly confidential. Each participant will receive an explanation of the study and the survey they are asked to complete, as well as a written consent form. They can choose to not participate at any time.

If you agree to participate, I will then contact the building principals prior to sending out any surveys.

Thank you for your consideration and support of this project.
Dear Colleague,

You are receiving this survey because you are either a secondary special education teacher, secondary guidance counselor or a career and technical education teacher or administrator in an identified region in Indiana. I am currently conducting research to complete my dissertation for the doctoral degree at Ball State University. My present position is as a Director of Special Education. I have a long history of working with secondary transition and students with disabilities. For my dissertation I am researching the communication and collaboration practices that take place between special education teachers, guidance counselors, and career and technical education (CTE) teachers and administrators. My goal is to look at the current practices and identify potential communication and collaboration needs as we continue to work to meet the many educational and occupational needs of our students.

I am inviting you to participate in this important study. I would greatly appreciate it if you could take a few minutes to complete the enclosed survey and return it to me in the envelope provided. Participation in this survey is confidential and completely voluntary. An explanatory consent form is attached. Please check the appropriate box (participation or no participation) and include the consent form when you return the survey.

If you have any questions, please feel free to contact me either by email at nateljs@omnicityusa.com or reach me at my office at 260-563-8871.

Thank you for your assistance.

Respectfully,

Joni Schmalzried,
Director of Special Education
Wabash-Miami Area Program for Exceptional Children
SURVEY PARTICIPATION CONSENT FORM

Study Title: A Study of Indiana’s Special Education and Career and Technical Education (CTE) Collaboration: Practice, Perception, and Process

Study Purpose and Rational:
The purpose of this research project is to examine the current system of communication and collaboration that takes place between secondary special education and career and technical education. Findings from this research will be used to determine collaboration needs within the two systems to better support the needs of students with disabilities participating in secondary CTE programs.

Participation Procedures and Duration:
For this project you will be asked to complete a survey. It will take approximately 10-15 minutes to complete.

Data Confidentiality:
All data will be maintained as confidential, surveys are coded and no identifying information such as names will appear in any written work concerning this study including any publication or presentation of the data.

Storage of Data:
Paper data (surveys) will be stored in a locked filing cabinet in the researcher’s office for two years and then will be shredded. The data will also be entered into a software program and stored on the researcher’s password protected computer for two years, then deleted.

Risks or Discomforts:
There should be no risk or discomfort from participating in this project.

Benefits:
The benefit of participating in this project will be a broader understanding of the collaborative practices and needs between special education and career and technical education. The data will potentially support appropriate staff development and training needs.

Voluntary Participation:
Your participation in this survey is completely voluntary and you are free to withdraw your permission at anytime for any reason.

IRB Contact Information:
For one’s rights as a research subject, you may contact the following:
Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu.

Study Title: A Study of Indiana’s Special Education and Career and Technical Education (CTE) Collaboration: Practice, Perception, and Process

Consent:
I, _______________________________ (print name), agree to participate in this research project. I understand the purpose and rational of the study, and had contact information to ask any questions I might have. I have read the description of this project and give my consent to participate.

I choose not to participate in this study
_____________________________
Participant’s Signature
_____________________________
Date

Researcher Contact Information:
Principal Investigator: Joni Schmalzried
nateljs@omnicityusa.com
260-563-8871

Faculty Sponsor: Dr. Michael Harvey
mwharvey@bsu.edu
765-285-5715
## NSTTAC Indicator 13 Checklist Form A (Meets Minimum SPP/APR Requirements)

Percent of youth with IEPs aged 16 and above with an IEP that includes appropriate measurable postsecondary goals that are annually updated and based upon an age appropriate transition assessment, transition services, including courses of study, that will reasonably enable the student to meet those postsecondary goals, and annual IEP goals related to the student’s transition services needs. There also must be evidence that the student was invited to the IEP Team meeting where transition services are to be discussed and evidence that, if appropriate, a representative of any participating agency was invited to the IEP Team meeting with the prior consent of the parent or student who has reached the age of majority.

(20 U.S.C. 1416(a)(3)(B))

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
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</thead>
<tbody>
<tr>
<td>1. Is there an appropriate measurable postsecondary goal or goals that covers education or training, employment, and, as needed, independent living?</td>
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<tr>
<td>Can the goal(s) be counted?</td>
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<td>Will the goal(s) occur after the student graduates from school?</td>
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<tr>
<td>Based on the information available about this student, does (do) the postsecondary goal(s) seem appropriate for this student?</td>
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<tr>
<td>2. Is (are) the postsecondary goal(s) updated annually?</td>
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<tr>
<td>Was (were) the postsecondary goal(s) addressed/updated in conjunction with the development of the current IEP?</td>
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<tr>
<td>• If yes, then circle Y OR If the postsecondary goal(s) was (were) not updated with the current IEP, circle N</td>
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<tr>
<td>3. Is there evidence that the measurable postsecondary goal(s) were based on age appropriate transition assessment?</td>
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<tr>
<td>Is the use of transition assessment(s) for the postsecondary goal(s) mentioned in the IEP or evident in the student’s file?</td>
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<td>• If yes, then circle Y OR if no, then circle N</td>
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<tr>
<td>4. Are there transition services in the IEP that will reasonably enable the student to meet his or her postsecondary goal(s)?</td>
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<tr>
<td>Is a type of instruction, related service, community experience, or development of employment and other post-school adult living objectives, and if appropriate, acquisition of daily living skills, and provision of a functional vocational evaluation listed in association with meeting the post-secondary goal(s)?</td>
<td></td>
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<tr>
<td>5. Do the transition services include courses of study that will reasonably enable the student to meet his or her postsecondary goal(s)?</td>
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<tr>
<td>Do the transition services include courses of study that align with the student’s postsecondary goal(s)?</td>
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<tr>
<td>• If yes, then circle Y OR if no, then circle N</td>
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</table>
### Appendix H: Indicator 13 Checklist

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
<th>NA</th>
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<tbody>
<tr>
<td>6. Is (are) there annual IEP goal(s) related to the student’s transition services needs?</td>
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<tr>
<td>Is (are) an annual goal(s) included in the IEP that is/are related to the student’s transition services needs?</td>
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<tr>
<td>• If yes, then circle Y OR if no, then circle N</td>
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<tr>
<td>7. Is there evidence that the student was invited to the IEP Team meeting where transition services were discussed?</td>
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<tr>
<td>For the current year, is there documented evidence in the IEP or cumulative folder that the student was invited to attend the IEP Team meeting?</td>
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<tr>
<td>• If yes, then circle Y OR if no, then circle N</td>
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<tr>
<td>8. If appropriate, is there evidence that a representative of any participating agency was invited to the IEP Team meeting with the prior consent of the parent or student who has reached the age of majority?</td>
<td></td>
<td></td>
<td>NA</td>
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<tr>
<td>For the current year, is there evidence in the IEP that representatives of any of the following agencies/services were invited to participate in the IEP development including but not limited to: postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living or community participation for this post-secondary goal?</td>
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<tr>
<td>Was consent obtained from the parent (or student, for a student the age of majority)?</td>
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<td>• If yes to both, then circle Y</td>
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<tr>
<td>• If no invitation is evident and a participating agency is likely to be responsible for providing or paying for transition services and there was consent to invite them to the IEP meeting, then circle N</td>
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<tr>
<td>• If it is too early to determine if the student will need outside agency involvement, or no agency is likely to provide or pay for transition services, circle NA</td>
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<tr>
<td>• If parent or individual student consent (when appropriate) was not provided, circle NA</td>
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</table>

**Does the IEP meet the requirements of Indicator 13?** (Circle one)

**Yes** (all Ys or NAs for each item (1 – 8) on the Checklist) or **No** (one or more Ns circled)
Instructions for Completing NSTTAC Indicator 13 Checklist

1. Is there an appropriate measurable postsecondary goal or goals that covers education or training, employment, and, as needed, independent living?
   - Find the postsecondary goal(s) for this student
   - If there are appropriate measurable postsecondary goals that address Education or Training after high school, Employment after high school, and (if applicable) Independent Living after high school and if the identified postsecondary goal(s) in Education or Training, Employment, and (if applicable) Independent Living appear to be appropriate for the student, based on the other information regarding Present Level of Academic and Functional Performance and/or the student’s strengths, preferences, and interests, circle Y
   - If there are postsecondary goals that address Education or Training after high school, Employment after high school, and (if applicable) Independent Living after high school, but are not measurable, circle N
   - If there is misalignment between the student’s postsecondary goal(s), based on the information available (e.g., present level of performance, student interests, student preferences), circle N
   - If there is not a postsecondary goal that addresses Education or Training after high school, circle N
   - If there is not a postsecondary goal that addresses Employment after high school, circle N
   - If there is one postsecondary goal that addresses Education or Training, Employment, and (if applicable) Independent Living after high school, but it is not measurable, circle N

2. Is the postsecondary goal(s) updated annually?
   - If the postsecondary goal(s) for Education or Training, Employment, and as needed Independent Living, is (are) documented in the student’s current IEP, circle Y
   - If the postsecondary goal(s) for Education or Training, Employment, and as needed Independent Living, is (are) not documented in the student’s current IEP, circle N
• If this is the student’s first IEP that addresses secondary transition services because they just turned 16, this is considered an update, so circle Y

3. **Is there evidence that the measurable postsecondary goals were based on age appropriate transition assessment?**

   • Find where information relates to assessment and the transition component on the IEP (either in the IEP or the student’s file)
   
   • For each postsecondary goal, if there is evidence that at least one age appropriate transition assessment was used to provide information on the student's needs, strengths, preferences, and interests regarding the postsecondary goal(s), circle Y
   
   • For each postsecondary goal, if there is **no** evidence that age appropriate transition assessment provided information on the student’s needs, taking into account strengths, preferences, and interests regarding the postsecondary goal(s), circle N
   
   • If a postsecondary goal area was addressed in item #1, but was not measurable and if there is age appropriate transition assessment information, from one or more sources, provided regarding the student’s needs, taking into account strengths, preferences, and interests regarding this postsecondary goal, circle Y
   
   • If a postsecondary goal area was addressed in item #1, but was not measurable and if there is **not** age appropriate transition assessment information provided on the student’s needs, taking into account strengths, preferences, and interests regarding this postsecondary goal, circle N

4. **Are there transition services in the IEP that will reasonably enable the student to meet his or her postsecondary goal(s)?**

Prepared by the National Secondary Transition Technical Assistance Center (NSTTAC)

September, 2006; updated July, 2009
Appendix H: Indicator 13 Checklist

- Find where transition services/activities are listed on the IEP
- For each postsecondary goal, if there is a type of instruction, related service, community experience, or development of employment and other post-school adult living objectives, and if appropriate, acquisition of daily living skill(s), and provision of a functional vocational evaluation listed in association with meeting the postsecondary goal, circle Y
- For each postsecondary goal, if there is no (a) type of instruction, (b) related service, (c) community experience, (d) development of employment and other post-school adult living objective, (e) if appropriate, acquisition of a daily living skill, or (f) if appropriate, provision of a functional vocational evaluation listed in association with meeting the postsecondary goal, circle N
- If a postsecondary goal area was addressed in item #1, but was not measurable and there is a type of transition services listed in association with meeting that postsecondary goal, circle Y
- If a postsecondary goal area was addressed in item #1, but was not measurable and there is no type of transition service listed in association with meeting that postsecondary goal, circle N

5. Do the transition services include courses of study that will reasonably enable the student to meet his or her postsecondary goal(s)?
   - Locate the course of study (instructional program of study) or list of courses of study in the student’s IEP
   - Are the courses of study a multi-year description of coursework from the student’s current to anticipated exit year that is designed to help achieve the student’s desired post-school goal(s)?
     If yes, go to next instruction bullet. If no, circle N
   - Do the courses of study align with the student’s identified postsecondary goal(s)? If yes, circle Y. If no, circle N

6. Is (are) there annual IEP goal(s) that are related to the student’s transition services needs?
   - Find the annual goals, or, for students working toward alternative achievement standards, or States in which short-term objectives are included in the IEP, short-term objectives on the IEP
Appendix H: Indicator 13 Checklist

• For each of the postsecondary goal areas circled Y in question #1, if there is an annual goal or short-term objective included in the IEP related to the student’s transition services needs, circle Y

• For each of the postsecondary goal areas circled Y in question #1, if there is no annual goal or short-term objective included in the IEP related to the student’s transition services needs, circle N

• If a postsecondary goal area was addressed in #1, but was not measurable, and an annual goal is included in the IEP related to the student’s transition services needs, circle Y

• If a postsecondary goal area was addressed in #1, but was not measurable, and there is no annual goal included in the IEP related to the student’s transition services needs, circle N

7. Is there evidence that the student was invited to the IEP Team meeting where transition services were discussed?

• Locate the documentation of the invitation to the IEP conference for the student.

• Was the student invitation signed (by the LEA) and dated prior to the date of the IEP conference. If yes, circle Y. If no, circle N

8. If appropriate, is there evidence that a representative of any participating agency was invited to the IEP Team meeting with the prior consent of the parent or student who has reached the age of majority?

• Find where persons responsible and/or agencies are listed on the IEP

• Are there transition services listed on the IEP that are likely to be provided or paid for by an outside agency? If yes, continue with next instruction bullet. If no, circle NA.

Prepared by the National Secondary Transition Technical Assistance Center (NSTTAC)

September, 2006; updated July, 2009
Appendix H: Indicator 13 Checklist

- Was parent consent or student consent (once student has reached the age of majority) to invite an outside agency(ies) obtained? If yes, continue with next instruction bullet. If no, circle NA

- If a postsecondary goal area was addressed in item #1, but was not measurable and there is evidence that agency(ies) for which parent/student had given their consent to invite, were invited to the IEP meeting to discuss transition, circle Y

- If a postsecondary goal area was addressed in item #1, but was not measurable and there is no evidence that agency(ies) for which parent/student had given their consent to invite, were invited to the IEP meeting to discuss transition, circle N

- If it is too early to determine if this student will need outside agency involvement, circle NA

Does the IEP meet the requirements of Indicator 13?

- If all Ys or NAs for each item (1 – 8) on the Checklist, then circle Yes

- If one or more Ns are circled, then circle No

Prepared by the National Secondary Transition Technical Assistance Center (NSTTAC)

September, 2006; updated July, 2009
Appendix I: Summary of Performance (SOP)

SUMMARY OF PERFORMANCE (SOP)

Instructions

Purpose: The Summary of Performance (SOP) is required under the reauthorization of the Individuals with Disabilities Education Act of 2004. The language as stated in IDEA 2004 regarding the SOP is as follows:

For a child whose eligibility under special education terminates due to graduation with a regular diploma, or due to exceeding the age of eligibility, the local education agency “shall provide the child with a summary of the child’s academic achievement and functional performance, which shall include recommendations on how to assist the child in meeting the child’s postsecondary goals” §Sec. 300.305(e)(3).

The Summary of Performance, with the accompanying documentation, is important to assist the student in the transition from high school to higher education, training and/or employment. This information is necessary under Section 504 of the Rehabilitation Act and the Americans with Disabilities Act to help establish a student’s eligibility for reasonable accommodations and supports in postsecondary settings. It is also useful for the Vocational Rehabilitation Comprehensive Assessment process. The information about students’ current level of functioning is intended to help postsecondary institutions consider accommodations for access. *These recommendations should not imply that any individual who qualified for special education in high school will automatically qualify for services in the postsecondary*
education or the employment setting. Postsecondary settings will continue to make eligibility decisions on a case-by-case basis.

The SOP is most useful when linked with the IEP process and the student has the opportunity to actively participate in the development of this document. The SOP must be completed during the final year of a student’s high school education. The timing of completion of the SOP may vary depending on the student’s postsecondary goals. If a student is transitioning to higher education, the SOP, with additional documentation, may be necessary as the student applies to a college or university. Likewise, this information may be necessary as a student applies for services from state agencies such as vocational rehabilitation. In some instances, it may be most appropriate to wait until the spring of a student’s final year to provide an agency or employer the most updated information on the performance of the student.

Part 1: Background Information – Complete this section as specified. Please note this section also requests that you attach copies of the most recent formal and informal assessment reports that document the student’s disability or functional limitations and provide information to assist in post-high school planning.

Part 2: Student’s Postsecondary Goals – These goals should indicate the post-school environment(s) the student intends to transition to upon completion of high school.

Part 3: Summary of Performance – This section includes three critical areas: Academic, Cognitive and Functional levels of performance. Next to each
specified area, please complete the student’s present level of performance and the accommodations, modifications and assistive technology that were essential in high school to assist the student in achieving progress. Please leave blank any section that is not applicable.

An **Accommodation** is defined as a support or service that is provided to help a student fully access the general education curriculum or subject matter. Students with impaired spelling or handwriting skills, for example, may be accommodated by a note-taker or permission to take class notes on a laptop computer. An accommodation *does not change the content* of what is being taught or the expectation that the student meet a performance standard applied for all students. A **Modification** is defined as a change to the general education curriculum or other material being taught, which alters the standards or expectations for students with disabilities. Instruction can be modified so that the material is presented differently and/or the expectations of what the student will master are changed. Modifications are not allowed in most postsecondary education environments. **Assistive Technology** is defined as any device that helps a student with a disability function in a given environment, but does not limit the device to expensive or “high-tech” options. Assistive technology can also include simple devices such as laminated pictures for communication, removable highlighter tapes, velcro and other “low-tech” devices.

The completion of this section may require the input from a number of school personnel including the special education teacher, regular education teacher,
school psychologist or related services personnel. It is recommended, however, that one individual from the IEP Team be responsible for gathering and organizing the information required on the SOP.

**Part 4:** **Recommendations to assist the student in meeting postsecondary goals** – This section should describe any essential accommodations, assistive technology, supportive services, or general areas of need that students will require to enhance access in a **post-high school** environment, including higher education, training, employment, independent living and/or community participation.

**Part 5:** **Student Input (Highly Recommended).** It is highly recommended that this section be completed and that the student provide information related to this Summary of Performance. The student’s contribution can help (a) secondary professionals complete the summary, (b) the student to better understand the impact of his/her disability on academic and functional performance in the postsecondary setting, (c) postsecondary personnel to more clearly understand the student’s strengths and the impact of the disability on this student. This section may be filled out independently by the student or completed with the student through an interview.
Appendix J: IRB Approval Letter

Institutional Review Board

DATE: November 25, 2008
TO: Joan Schmalzried
FROM: Ball State University IRB
RE: IRB protocol # 91204-1
SUBMISSION TYPE: New Study
ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: November 25, 2008

The Institutional Review Board reviewed your protocol on November 25, 2008 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project. Please contact Amy Boos at (765) 285-5034 or aboos@bsu.edu if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.
Appendix K: NIH Certification

Human Participant Protections Education for Research Teams

Completion Certificate

This is to certify that

Joan Schmalzried

has completed the Human Participants Protection Education for Research Teams online course, sponsored by the National Institutes of Health (NIH), on 01/20/2008.

This course included the following:

- key historical events and current issues that impact guidelines and legislation on human participant protection in research.
- ethical principles and guidelines that should assist in resolving the ethical issues inherent in the conduct of research with human participants.
- the use of key ethical principles and federal regulations to protect human participants at various stages in the research process.
- a description of guidelines for the protection of special populations in research.
- a definition of informed consent and components necessary for a valid consent.
- a description of the role of the IRB in the research process.
- the roles, responsibilities, and interactions of federal agencies, institutions, and researchers in conducting research with human participants.

National Institutes of Health