

ABSTRACT

VIERNO, PETER JOSEPH. A Comparison of Transition Predictors between Students Following Different Diploma Pathways. (Under the direction of Dr. Edward Sabornie.)

The purpose of this study was to determine the extent to which evidence of two secondary transition predictors, paid employment and independent living, exist in the Individualized Education Plans (IEPs) of students on two pathways to a high school diploma in a southeastern state. The IEPs of 538 students were examined from one urban district in the state. Of that total sample, 353 students were following the diploma pathway that allows students opportunities to attend post-secondary institutions, known as the Future Ready diploma. The remaining 185 students in the sample were students in the Occupational Course of Study, a diploma pathway for students whose goal after high school is to enter the workforce. All students in the sample, regardless of diploma pathway, had an IQ between 70 and 85 and were at least 16 years of age. Level of evidence for both transition predictors was identified on a scale of 0-3, with 0 as no evidence and 3 as full evidence. In addition to diploma pathway, data were disaggregated by each student's disability category, ethnicity, gender, and age. Descriptive statistics were used to determine levels of evidence for both predictors, and ordinal regression was used to determine the predicted probability that an IEP would have full evidence of both predictors. Results showed that for the transition predictor Paid Employment, students enrolled in the Occupational Course of Study had a mean score of 2.21 ($SD = .91$), compared to students enrolled in the Future Ready who had a mean score of .71 ($SD = .58$). For the transition predictor Independent Living, students enrolled in the Occupational Course of Study had a mean score of 1.79 ($SD = .96$), compared to students enrolled in Future Ready who had a mean score of 1.09 ($SD = .83$). When the original ordinal regression model was adjusted to account for clustering, the final model showed

diploma pathway was the only significant predictor of an IEP showing more evidence of a transition predictor, and only for Paid Employment. Implications of the findings are discussed in terms of ways school personnel can improve transition planning, regardless of the diploma pathway a student with a disability is pursuing.

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A Comparison of Transition Predictors between Students
Following Different Diploma Pathways

by
Peter Joseph Vierno

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APPROVED BY:

Dr. Edward Sabornie
Committee Chair

Dr. Tamara Young

Dr. Susan Osborne

Dr. Michael Maher

BIOGRAPHY

Peter Joseph Vierno was born December 21, 1970 in New Rochelle, NY. After spending his early years living in the Westchester County suburbs of New York City, and for a brief time in the suburbs of London, England, Peter graduated from Westfield High School in Westfield, NJ. He then graduated from the Pennsylvania State University in 1993 with a Bachelor of Science degree in Rehabilitation Counseling Education, and earned his Master of Education degree in Curriculum and Instruction from North Carolina State University in 2000. Peter was a special education teacher for five years at Wake Forest-Rolesville High School in Wake Forest, NC, and for three years at Leesville Road High School in Raleigh, NC working with students on North Carolina's Occupational Course of Study. For the past six years Peter has been a transition teacher for the Wake County Public School System in North Carolina. He lives in Rolesville, NC with his wife, Margie and daughter, Katie.

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CHAPTER 1

INTRODUCTION

Post-school Outcomes of Students with Disabilities

Graduation from high school is a significant milestone for any student. For students with disabilities, evidence suggests that this is a particularly difficult time. Students with disabilities transitioning from high school to adult roles lag behind their peers without disabilities in obtaining successful post-school outcomes (Blackorby & Wagner, 1996; Newman, Wagner, Cameto, & Knokey, 2009). The National Longitudinal Transition Study (NLTS) was the first attempt at collecting data on more than 8,000 students with disabilities by following their experiences from the late 1980s to the early 1990s (Blackorby & Wagner, 1996). Data were collected through phone interviews of students and parents, teacher surveys, and reviewing school records to determine post-school outcomes in employment, and independent living. They found that students with disabilities were engaged in full time employment at a lower rate than their peers without disabilities (57% compared to 69%) between three and five years out of high school (Blackorby & Wagner, 1996). In addition, youth with disabilities experienced lower rates of living independently (37% compared to 60%) than their nondisabled peers between three and five years out of high school (Blackorby & Wagner, 1996).

Subsequent to this study was the National Longitudinal Transition Study2 (NLTS-2), which followed students with disabilities from 2001 to 2010 who were between the ages of 13 and 16 when the study began. Similar to the original NLTS, the NLTS2 also collected data on a nationally representative sample of students through phone interviews, surveys, and

school records. Results for employment were similar to the first NLTS, as 60% of young adults with disabilities were employed, compared to 66% of young adults without disabilities at the time they were interviewed eight years out of high school (Newman et al., 2009). In addition, youths with disabilities were less likely than their nondisabled peers (45% compared to 59%) to live independently when interviewed eight years after high school (Newman et al., 2009).

Evolution of Transition Definitions

Before the term “transition” was first used in the field of special education in the 1980s to describe adolescents moving from school into adult roles in their communities, other terms were used to address similar issues. The “work/study” programs of the 1960s sought to prepare students with intellectual disabilities for jobs after high school and tried to accomplish it through a collaboration between special education and vocational education teachers, as well as vocational rehabilitation counselors (Halpern, 1994). The “career education” movement of the 1970s broadened the focus to include students with and without disabilities in both regular and special education environments, and was primarily viewed as a general education movement. This ultimately led to the Council for Exceptional Children (CEC) forming the Division on Career Development and Transition (DCDT) in 1976 (Halpern, 1994). DCDT currently defines secondary transition of youth with disabilities as:

A change in status from behaving primarily as a student to assuming emergent adult roles in the community. These roles include employment, participating in postsecondary education, maintaining a home, becoming appropriately involved in

the community, and experiencing satisfactory personal and social relationships. The process of enhancing transition involves the participation and coordination of school programs, adult service agencies, and natural supports within the community. The foundations of transition should be laid during the elementary and middle school years, guided by the broad concept of career development. Transition planning should begin no later than age 14, and students should be encouraged, to the full extent of their capabilities, to assume a maximum amount of responsibility for such planning. (Halpern, 1994, p. 117)

The transition planning process should include (a) developing self-determination skills in students; (b) students evaluating their own strengths and weaknesses to find information about them which will help in their own transition planning; (c) identifying post-school goals based on students' evaluations; and (d) selecting school experiences that will help students meet their post-school goals (Halpern, 1994). The work/study and career education movements set the stage for the transition movement that took place in the 1980s.

Evolution of Transition Legislation

The definitions of secondary transition for students with disabilities, along with studies showing poor post-school outcomes for this population, have been the driving force behind federal legislation. The federal government began requiring transition services for students with disabilities beginning with the Individuals with Disabilities Education Act (IDEA) of 1990 (Landmark, 2009). This marked the first time schools were required to devise comprehensive plans focused on a student's post-school outcomes by addressing not

only employment goals, but education, independent living and community participation goals as well (Individuals with Disabilities Education Act, 1990). The 1997 IDEA reauthorization built upon the 1990 law by moving the age at which a statement of transition service needs must be included from 16 years of age to 14 (Individuals with Disabilities Education Act, 1997). When IDEA was amended in 2004, beginning at age 16 the student's postsecondary goals for education/training, employment and, where appropriate, independent living, are to be measurable, updated annually, and based on age appropriate assessments (Individuals with Disabilities Education Improvement Act, 2004).

The IDEA 2004 law also called for greater accountability in accordance with the 2001 No Child Left Behind (NCLB) law. To ensure this, the U.S. Department of Education and the Office of Special Education Programs (OSEP) now requires states to report annually on how well school districts are meeting IDEA mandates. States measure their performance on 20 different indicators on part B in their Annual Performance Report (APR) of their state's performance plan (SPP). Indicators 13 and 14 are related to secondary transition. Indicator 13 requires states to report how well they are providing transition services to students while they are still in school, and Indicator 14 requires states to report data on young adults with disabilities one year after leaving high school. Several studies have documented the extent to which Individual Education Plans (IEPs) are in compliance with the law's mandates. One pattern in the literature has been the conclusion that while IEPs may be compliant by the letter of the law, putting elements of transition plans into effective practice

has been more elusive (Everson, Zhang, & Guillory, 2001; Finn & Kohler, 2009; Grigal, Test, Beattie, & Wood, 1997).

Evolution of Transition Planning Models

While transition services were not required by law until 1990, transition planning dates to the mid-1980s. Madeleine Will developed *The Bridges from School to Working Life Model* (1985), which focused exclusively on moving students from school into competitive employment either immediately or after post-school vocational training. The model emphasized a range of services and supports, from temporary to more on-going, that focus on the individual needs of the student (Will, 1985). The transition model advocated by Halpern (1985) builds on the *Bridges* model by expanding the supports for students with disabilities beyond employment to also address options for independent living and developing interpersonal relationships. Halpern believed transition services need to be more comprehensive so students with disabilities are better equipped to handle the adjustment to independent living in their communities. To help meet this need, schools need to provide support before students exit school by setting post-school goals, providing families with information about post-school options, and linking students to adult service agencies.

By the 1990s, the field had evolved to the point where transition planning became pervasive throughout the education of a student with a disability. This belief is evident in Paula Kohler's *A Taxonomy for Transition Programming* (1996). The goal of Kohler's taxonomy is to embed all secondary education activities as part of planning to transition to what a student wants to do after high school. There are five components to the taxonomy:

Student-focused planning – includes planning strategies for students to participate in their Individual Education Plan (IEP) meetings.

Student development – includes instructional activities and supports needed to meet IEP goals.

Interagency collaboration – coordination of service delivery between schools and adult service agencies to meet individual needs of students with disabilities.

Family involvement – provide information and training to families of students with disabilities so they can advocate more effectively for their child's needs.

Program structure – developing program policies aimed at providing services to students with disabilities, evaluating their effectiveness, and allocating resources to programs.

Alternative Paths to Obtaining a Standard High School Diploma

Many states offer a range of options for students with disabilities to obtain a high school diploma. Thurlow, Cormier, and Vang (2009) found a total of 19 states offering a total of 46 alternate routes to a diploma, 22 for all students (with and without disabilities) and 24 only for students with disabilities. In most cases, the alternate option includes a certificate of attendance or certificate of completion developed by a local education agency and not endorsed by their state's education agency, or a technical diploma that allows students to complete a greater number of credits in a technical field, leading to technical certification before completing high school (Johnson, Stout, & Thurlow, 2009). Some states also allow for students with disabilities to meet fewer requirements than nondisabled peers and still

obtain a standard diploma. Examples of modifications include earning fewer credits, allowance for both extended time to earn the necessary credits as well as alternate courses to count for required credits, and meeting graduation requirements based on decisions made by the student's IEP team (Johnson & Thurlow, 2003). States also allow for non-traditional exit certificates. Gaumer-Erickson, Kleinhammer-Tramill, and Thurlow (2007) found 15% of students with disabilities earning exit certificates, compared to 1% of students without disabilities. They also noted that within disability categories, students with intellectual disabilities earn exit certificates at a significantly higher rate than other disability groups. The route a student takes toward earning a diploma may be of little significance to employers, though. Hartwig and Sitlington (2008) interviewed 25 employers to determine if they consider the type of diploma a student earns or if they just want to know a student graduated. They found only five employers interested in the specific diploma type a student earned, while the rest only wanted to know a student graduated.

Occupational Course of Study

Nine states have diploma path options reserved exclusively for students with disabilities who have an IEP—Alabama, Florida, Georgia, Hawaii, Mississippi, Nevada, New Mexico, New York, and North Carolina (Johnson & Thurlow, 2003). The current study focuses on how effective one southeastern state is in transition planning for students on this type of diploma path, the Occupational Course of Study (OCS). This pathway, which started in 2000, was one of four options students had to earn a diploma. In 2009, OCS became one of only two pathways to a diploma, as the state condensed the three other diploma pathways,

College/University Prep, College Tech Prep, and Career Prep, into one diploma path, Future-Ready Core. As a pathway to earning a diploma, OCS classes are offered at each high school in the state and student enrollment is based on IEP team decisions. Students currently complete 22 credits, including courses in traditional academic areas as well as elective courses in career and technical areas. The academic courses are taken in classrooms with other OCS students, while OCS students participate in the career and technical education electives with their nondisabled peers, though they are allowed accommodations for assignments and state testing in these classes.

An additional requirement for OCS students to earn a diploma is the 900 total hours in vocational training and paid work experiences. Students need to earn 300 hours in vocational training on their school campus, and 240 hours of vocational training at a site in the local community. These components are completed during a student's school day and counted toward credits in Occupational Preparation classes. The final component is the 360 hours of paid employment a student completes in a job obtained outside of school hours. Students are required to show documentation of their paid hours by bringing pay stubs to their school so teachers can make copies and keep track of the number of hours the student has earned. Student on the OCS pathway are allowed to participate in graduation exercises if they have completed all requirements except for the number of paid hours. They then have up to two years to complete the paid hour requirement, bring the pay stubs back to their high school as documentation, and the school issues a diploma.

Significance of the Study

The magnitude of contribution of the study is two-fold. From a research perspective, previous studies have investigated the level of best practices evident in students' IEPs (Everson, Zhang, & Guillory, 2001; Landmark, 2009). To date, no studies have investigated the extent to which the secondary transition predictors first published by Test, Mazzotti, et al(2009) are evident in students' IEPs. Since these predictors are now measuring evidence-based transition practices and the extent to which they improve post-school outcomes, a study that determines level of evidence in student IEPs is appropriate. From a practical significance perspective, while studies have investigated the effect of different diploma options for students with disabilities (Gaumer-Erickson, Kleimhammer-Tramill, & Thurlow, 2007; Johnson, Stout, & Thurlow, 2009; Thurlow, Cormier, & Vang, 2009), no study has compared the effectiveness of transition planning between groups of students following different pathways to earning a diploma. More specifically, no study has yet to measure the effectiveness of the Occupational Course of Study as a pathway to earning a diploma for students with disabilities, 13 years after it was introduced. With post-school outcomes for students with disabilities continuing to be reported at poor rates when compared to their peers without disabilities, the purpose of this study is to determine if transition planning for OCS students in one school district of a southeastern state is preparing them to meet their post-secondary goals when compared to high school students from the same district pursuing the standard (Future-Ready Core) diploma.

Research Questions

- 1a. To what extent do student IEPs show evidence of the secondary transition predictors paid employment?
- 1b. To what extent do student IEPs show evidence of the secondary transition predictor independent living?
- 2a. Does a student's diploma pathway, disability, ethnicity, gender, and age predict the probability that an IEP will show evidence of the secondary transition predictors paid employment?
- 2b. Does a student's diploma pathway, disability, ethnicity, gender, and age predict the probability than an IEP will show evidence of the secondary transition predictor independent living?

Of the 16 predictors described by Test, Mazzotti et al. (2009), the two predictors the study sought to investigate were selected because they are consistent with the categories listed on the transition activities page of IEPs. The study will look for evidence of the predictors in the transition activities of Employment and Daily Living Skills, and look for further evidence of the predictors in additional sections of the IEP, specifically in the Present Level of Academic and Functional Performance and the Annual Goal pages.

Overview of Methodology

This study used quantitative methods to answer the research questions on two levels. The first was descriptive statistics to determine the number of students in each category—diploma pathway, disability, ethnicity, gender, and age—who had evidence of the secondary

transition predictors of paid employment and independent living in his/her IEPs. The second level of analysis was two separate ordinal regression analyses, one for each of the dependent variables (paid employment and independent living). This analysis sought to determine if the probability of predicting that an IEP contained full evidence of either paid employment or independent living activities based on a student's diploma pathway, disability, ethnicity, gender, or age.

Delimitations

The proposed study seeks to investigate the extent to which secondary transition predictors of post-school outcomes for students with disabilities are evident in IEP documents. While documentation on IEP forms does not necessarily represent all that occurred during IEP meetings, it is the only required documentation regarding the educational plan for a student with a disability.

The proposed study investigates a sample of students between the ages of 16 and 22 from one urban school district in the Southeastern U.S.; and includes those with intellectual disabilities, learning disabilities, emotional/behavioral disabilities, and autism. Students who are African American, Caucasian, or Hispanic will be represented as participants.

Definitions of Terms

The following terms will be used throughout this study. They are based on definitions from the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004). The definitions for disability categories are among the 13 categories used by

the federal government that guide states in determining who is eligible for a free and appropriate public education under IDEA.

Learning Disability—A disorder in one of the psychological process in using or understanding written or spoken language, leading to deficits in the ability to speak, read, write, listen, spell, or perform math calculations. It does not include learning problems as a result of visual, hearing, or motor impairments; or of emotional disturbance or intellectual disability.

Intellectual Disability—Significantly subaverage general intellectual functioning, along with deficits in adaptive behavior that take place during the developmental period and negatively impact educational performance.

Emotional Disturbance—Exhibiting one or more of the following characteristics over a long period of time and negatively affects educational performance: An inability to learn unexplained by intellectual, sensory, or health factors; inability to develop satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior under typical circumstances; pervasive unhappiness or depression; and developing physical problems or fears related to school problems.

Other Health Impairment—A limited alertness in the educational environment negatively affecting educational performance, due to chronic and acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome.

Autism—A developmental disability that significantly impacts verbal and non-verbal communication and social interaction, and usually develops before age three and negatively impacts educational performance. Other characteristics include engaging in repetitive activities and stereotyped movements, resistance to changes in environments or daily routines, and unusual responses to sensory experiences.

Transition Planning—A legal requirement that state and local education agencies must provide transition services through a coordinated set of activities for students with disabilities. A comprehensive transition plan including both goals and activities must begin at age 16. The activities must focus on individualized employment, post-secondary education or training, and community living goals and based on the individual student's strengths, preferences, and interests. In addition, transition activities must be coordinated with community service agencies so students have access to these services before graduation.

Individualized Education Plan (IEP)—A legal written document necessary for a child with a disability to receive services under IDEA. It is written by an IEP team and includes input from school staff, the child's parents, and the child.

Summary

The first chapter outlined how the field of transition services for students with disabilities has evolved in terms of definitions and legislation. The chapter then discusses how states address alternate diploma options for students with disabilities, and outlines the requirements for diploma options in the state in which this study was conducted. Finally, the

chapter describes why the study is needed at this time, outlines the research questions, and provides definitions relevant to the study.

Overview of the Manuscript

This study is comprised of five chapters. The first chapter provides the introduction. The second chapter is a review of the relevant literature. The third chapter discusses the methods used to answer the study's research questions. The fourth chapter summarizes the study's findings, and the fifth chapter discusses those findings in terms of their research and practical implications.

CHAPTER 2

REVIEW OF THE LITERATURE

Career Development Theories

Chapter 1 detailed how the definitions, legislation, and programming models for the field of transition services has evolved from a strict focus on vocational and career planning needs of students with disabilities to a broader array of services that help this population move from school to adult living roles. A similar evolution is seen in the theoretical foundations behind transition programs and services. The original theories focused on how individuals with disabilities can develop skills and behaviors to contribute to the work environment as adults. This moved to a more comprehensive model that takes into account not only vocational, but daily living and social needs of individuals with disabilities.

Structural Theory

Structural theory focuses on the match between individual characteristics (i.e., abilities and interests) with the appropriate work environments. Structural theory was originally developed by Parsons in the early 1900s and became known as the trait-factor approach (Wolffe, 1997). Parsons believed that identifying the relationship between individual attributes and occupational requirements leads to satisfying career choices. A more current version of structural theory is John Holland's (1992) theory of career development. Holland identified six personality types: realistic, investigative, artistic, social, enterprising, and conventional. He then identified corresponding occupations based on each personality type. One goal of an IEP team working on a transition plan for a student with a

disability is to identify the match between a student's personality type and work environment type.

Developmental Theory

While structural theory concentrates on individual occupations as the primary choice they make in their adult lives, developmental theory sees occupation as only one component among many decisions in an individual's life. In developmental theory, occupational choice is a result of concepts and beliefs that develop throughout a person's life. The result is that a satisfying career choice is one element in a fulfilling life. This theory is evident in Super's (1990) life-span approach, where individual roles over their lifetime (i.e., family roles, leisure activities, citizenship) result in occupational choices. Super focused on how individuals change over time as they grow into adult roles and responsibilities, especially as a worker. Developmental theory is also flexible enough that it can be applied to individuals in diverse roles, addressing the needs of individuals in different ethnicities and disabilities (Szymanski, Hershenson, Enright, & Ettinger, 1996).

Work Adjustment Theories

Minnesota theory of work adjustment. This theory focuses on the unique needs of individuals with disabilities, particularly on work behaviors necessary for success rather than particular career choices (Hershenson & Szymanski, 1992). Work adjustment looks at an individual's work personality as a critical factor in his or her level of work satisfaction, which is defined as what the worker wants to get out of the job and their ability to perform required tasks of the job. This theory is most effective when there is a specific position in

mind for an individual with a disability, as it would allow for a match between the individual needs of the student and the workplace characteristics.

Hershenson's theory of work adjustment. Hershenson combined career development and work adjustment approaches by looking at the evolution of an individual's role as a worker and the work environment over time (Hershenson & Szymanski, 1992). Hershenson saw the individual as a worker in three phases. Work personality is how people see themselves as workers and their motivations to work. Work competencies include the work habits, work skills, and interpersonal skills needed to succeed in the workplace; this develops as the person progresses through their school years. Work goals develop based on interactions with peer groups during the time an individual is leaving school and entering the world of work. This theory can help address the support needs of an individual with a disability by identifying his/her work personality, competencies, and goals.

Learning Theory

Using Bandura's original learning theory, Krumboltz applied parts of social learning theory to career development (Mitchell & Krumboltz, 1996). Learning experiences help explain why individuals select occupations and make career changes as their preferences evolve over time. According to Learning Theory, individuals continually change through lifelong learning opportunities and experiences, including learning new work tasks.

Conceptual Framework

Ecological Model of Development

Students without disabilities normally go through the process of transitioning from high school to adult roles without supports or interventions from school staff. Because students with disabilities continue to experience poor post-school outcomes, transition planning to address individual needs is necessary. Transition planning must be guided by a theoretical framework that is broad enough to encompass the complex needs of students with disabilities. An ecological model of career development will guide the current study investigating whether differences exist in transition planning for students who pursue different paths to a diploma. As a conceptual framework, the ecological model of career development is grounded in social functioning that provides the necessary scope to address the complex issues surrounding the transition of students with disabilities from high school to adulthood. It takes into account the multiple factors that school personnel need to consider when preparing students with disabilities to transition from school to adult roles. The theory highlights the relationships among individuals, their environments, and their behaviors.

Szymanski et al. (1996) looked at five areas that impact career development for individuals with disabilities: individual, contextual, mediating, work environment, and outcome. Individual factors included each person's physical and personality characteristics; contextual factors were the outside factors that influence a person (i.e., home and family environment, neighborhood in which a person lives, available financial resources, etc.); mediating factors are how an individual's beliefs impact his or her ability to work; work

environment factors include anything related to a person's work setting—where work is located, tasks of the job, culture of the work environment; outcome factors are the result of all the above factors and how they influence the level of success an individual has in meeting his/her goals.

In addition to these constructs, Szymanski et al. (1996) developed six different processes that address the constructs in the ecological model: congruence, decision making, developmental processes, socialization, allocation, and chance. Congruence is the fit between an individual and his or her work environment; decision making involves the skills the student needs to consider various choices and arrive at a decision; developmental processes are the changes an individual goes through over time, taking into consideration any obstacles to development as the result of a disability; socialization is how individuals go about learning from others about their various roles in family, work, and community contexts; allocation is the extent to which individuals with disabilities are either provided opportunities or shut out of opportunities by the professionals who serve their needs (i.e., teachers and counselors); chance processes are unexpected events in an individual's life and how prepared he or she is to handle them.

Compliance in Transition Planning

A transition plan compliant with federal regulations reflects appropriate planning and documentation of a student's transition goals and activities, thus ensuring effective transition services and practices are in place. In doing so, schools are providing a transition-related Free and Appropriate Public Education (FAPE), the minimum requirement for following

federal guidelines under IDEA. Conversely, the consequences for not meeting Indicator 13 requirements are that a FAPE is not being provided. In addition to addressing the legal implications of writing compliant transition plans, other themes in the literature on transition planning have emerged, including how a student's disability category impacts transition planning, how effective transition plans are in matching goals with activities, how transition plans can be implemented into practice.

Transition Planning and a Student's Disability Category

Several studies documented the differences in transition planning by specific disability categories. McMahan and Baer (2001) surveyed 186 members of transition teams throughout Ohio to examine the extent to which transition policies and best practices were implemented. Respondents included those who participated in the planning process as well as those who were directly involved in providing services (i.e., adult service agency representatives). All respondents were on transition teams that were part of a statewide systems change project. Their instrument was divided into two sections. The first section had four parts: (a) measuring level of parent notification of IEP meetings, (b) level of student participation in IEP meetings, (c) transition services included in the IEP, and (d) strategies to address participating agencies that do not provide transition services. They found the IEP contents showed students with moderate to severe disabilities included all aspects of transition services at a higher rate than for students with mild disabilities. Additional results showed that for parent notification, the vast majority of respondents indicated a standard form letter was used to contact parents for IEP meetings where transition would be discussed;

nearly 80% responded that students were both verbally invited to attend IEP meetings and that their preferences were included in the IEP based on information from adults who knew them. McMahan and Baer also examined predictors of policy compliance and best practices. They found the strongest predictors of policy compliance to be transition training through statewide regional resource centers, the existence of school-based interagency transition teams, and transition training within schools. In addition, school-based interagency teams were the strongest predictor of transition best practices.

Tillman and Ford (2001) examined the level of transition services in the IEPs of 282 high school students. They used an instrument, the *Program Evaluation for Procedural and Substantive Efficacy of Transition Services* (PEPSE-T; Smith, 1987) to collect data that measured compliance with IDEA 1997 mandates, content of IEPs based on goals and objectives met, and the extent to which transition needs of students, based on assessments, correlated with goals and objectives. They tested for differences based on disability classification (i.e., learning disability, emotional disability, mild intellectual disability, and low incidence disability) and school district size (urban and non-urban /rural) using factor and chi—square analyses. Results showed no statistically significant differences in compliance with IDEA 1997 based on disability classification or a school district's size, though they did not find any IEPs to be 100% compliant. There were few annual goals written, but students with more severe disabilities had a higher number of transition-related goals. In addition to annual goals, there was little evidence that short term objectives were monitored regularly to determine if they were being met. The IEPs of students with severe

disabilities matched their present levels of performance with their annual goals more frequently than the IEPs of students with other disability classifications. The authors concluded that special educators need to go beyond minimum compliance requirements and focus on the best practices that will help students live and work independently when they leave school.

Landmark (2009) created a survey that measured compliance with the 2004 IDEA transition regulations. In reviewing the transition plans of 212 IEPs across eight school districts in central Texas, Landmark investigated the extent to which best practices in transition were documented in the transition plans. She also sought to determine the effects of disability and ethnicity on both compliance and best practices. To calculate an overall compliance score, Landmark rated the compliance level of each transition plan in five areas, whether: (a) appropriate members were invited to the meeting, (b) timelines were included for meeting transition services, (c) postsecondary goals were measurable, (d) annual goals supported the postsecondary goals, and (e) transition services were addressed. Scores for overall compliance ranged from 0 to 5, with a score of 5 if all five areas of the IEP were compliant. The mean score for the sample was 2.03. Results of the effects of disability revealed having an emotional disability was a predictor for not having compliant transition services, while having a learning disability was a predictor for not having annual goals that supported postsecondary goals. The effects of ethnicity revealed that being African American was a predictor for compliant IEP goals and appropriate IEP team members, while being Hispanic was a predictor for not having compliant annual goals. Statistically

significant results based on disability and ethnicity variables showed that students with emotional disabilities were less likely to have compliant transition plans; among best practices variables, African American students and students with emotional disabilities and learning disabilities were less likely to have IEPs that showed evidence of employment preparation; students with learning disabilities were less likely to have IEPs that showed evidence of self-determination.

Daviso, Denney, Baer, and Flexer (2011) conducted a survey of 416 students with learning disabilities across 48 school districts in Ohio who had exited school in 2004, a subsample of the Ohio Longitudinal Transition Study. The researchers sought information on their employment and postsecondary education goals, the extent to which the high school program and transition services they received predicted their post-school goals, and student perceptions of what helped them most in meeting their transition goals. They found more than 80% of respondents planned on either full-time or part-time employment, while nearly 70% also planned on entering some type of post-secondary education. The researchers then used logistic regression to determine that the model for predicting employment goals was accurate for 67% of the sample and the model for predicting postsecondary goals was accurate for 59.4% of the participants. The survey given to students in the spring before they exited school found that paid work and career and technical education received the highest ratings for usefulness of services they received during high school. Based on these results, the authors recommended students with learning disabilities should have increased contact with vocational rehabilitation counselors while still in high school. They also recommended

developing an academic curriculum that would better prepare students with learning disabilities to meet the demands of postsecondary education settings.

Transition Goals and Activities

Several other studies measured compliance with specific aspects of transition plans. Grigal, Test, Beattie, and Wood (1997) reviewed the transition components of 94 IEPs of students ages 18 to 21 with learning disabilities, mild and moderate intellectual disabilities, and emotional/behavioral disorders. The instrument they used, *The Statement of Transition Services Protocol* (Lawson & Everson, 1993), evaluated compliance with IDEA on 25 questions over four sections: demographics, the format of the transition component, the quality of transition goals, and evidence of best practices. While they found that transition plans contained components required by IDEA, many only met the bare minimum for compliance and did little in terms of actual transition planning and programming. They found goals were written in vague terms and without specific steps to assist students in developing skills necessary for adulthood. They also found a lack of involvement by adult service agencies (other than vocational rehabilitation) in developing transition plans. Grigal et al. also found that plans were rarely updated annually. They concluded that post-school goals need to be individualized based on student interests and desires, and not based upon a student's disability as the foundation for developing goals.

Williams and O'Leary (2001) evaluated the 1990 IDEA requirements by reviewing how effective states were in implementing the transition service requirements through the Office of Special Education Programs (OSEP) monitoring cycles from 1993 to 1997. They

examined the monitoring reports of states receiving IDEA Part B funds. With regard to states implementing transition services over the four-year period, they found that (a) just over one-third of the states did not invite students to the IEP meeting when transition was considered, (b) two-thirds did not indicate that transition services would be discussed on the invitation to parents, and (c) nearly half of the IEPs reviewed did not address elements of transition services: instruction, community experiences, employment, and post-school adult living. They also found little change over the monitoring cycle's four year period in terms of overall compliance with transition mandates. They did find, however, states that implemented systems change grants were significantly more likely to have evidence of transition services in their IEPs.

Everson, Zhang, and Guillory (2001) studied the transition plans of 329 students using an instrument developed for the Louisiana Statewide Transition Project. They used the same instrument used by Grigal et al. (1997), but revised it to include areas suggested by the Louisiana State Transition Project. They found that transition plans addressed basic transition services as required under IDEA 1997 authorization (i.e., post-secondary education, vocational training, integrated employment, community participation, independent living), but did not reflect best practices in transition planning recommended by the state (i.e., transportation, recreation, financial planning, and health/medical issues). They also found that transition plans addressed interagency linkages but did not address details of how adult service agencies would assume responsibilities for their roles. They recommended all students have transition services that address areas both mandated and not mandated by law.

Implementing Transition Plans into Practice

Researchers that studied transition compliance made several recommendations so practitioners could put transition plans into practice. Finn and Kohler (2009) stressed that leaders at state and local levels make sure that the information written on IEPs, including transition plans, is implemented. Their study was published after the 2004 reauthorization of IDEA; the instrument they used in their study was based on the 1997 IDEA reauthorization. They reviewed 291 IEPs across 13 school districts in a Midwestern state by using the *Transition Requirements Checklist* (O’Leary, Lehman, & Doty, 2001) The checklist was developed by the Transition Outcomes Project to help schools improve compliance with IDEA 1997 with the goal of improving post-school outcomes for students with disabilities (O’Leary, 2000c). Their results showed an increase in compliance at the follow-up review, as indicated by a higher frequency and percentage of “yes” marks, from 46.2% to 74.6%. There was a significant difference between expected frequency at initial review and observed frequency at follow-up review for 20 of the 31 items. In addition, for 18 items the majority of scores were “yes” at initial and “yes” at follow-up.

Everson, Zhang, and Guillory (2001) found that transition plans need to reflect practices recommended by the state (i.e., transportation, recreation, financial planning, and health/medical issues). A disturbing trend they found was a disconnect on the transition plans they studied between post-school goals and the action steps and timelines needed to implement the action steps. While 88% of the transition plans they reviewed included

statements by students about their post-school goals, only 62% identified action steps and 56% identified timelines to accomplish them.

Best Practices in Transition Planning

Research in secondary transition, similar to special education research in general, has moved from descriptive research to identifying best practices to the current state of identifying evidence-based practices, or EBPs (Landmark, Ju, & Zhang, 2010). The predictors are supported by EBPs in secondary transition. Before EBPs were developed in the transition research literature, best practices in transition were first published by Kohler (1993). After reviewing articles that discussed best practices in transition between 1985 and 1991, she identified 11 documents that described substantiated practices in transition based on empirical evidence. To determine if a practice was empirically substantiated, Kohler (1996) sought out practices that were linked to an outcome variable in post-secondary education, employment, or independent living. The documents that met the criteria for substantiated best practices were in the areas of vocational training, parent involvement, social skills training, paid work experience, follow-up employment services, employer input in transition planning, inclusion in general education, daily living skills training, and employability skills training. The results of this review eventually formed the basis of Kohler's Taxonomy for Transition Programming (1996). This taxonomy, in turn, was the basis for Cobb and Alwell's (2009) meta-analysis of transition planning interventions. Of the quantitative studies they reviewed, they found a large and statistically significant average effect size ($g = 1.47, p < .001$) across three intervention studies in the area of student-focused

planning, indicating the positive effect students' participation in planning for their own futures can have on their post-school outcomes.

The transition research literature moved toward EBPs with the study conducted by Test, Fowler, et al. (2009). They searched systematic literature reviews and experimental studies to identify EBPs then categorized them using the Taxonomy for Transition Programming. They found 63 studies that met their criteria for high or acceptable quality single subject intervention studies, or were a systematic literature review or meta-analysis. This led to the identification of 32 evidence-based practices in transition, with 25 of these practices under the Student Development area of the taxonomy.

Landmark et al. (2010) provided a review of best practices in transition since Kohler's (1993) review. They found an additional 18 empirical studies to go along with the original 11 studies that Kohler found. Based on the total of 29 documents, Paid or Unpaid Work Experience was the practice supported by the literature most often, with 18 articles that supported it. Employment Preparation Program was the next most frequently cited practice, with 16 articles. The remaining practices from most to least support from the documents reviewed were general education inclusion, family involvement, social skills training, daily living skills training, self-determination training, and community or agency collaboration.

While the theory behind other transition planning models is based on evidence-based practices aimed at improving outcomes for all students (Baer, Daviso, Flexer, Queen, & Meindl, 2011), the career pathways model proposed by Greene (2003) is the transition planning model most closely aligned with promoting to the post-school outcomes that

specifically meet the needs of students with disabilities. The four career paths he identified are preparation for four-year college through a strictly academic program, a combination of academics with career and technical education in preparation for a two-year college, preparation for competitive employment and independent living, and preparation for employment and living with support.

Predictors of Post-School Outcomes

Test, Mazzotti, et al. (2009) reviewed the correlational literature and found 22 studies that met the criteria for quality indicators of correlational research developed by Thompson, Diamond, McWilliam, Snyder, and Snyder (2005). The list of 18 quality indicators divided into four areas: measurement, practical/clinical significance, avoiding common analytic mistakes, and confidence intervals for reliability coefficients, statistics, and effect sizes. Based on these criteria, Test, Mazzotti, et al. (2009) categorized the 22 studies into 16 different predictors of post-school outcomes in the areas of education/training, employment, and independent living. They categorized studies into potential or moderate levels of evidence for causal inferences, using decision rules for correlational research set by the Institute for Education Sciences (IES). While the IES only allows for moderate levels of evidence, the researchers added a potential level for promising research that had insufficient evidence to meet moderate levels of evidence (Test, Mazzotti, et al., 2009). A predictor was identified with a moderate level of evidence if two “a priori” (i.e., hypothesis stated before analysis) studies were found in that category with both significant correlations between predictor and outcome variables, along with data to calculate effect sizes. To meet the

criteria for a potential level of evidence, a category needed one a priori study and/or two or more exploratory studies (i.e., studies with no hypothesis) that included significant correlations between predictor and outcome variables. Predictors that were found to have levels of evidence in all three post-school outcome areas were inclusion in general education, paid employment/work experience, self-care/independent living skills, and student support. Other predictors include career awareness, exit exam requirements, interagency collaboration, occupational courses, parental involvement, program of study, transition program, vocational education, and work study. This study investigated two of the predictor categories that show evidence in all three post-school outcome areas, paid employment and independent living skills, to see if there is evidence of differences between samples of students pursuing different diploma paths in the same state. Paid employment has established a moderate level of evidence as a secondary transition predictor for positive post-school outcomes in the areas of education/training and employment (Test, Mazzotti, et al., 2009). It also has a potential level of evidence as a predictor for positive post-school outcomes in the area of independent living. Recommended evidence-based practices that support paid employment as a predictor include teaching employment skills using community based instruction; teaching job specific skills using computer assisted instruction; teaching how to complete a job application using mnemonic strategies (Test, Fowler, et al., 2009). Independent living has established a moderate level of evidence as a secondary transition predictor for positive post-school outcomes in the area of independent living, and a potential level of evidence in the areas of education/training and employment (Test,

Mazzotti, et al., 2009). Recommended evidence-based practices that support independent living as a predictor include food preparation and cooking skills, home maintenance, laundry skills, and counting money skills (Test, Fowler, et al., 2009).

Paid employment and independent living were the predictors specifically selected because they are also among the transition activities on IEPs forms used by the district in this study. The next section of this review will focus on correlational research that measured outcomes related to employment and independent living. The review will be divided into three areas: disability, gender, and ethnicity. Throughout the transition research literature, these are the covariates that have had the most impact on post-school outcomes (Baer al., 2011).

Disability

Correlational research in recent years measuring employment and independent living outcomes for individuals across different disability categories used a secondary analysis of NLTS2 data to find results. Wave 5 of the NLTS2 collected data in 2009 from students who exited high school 8 years earlier from phone interviews or mailed surveys. Among disability groups on which data were collected about employment and independent living outcomes, individuals with learning disabilities were most likely to be employed and living independently 8 years out of high school (Newman et al., 2011).

Recent studies also focused on students with intellectual disabilities (ID) as the target sample. Joshi, Bouck, and Maeda (2012) used secondary analysis of NLTS2 data to explore relationship between participation in employment-related activities and post-school

employment of students with ID. They found 99.7% of students with ID participated in employment-related transition activities, 53.4% participated in school-sponsored work and 59.7% participated in other paid work experiences while in school. Logistic regression analyses showed students were 3.489 times more likely to be employed after school if they participate in a school-sponsored job, and 5.704 times more likely to be employed after school if they participated in paid work experiences while in school.

Carter, Austin, and Trainor (2012) used the NLTS2 dataset to examine factors associated with employment two years after leaving high school for students with severe disabilities. Data were taken from parent and youth interviews, school program surveys, and school characteristics surveys. In this sample, students with severe disabilities were defined as having an intellectual disability, multiple disabilities, or autism. Results showed only 26% of individuals in the sample were employed two years after leaving high school. The researchers pointed out a difference in their findings on students with severe disabilities compared to prior post-school outcome studies on students with mild disabilities. They found that for students with severe disabilities, actual hands-on work experiences were the best predictor for employment after high school, whereas the best predictors for students with mild disabilities were career awareness, job search skills, and taking vocational courses.

The NLTS2 analysis by Grigal, Hart, and Migliore (2011) compared students with intellectual disabilities to students identified with other disabilities to determine how transition goals on IEPs, number of referrals made to outside agencies, and agency participation in transition planning impact students' employment outcomes. Results showed

students with ID, when compared to students with other disabilities, were significantly less likely to have transition goals related to attending a two- or four-year college, postsecondary vocational training, and competitive employment, but significantly more likely to have goals related to sheltered and supported employment. Schools contacted supported employment, sheltered workshop, and adult day programs significantly more often on behalf of students with ID. Students who had a post-school goal of attending a two- or four- year college was the only predictor among transition goals associated with a greater likelihood of employment for students with ID.

The NLTS2 analysis by Bouck (2010) also focused on students with different levels of ID, specifically, those with mild levels and with moderate/severe levels. She examined what differences, if any, existed in the amount of life skills instruction each subgroup received both while in school and after leaving school. Results showed a statistically significant difference existed in the amount of life skills instruction students with mild and moderate/severe ID received while in school. Among students with mild ID, 15.2% received specific life skills instruction, compared to 62.7 % of students with moderate/severe ID. Among all students with mild ID who were out of school during wave 4, 13.9% reported receiving life skills instruction during their school years. Of the students with mild ID who received life skills training while in school, 30.1% reported receiving life skills training after leaving school, compared to 10.5% of the group that received academic skills while in school. No statistically significant differences were found between whether students with mild ID received life skills training while they were in school and the amount of life skills

training after school. The same number of students (24.0%) with moderate/severe ID reported receiving life skills instruction after school regardless of whether they received life skills training while in school, with no statistically significant differences found.

Hasnain and Balcazar (2009) used secondary analysis data from the 1994-95 National Health Interview Survey on Disability (NHIS-D) to determine which factors predict young adults with disabilities will be employed in either community-based or facility-based settings. The NHIS-D dataset differs from the NLTS2 dataset in that the participants are older (between 18 and 26) and must have exited from high school, either with or without a diploma, to be included in the study. They found individuals with more severe disabilities were significantly less likely to be employed in community based setting.

Heal and Rusch (1994) used data from the original NLTS to investigate predictors of residential independence among a stratified random sample of 2,700 individuals with disabilities surveyed two years after leaving high school. Results revealed 80% of the respondents lived with a parent or other family member, with students with mild disabilities living with greater independence, and students with severe disabilities living less independently.

Rabren, Dunn, and Chambers (2002) investigated the employment status of students from 37 school districts in one southeastern state who graduated over a four-year period (1996–2000). They found students with learning disabilities were 2.1 times more likely to be competitively employed one year after leaving high school compared to students with other disabilities.

Gender

Research has documented poor outcomes for women with disabilities, particularly in the area of employment (Moore, Feist-Price, & Alston, 2002; O'Hara, 2004). This combination of gender and disability leads to such increased difficulty in obtaining positive employment outcomes that it has been referred to as "double jeopardy" (Rousso & Wehmeyer, 2001). The NLTS2 data show 65% of males and 52% of females were employed when interviewed eight years after exiting high school in employment and independent living outcomes, though the difference was not statistically significant. There were also no significant differences in average hourly wages, \$10.90 for males and \$9.40 for females, but a significant difference existed in hours worked per week, as males worked 38 hours and females worked 32 hours (Newman et al., 2011). There were no significant differences in rates of living independently up to 8 years after exiting high school, which were 65.7% of females and 54.6% of males (Newman et al., 2011).

Recent studies also show the challenges women with disabilities continue to experience in achieving post-school outcomes in employment and independent living. Flexer, Daviso, Baer, Queen, and Meindl (2011) pointed out that gender impacts the correlational research on transition outcomes. They surveyed 1,650 students from 177 school districts in a Great Lakes state who had graduated between 2005 and 2008. They used a student exit interview and a one year follow up phone interview using questions based on surveys from the original NLTS to investigate how work study participation while in school leads to full time employment after school. Results showed female students were

significantly less likely to be employed full time. The Hasnain and Balcazar (2009) study using the NHIS-D dataset also found females were significantly less likely to be employed in a community setting.

Boeltzig, Timmons, and Butterworth (2009) investigated the employment outcomes of men and women with developmental disabilities (DD). They analyzed survey responses from 195 Community Rehabilitation Providers who reported on a total of 869 individuals with DD. Results showed a statistically significant difference in average weekly earnings, with men earning \$170 per week compared to women earning \$152. In addition, they found a statistically significant difference in wage ranges, with a higher percentage of men earning higher ranges of weekly earnings (defined as ranges of \$151–200, \$201–250, \$251–300), and a higher percentages of women were in the lower ranges (defined as ranges of \$51–100 and \$151–200). There was also a significant difference in the types of jobs held. More men worked in maintenance, assembly, manufacturing, and packaging, where more women worked in food services and clerical positions.

Doren and Benz (1998) investigated factors that led to improved employment outcomes after high school specifically for young women with disabilities. They collected data on a sample of 422 students from two western states. Data were collected at two different points, once during the last year of high school and again during the first year after exiting high school. The outcome variable was competitive employment, defined as working 20 or more hours per week and earning at least \$4.25 per hour. The researchers used logistic regression to analyze the relationship between predictor and outcome variables. Results

showed that both males and females who held at least two jobs during high school were twice as likely to be employed one year out of high school. Results also showed predictor variables of competitive employment unique to young women with disabilities. For instance, young women whose family income was less than \$25,000 were over six times less likely to be competitively employed. Self-esteem also had a significant effect; women with low levels of self-esteem were three times less likely to be competitively employed. The researchers discussed how school-to-work transition programs should address the specific needs of young women so they are better prepared for the demands of the workforce. They also recommended providing meaningful learning opportunities in less traditional occupations for women.

Ethnicity

NLTS2 Wave 5 data from 2009 on students eight years after exiting high school do not show significant differences in the number of young adults with disabilities from different ethnicities employed at the time they were interviewed, with 64.5% of Caucasians reporting they were employed compared to 53.6% of Hispanics and 48.0% of African Americans (Newman et al., 2011). There were also no significant differences in number of hours worked or average hourly wages earned (Newman et al., 2011). As for independent living outcomes, 63.2% of Caucasians reported living independently when interviewed 8 years out of high school, compared to 51.2% of Hispanics and 47.4% of African Americans, but no statistically significant differences were found (Newman et al., 2011).

Recent studies show this struggle continues for minorities with disabilities. In Grigal et al.'s (2011) study that compared employment outcomes of students with intellectual disabilities to students with other disabilities, they also found that among students with other disabilities, Caucasians were significantly more likely to be employed than students of other ethnicities. In addition to finding gender differences on employment outcomes, Flexer et al. (2011) also found African American students were significantly less likely to be employed than students from other ethnicities who participated in a work study program. Hasnain and Balcazar's (2009) study using the NHIS-D dataset also found 63.4% of Caucasians were in community-based employment shortly after exiting high school, compared to 36.5% of African Americans and 32.8% of Hispanics. They also found 32.2% of African Americans used formal supports such as vocational rehabilitation services to obtain community-based employment, compared to 24.2% of Caucasians and 20% of Hispanics. Finally, in the logistic regression model, Caucasians were significantly more likely to be employed in both community-based settings and facility-based settings when compared to African Americans and Hispanics.

Fabian (2007) analyzed data on 4,571 students who participated in the Bridges transition-to-work program between 2000 and 2005 in six different urban areas to determine which factors predicted that students will get a job from minority groups. Results showed 68% of all youth who participated in the program found competitive employment while still in high school. Males were employed at a significantly higher rate (69% to 63%). Gender was one of the significant predictors of the logistic regression analysis, as girls were 25% less

likely to secure employment than boys. Other significant predictors to employment were prior vocational experience (35% more likely for those who had it), and receipt of Supplemental Security Income benefits (22% less likely for those receiving it).

Summary

The predictors for post-school outcomes developed by Test, Mazzotti, et al. (2009), along with the evidence-based practices developed by Test, Fowler, et al. (2009) help practitioners by providing evidence of practices that will give students a greater opportunity to achieve their post-secondary goals. It is clear that to date the correlational research identifying transition practices that relate to post-school outcomes for students with disabilities lags behind the experimental research that identifies evidence-based practices. Flexer et al. (2011) point out that research in secondary transition has focused more on practices that identify in-school outcomes rather than post-school outcomes because the No Child Left Behind Act defined special education research more narrowly. The law's definition of scientifically based research did not leave room for research in transition practices based on correlational studies (Flexer et al., 2011).

A recent study by Carter et al. (2013) reviewed types of methodology used in research studies published by *Career Development and Transition for Exceptional Individuals*, the leading journal on research in secondary transition, over the past 35 years. They found correlational research accounted for 13.5% of all studies using quantitative designs. Because studies on which transition practices lead to improved post-school outcomes for students with disabilities rely on correlational research methods and collect data

through secondary analyses of datasets such as NLTS and NLTS2, more research of this type will be needed in the future. This review focused on how correlational studies have found differences in post-school outcomes based on a student's disability category, gender, and ethnicity. These studies can provide the basis for future research on interventions that address the gaps in post-school outcomes, specifically the need to increase employment outcomes for females and African Americans with disabilities. In addition, more correlational studies will be needed on additional variables that can impact a student with a disability achieving his/her post-school outcomes, such as the amount of time students with disabilities spend with peers without disabilities.

This review also demonstrated the need for writing and implementing effective transition plans as a first step toward helping students achieve their post-school goals. It reviewed studies that noted compliance levels in transition plans for students of different disability categories, and how transition planning must move beyond meeting minimal compliance levels. The present study investigated another variable, diploma pathway, to compare the likelihood that evidence exists for two transition predictors, paid employment and independent living, in transition plans of student IEPs. The next chapter describes the methods the study used to answer the research questions.

CHAPTER 3

METHODS

Population

The population for this study were high school students identified with a range of disabilities, including developmental disabilities (i.e., intellectual disabilities and autism), learning disabilities, emotional/behavioral disabilities, and other health impairment (i.e., attention deficit disorder). The students were served in an urban school district in the central region of a southeastern state. Based on enrollment figures for the 2012-13 school year, the district has a total of nearly 150,000 students, making it the largest in the state and the 16th largest in the country. Of the total population of students in the district, over 19,500, or 13.4%, have an identified disability. Current enrollment figures also indicate 49.1% of the total population is White, 24.4% are African American, 15.4% are Hispanic, 6.5% are Asian, 0.3% is American Indian/Alaska Native, and 0.1% is Native Hawaiian/Other Pacific Islander. In addition, 51% are male, 49% are female, and 33.7% of students qualified for the Free or Reduced Lunch Program. There are currently 20 high schools in the district, 10 of which are within the same city and the remaining in various municipalities throughout the district. The total high school population consists of more than 43,300 students. Based on 2010 census estimates, median household income within the district ranges from \$50,085 to \$94,123.

Sample

The sample consisted of two groups of students who are pursuing the two pathways to earn a diploma in a southeastern state. Each of the 20 high schools in the district was

sampled for students on both the Future Ready-Core Course of Study and the Occupational Course of Study. There were two primary considerations in determining if a student was included in the study. First, a student had to be at least 16 years of age, or turn 16 during his/her current IEP term, because this is the age at which transition activities are first included as part of a student's transition IEP. Second, the student's IQ score was between 70 and 85, based on the student's most recent psychological exam in which an IQ score was obtained. This IQ range was selected because it is between one and two standard deviations below the mean IQ score of 100 (American Association on Intellectual and Developmental Disabilities, 2013), and gives the greatest likelihood of capturing a significant percentage of students currently enrolled in the Occupational Course of Study while also providing a sufficient sample of students on the Future Ready Course of Study. It is worth noting, however, that a student's IQ score does not determine whether a student is placed on the OCS pathway or Future Ready pathway; such decisions are made by IEP teams based on the diploma pathway that is most appropriate for the student to meet his/her post-secondary goals.

Instrument

The data collection instrument was modeled on an existing rating scale recently developed by the National Post-School Outcomes Center and the National Transition Technical Assistance Center (see Appendix C). Their scale assesses the degree to which individual schools and school districts as a whole are implementing secondary transition predictors that are identified on student IEPs. To help schools and districts identify whether

students are provided with activities related to each predictor, experts in the field of secondary transition developed operational definitions through a Delphi study (Rowe et al., 2013). The instrument used in the current study adapted the implementation scale so the focus was on the extent to which evidence of transition predictors exist in student IEPs. The rating scale measured how far each IEP extends in addressing the two transition predictors selected for this study. The two predictors— paid employment and independent living— were selected because they are closely associated with two of the areas addressed on the transition activities page. The sections on this page of the IEP are titled Employment and Daily Living Skills.

Data Scoring

The following scale was used in determining each student's score for each predictor.

Table 1 shows how the spreadsheet was used to collect the data.

- 0 = No evidence
- 1 = Evidence as a transition activity
- 2 = Evidence as a transition activity and in Present Level of Performance
- 3 = Evidence as a transition activity, in Present Level of Performance, and Annual Goal

The rating scale is also consistent with the responsibilities schools have for ensuring that transition activities are supported with annual goals to address them. Figure 1 describes how annual goals are derived from transition activities.



Figure 1. IEP sequence: From a student’s transition activities to their present level of performance to their annual goals.

The score each student earns for each predictor will be based on examples of characteristics for each predictor cited in the operational definition from the Delphi study. Table 1 summarizes the guide the researcher will use to determine the score for level of evidence that exists in IEPs.

Table 1

Operational Definitions for Transition Predictors

Predictor Category	Transition Activity Category on IEP	Operational Definition
Paid Employment	Employment	Opportunities to participate in job shadowing, work-study, apprenticeships, internships; instruction in obtaining and maintaining a job; allowing students to earn credits for paid employment; provide employment training placements.

Table 1

(Cont.)

Predictor Category	Transition Activity Category on IEP	Operational Definition
Independent Living	Daily Living Skills	Provide instruction in the following areas: financial planning, cooking, housekeeping, home maintenance, using transportation, clothing care, time/organizational management, self-determination, problem solving.

Procedures

The researcher is employed as one of six Transition Teachers in Special Education Services by the school district from which the sample of students for this study was selected. This position allowed the researcher access to each student's IEP in the district through the district's software program that contains all student IEPs, titled *EasyIEP*. The researcher did not need to ask personnel at any of the high schools to pull IEP files or use their time in any way that detracted from their duties. The study was granted exemption from Federal requirements for human subjects' research by the Institutional Review Board of North Carolina State University. The school district from which the sample was taken required the study be approved by the district's research committee, which was granted on April 24, 2013.

Once permission to conduct the study was granted by the school district, the researcher trained a sample selector on determining which students are eligible for inclusion in the sample. The sample selector, who also had access to *EasyIEP*, opened up the program

and clicked on the name of each high school, which displayed the names of all students at that school who had IEPs. Before looking at the current IEP, the sample selector first looked at the most recent psychological evaluation to find evidence of the student's full scale IQ score. The sample selector noted the year of the exam to make sure the score was obtained no earlier than middle school. The sample selector then made sure the score was between 70 and 85. If one of these conditions were not met, the co-worker returned to the student list and clicked on the next student's name and repeated the process. If both conditions were met, the co-worker opened the student's current IEP to check the date of birth to make sure the student is at least 16 years of age, or will turn 16 during the current IEP term. Again, if this was not met the sample selector exited the IEP, went back to the main screen and moved on to the next student. Therefore, if the student was found to have a full scale IQ score between 70 and 85 on a psychological exam administered no earlier than middle school and was at least 16 years of age, or turned 16 during the current IEP term, the sample selector proceeded to examine the student's IEP for evidence of predictors as well as identify information about the student's identified disability, ethnicity, and gender. The sample selector found the student's disability category and gender at the top of the first page of the current IEP, and found the student's ethnicity by clicking on the tab for "student profile" under the student's name in *EasyIEP*.

Once the process of determining which students were eligible for inclusion in the study was completed, the sample selector ensured anonymity by assigning a code number to each student without a master link to the electronic file that contained data collected from the

IEP, and removed all identifying information before sending the file back to the researcher. The IEP documents were then reviewed using the rating scale described earlier. To check for inter-rater reliability on the level of evidence on each of the predictors, the researcher trained a reliability checker on how to view the transition plans and annual goals for evidence of paid employment/work experience and self-care/independent living. The researcher sent a separate electronic file to the reliability checker with 10% of the total sample of students in both the Future Ready Course of Study students and Occupational Course of Study students. The students were randomly selected using the random number generator function on Statistical Package for the Social Sciences (SPSS), version 21.0. The researcher sent the electronic file to the reliability checker and deleted the file from his computer. The researcher then entered the raw data indicating the level of evidence for each predictor on a spreadsheet in SPSS. The researcher used the same codes as those used on the rating scale, and double checked that the data were accurately transferred to the spreadsheet. Reliability was determined by dividing the number of agreements between the reliability checker and researcher by the number of agreements plus disagreements. An agreement for an individual student was counted when each level of evidence was in agreement. For instance, if a student scored a 3 for either paid employment or independent living activities, agreement had to be found across the student's transition activities, present level of performance, and IEP annual goals. Reliability for the selected sample was 96% for paid employment activities, 92% for independent living activities.

Design

The independent variables in the study were the student's diploma pathway, along with their disability category, ethnicity, gender and age. Diploma pathway had two levels: students pursuing the Future Ready course of study and students pursuing the Occupational Course of Study. When entering the raw data into SPSS, students on the Future Ready Course of Study were coded "1" and students on the Occupational Course of Study were coded "2." Disability had five levels: students with learning disabilities were coded as "1," students with intellectual disabilities were coded as "2," students with emotional/behavioral disabilities were coded as "3," students with other health impairments were coded as "4," and students with autism were coded as "5." Ethnicity had three levels: Students who were African American were coded as "1," students who were Caucasian were coded as "2," and students who were Hispanic were coded as "3." Gender had two levels: Females were coded as "1," and males were coded as "2." Age had four levels: Students who were 16 were coded as "1," students who were 17 were coded as "2," students who were 18 were coded as "3," and students who were 19, 20, and 21 were combined into the same level and coded as "4." The dependent variables were the predictors, paid employment and independent living activities, based on the level of evidence in the IEP for the transition activities of employment and daily living Skills. Figure 2 shows the relationship between the independent variables and the dependent variables.

Data Analysis

Ordinal regression was used to analyze the data by predicting probabilities that the dependent variables— paid employment and independent living—exist in transition plans of students. The dependent variables are on an ordinal scale, since the distance between each level of evidence—No evidence (0), Some Evidence (1), Strong Evidence (2), and Full Evidence (3)—is unknown. For example, when one of the sections of the IEP showed evidence of an activity, a score of 1 was given regardless of how many examples of evidence existed in that section. The independent variables for disability and ethnicity were recoded because learning disabilities and Caucasian were selected as the reference categories. In ordinal regression, the “event”— in this case, observing evidence of the transition predictors in an IEP from the sample— is the probability of achieving a particular score and all others ordered before it (Norusis, 2005). It focuses on the cumulative probabilities instead of probabilities of discrete categories, such as in logistic regression. Therefore, the odds of an event occurring for each level of the rating scale is expressed as $\theta_j = \text{prob}(\text{score} \leq j) / \text{prob}(\text{score} > j)$. For the rating of level of evidence for Paid Employment and Independent Living, the following odds were used:

$\Theta_0 = \text{probability of a score of 0} / \text{probability of a score greater than 0.}$

$\Theta_1 = \text{probability of a score of 1} / \text{probability of a score greater than 1.}$

$\Theta_2 = \text{probability of a score of 2} / \text{probability of a score greater than 2.}$

The last category of full evidence (3) does not have an odds associated with it because the probability of scoring up to and including the last score is 1 (Norusis, 2005).

This study analyzed data from IEP documents on students within 20 different high schools. This is an example of a nested design where the data are analyzed on students who are nested within schools. This increases the likelihood that IEPs within each school will be more alike compared to IEPs from other schools (Doren, Flannery, Lombardi, & Kato, 2012). When data are clustered the way student data on IEPs are nested within schools, there is a greater chance that standard errors will be lower. This increases the possibility that significant differences will be found when they do not actually exist, otherwise known as Type I error (McCoach & Adelson, 2010). Options are available to prevent this from occurring. For example, a recent study by Doren et al. (2012) used hierarchical linear modeling (HLM) to take into account that IEPs are nested within teachers. They analyzed the extent to which professional development activities improved teachers' ability to write effective goals for post-secondary education and employment. Since HLM was used, though, the teacher was the unit of analysis and the study analyzed IEPs from only 18 teachers, therefore $n = 18$. The current study did not use HLM since IEPs were analyzed from 20 high schools, so the n would only be 20. Instead, this study used the Complex Samples function from SPSS version 21 to adjust standard errors. The Complex Samples function allows the researcher to identify the variable that the other independent variables are clustered around, which in this case is the school. Without using design features that account for complex samples, results could be misleading due to biased estimates (Liu & Koirala, 2013).

Table 2 illustrates which data analysis techniques was used to answer the research questions.

Table 2

Summary of Data Analysis Based on Research Questions

Research Question	Analyses
1a. To what extent do student IEPs show evidence of the secondary transition predictor of paid employment?	Descriptive Statistics
1b. To what extent do student IEPs show evidence of the secondary transition predictor of independent living?	
2a. Does a student's diploma pathway, disability, ethnicity, gender, and age predict the probability that an IEP will show more evidence of the secondary transition predictor of paid employment?	Ordinal Regression
2b. Does a student's diploma pathway, disability, ethnicity, gender, and age predict the probability that an IEP will show more evidence of the secondary transition predictor of independent living?	

Summary

This chapter described the methods used to answer this study's research questions. It provided details about the instrument and procedures used to collect the data. It then described the analyses used to answer the research questions. The next chapter will provide answers to the research questions.

CHAPTER 4

RESULTS

Sample

The sample for the study consisted of 538 students between the ages of 16 and 22 from 20 different high schools in an urban school district of North Carolina. Table 3 shows the composition of the sample by students' diploma pathway and demographic characteristics. Of the total number of students selected, 65% ($n = 353$) were pursuing the Future Ready course of study, while 35% ($n = 185$) were students following the Occupational Course of Study. Table 4 shows the percentage of each demographic characteristic for students on either diploma pathway. Students with learning disabilities made up the largest percentage of the total sample as well as the samples of students on both Future Ready and Occupational Course of Study. African American students made up the largest percentage of students of different ethnic backgrounds in the overall sample and the sample for each diploma, and nearly twice as many males were in each sample as there were females. Students between ages 16 and 18 made up at least 90% of each sample. A larger percentage of 19 and 20 year olds are following the Occupational Course of Study.

Table 3

Demographic Characteristics as a Percentage of the Overall Sample ($n = 538$)

Characteristic	n	Percent
Diploma Pathway Future Ready	353	65

Table 3

(Cont.)

Characteristic	<i>n</i>	Percent
Diploma Pathway (cont.)		
Occupational	185	35
Disability		
Learning Disability	266	49
Intellectual Disability	48	8
Emotional Disability	50	9
Other Health Impairment	134	24
Autism	40	7
Ethnicity		
African American	331	61
Caucasian	152	29
Hispanic	55	10
Age		
16	195	36
17	177	33
18	113	21
19,20,21	53	10

Table 4

Individual Characteristics as a Percentage of Students on Each Diploma Pathway

Characteristic	Percent Future Ready (<i>n</i> = 353)	Percent Occupational (<i>n</i> = 185)
Disability		
Learning Disability	52	44
Intellectual Disability	3	21

Table 4

(Cont.)

Characteristic	Percent Future Ready (<i>n</i> = 353)	Percent Occupational (<i>n</i> = 185)
Disability (cont.)		
Emotional Disability	13	3
Other Health Impairment	27	20
Autism	5	12
Ethnicity		
African American	64	54
Caucasian	27	32
Hispanic	8	13
Age		
16	38	31
17	35	30
18	19	24
19	6	9
20	1	5
21	1	1

Evidence of Transition Predictors

Table 5 presents the means and standard deviations of evidence of paid employment and independent living activities in the IEPs of students on both Future Ready and Occupational Course of Study diploma pathways. Students on the Occupational Course of Study obtained higher levels of evidence for both transition predictors, with a greater difference between students on the Future Ready diploma in paid employment activities. Figure 2 compares the percentages of students on each diploma pathway and the levels of

evidence for the transition predictors, Paid Employment and Independent Living, found in IEPs.

Table 5

Descriptive Statistics for Transition Predictor Evidence for each Diploma Pathway

Transition Predictor	Future Ready		Occupational Course of Study	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Paid Employment	.71	.58	2.21	.91
Independent Living	1.09	.83	1.79	.96

Tables 6–13 illustrate students on each diploma pathway based on several demographic characteristics, including disability category, ethnicity, gender, and age. Each table displays the percentage of students on each diploma pathway with each level of evidence for both paid employment and independent living activities.

Among disability categories for students on the Future Ready diploma pathway, only two students with learning disabilities and one student with autism showed full evidence of paid employment activities. No students with intellectual and emotional disabilities showed full evidence of paid employment activities, nor did any students with other health impairments. For students on the Occupational Course of Study, 40 students with learning disabilities showed full evidence of paid employment activities, followed by 22 students with other health impairments, 18 students with intellectual disabilities, 12 students with autism, and four students with emotional disabilities (see Table 6).

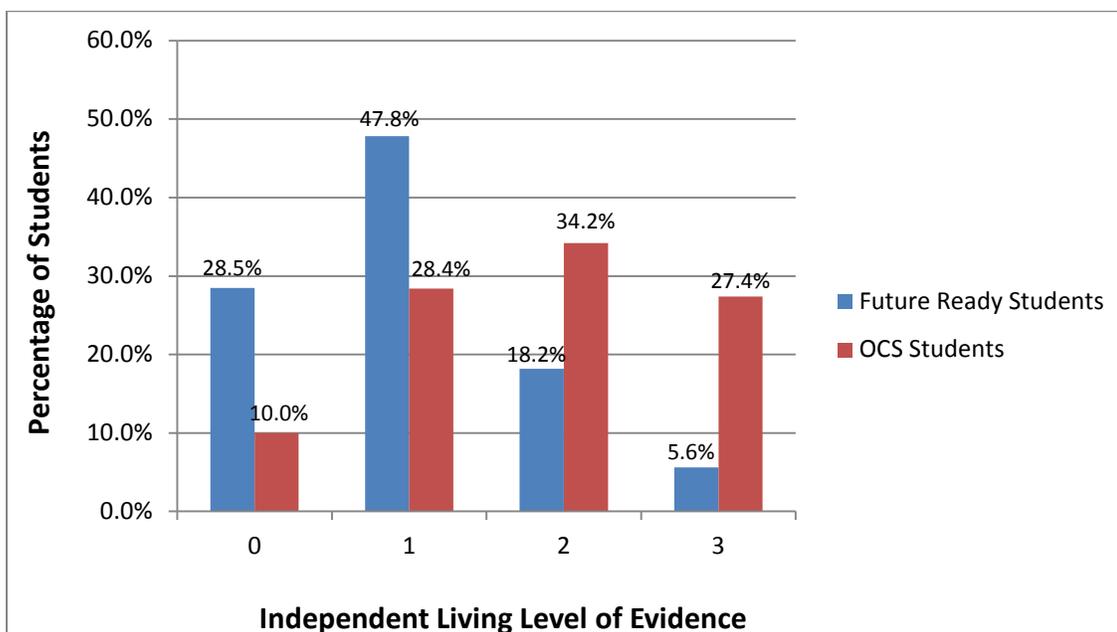
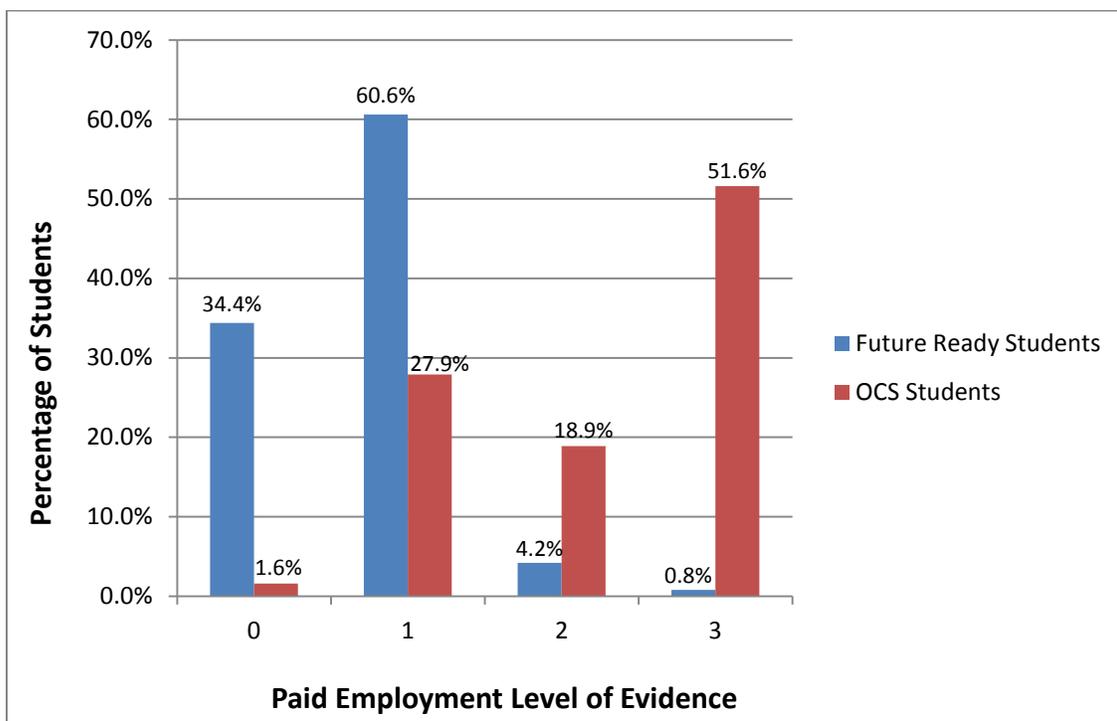


Figure 2. Percentages of students on Future Ready and Occupational Course of Study diploma pathways who show evidence of paid employment and independent living activities in IEPs.

Table 6

Number of Students on Each Diploma Pathway with Evidence of Paid Employment Activities in IEPs, by Disability Category

Disability Category	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
Learning Disabilities	69	107	6	2	2	22	18	40
Intellectual Disabilities	4	5	0	0	1	9	12	18
Emotional Disabilities	9	34	2	0	0	0	0	4
Other Health Impairments	33	59	4	0	0	12	4	22
Autism	7	9	2	1	0	5	4	12

Among disability categories for students on the Future Ready diploma pathway, there were seven students with Learning Disabilities who had full evidence of independent living activities, followed by four students with Other Health Impairments, three students with Emotional Disabilities, and two students for both Autism and Intellectual Disabilities. Students on the Occupational Course of Study had 15 students with Learning Disabilities who had full evidence of Independent Living activities, followed by 12 students with Other Health Impairments, 11 students with Intellectual Disabilities, eight students with Autism, and two students with Emotional Disabilities (see Table 7).

Among the different ethnic groups, for students on the Future Ready diploma pathway there were two Hispanic, one African American, and zero Caucasian students who had full evidence of paid employment activities. Students on the Occupational Course of Study, on the other hand, had 60 African American students with full evidence of paid

employment activities, followed by 27 Caucasian students, and nine Hispanic students (see Table 8).

Table 7

Number of Students on Each Diploma Pathway with Evidence of Independent Living Activities in IEPs, by Disability Category

Disability Category	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
Learning Disabilities	62	83	31	7	5	29	33	15
Intellectual Disabilities	2	5	0	2	5	9	14	11
Emotional Disabilities	10	27	6	3	0	0	2	2
Other Health Impairments	23	46	21	4	5	11	10	12
Autism	4	9	4	2	4	2	7	8

Table 8

Number of Students on Each Diploma Pathway with Evidence of Paid Employment Activities in IEPs, by Ethnicity

Ethnicity	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
African American	75	144	8	1	3	23	19	60
Caucasian	38	51	6	0	0	16	12	27
Hispanic	9	19	0	2	0	11	5	9

Among the different ethnic groups, for students on the Future Ready diploma pathway there were 13 African American students with full evidence of independent living activities in their IEPs, followed by five Caucasian students, and two Hispanic students. For students on the Occupational Course of Study there were 31 African American students with full evidence, followed by 17 Caucasian students, and four Hispanic students (see Table 9).

Table 9

Number of Students on Each Diploma Pathway with Evidence of Independent Living Activities in IEPs, by Ethnicity

Ethnicity	Future Ready (n = 353)				Occupational Course of Study (n = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
African American	66	109	40	13	12	26	36	31
Caucasian	26	44	20	5	5	16	18	0
Hispanic	10	14	4	2	2	10	9	4

There were two male students on the Future Ready diploma pathway with full evidence of paid employment activities, compared to 57 male students on the Occupational Course of Study. There was one female student on the Future Ready diploma pathway who showed full evidence of paid employment activities, compared to 41 female students on the Occupational Course of Study (see Table 10).

There were 14 male students on the Future Ready diploma pathway with full evidence of independent living activities in their IEPs, compared to 30 male students on the

Occupational Course of Study. There were six female students on the Future Ready diploma pathway with full evidence of Independent Living activities, compared to 20 female students on the Occupational Course of Study (see Table 11).

Table 10

Number of Students on Each Diploma Pathway with Evidence of Paid Employment Activities in IEPs, by Gender

Gender	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
Male	75	143	9	2	2	33	26	55
Female	47	71	5	1	1	17	10	41

Table 11

Number of Students on Each Diploma Pathway with Evidence of Independent Living Activities in IEPs, by Gender

Gender	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
Male	66	106	43	14	16	32	38	30
Female	36	63	19	6	3	20	26	20

Among students of different age groups on the Future Ready diploma pathway, two students who were 16 years of age and one student who was 18 years of age had full

evidence of paid employment activities. No students who were ages 17, 19, 20, or 21 had full evidence. Among Occupational Course of Study students, there were 25 students who were 17 years of age with full evidence of paid employment activities, followed by 26 students who were 16 years of age, 25 students who were 18 years of age, 13 students who were 19 years of age, six students who were 20 years of age, and one student who was 21 years of age (see Table 12).

Table 12

Number of Students on Each Diploma Pathway with Evidence of Paid Employment Activities in IEPs, by Age

Age	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
16	55	76	4	2	2	19	11	26
17	39	79	5	0	1	16	12	25
18	23	40	4	1	0	13	7	25
19–21	5	19	1	0	0	2	6	20

Among students of different age groups, there were 10 students who were 16 years of age on the Future Ready diploma pathway with full evidence of independent living activities, followed by six students who were 17 years of age, three students who were 18 years of age, no students who were either 19 or 20 years of age, and one student who was 21 years of age (see Table 13).

Table 13

Number of Students on Each Diploma Pathway with Evidence of Independent Living Activities in IEPs, by Age

Age	Future Ready (<i>n</i> = 353)				Occupational Course of Study (<i>n</i> = 185)			
	No	Some	Strong	Full	No	Some	Strong	Full
16	37	63	27	10	7	23	16	12
17	31	62	24	6	9	10	19	16
18	26	31	8	3	3	10	17	15
19–21	8	13	3	1	0	9	12	7

For Occupational Course of Study students, there were 16 students who were 17 years of age with full evidence of independent living activities, followed by 15 students who were 18 years of age, 12 students who were 16 years of age, four students who were 19 years of age, three students who were 20 years of age, and zero students who were 21 years of age.

Predicting Full Evidence of Transition Predictors in IEPs

Ordinal regression was conducted to determine which independent variables predict that an IEP from the sample will have full evidence of the transition predictor activities paid employment and independent living. Results are presented by first showing how well the model fits the data. Results of the proportional odds assumption are shown by the test of parallel lines, which determines if the effect of the independent variables is the same across cumulative logits, or different levels of the dependent variable (Norusis, 2005). A non-significant finding is desired for the test of parallel lines, as that would indicate no difference

in the independent variables across different threshold levels of the dependent variable. Full evidence of a transition predictor is the reference category, so the odds ratios are expressed as the odds of obtaining full evidence on a selected IEP.

Paid Employment

Before looking at the effects of each independent variable in predicting more evidence of Paid Employment activities, several statistics about the overall model are provided. The first one helps determine whether the model improves the ability to predict more evidence of Paid Employment activities. This is done by comparing the model without variables (baseline) to the model with all predictor variables (the final model). The final model of significant predictors was statistically reliable in predicting whether an IEP would have full evidence ($-2 \text{ Log Likelihood} = 59.451, \chi^2(2) = 112.060, p < .001$). The next statistic is the goodness-of-fit, which determines whether the observed data are consistent with the fitted model. The Pearson chi-square statistic was calculated and shows the model is a good fit. This is because the null hypothesis is not rejected, thus the data and the predictions are similar, $\chi^2(7) = 9.894, p = .195$. A preliminary regression was performed to determine if multicollinearity existed among the predictor variables for paid employment. Multicollinearity can occur when independent variables are highly correlated (Mertler & Vannatta, 2010). This can make it difficult to identify the contributions of each independent variable in predicting the dependent variable since information may be overlapping. Multicollinearity is measured by tolerance statistics, and values range between 0 and 1. Tolerance levels below .1 indicate multicollinearity (Mertler & Vannatta, 2010). The impact

of collinearity among variables is measured by the Variance Inflation Factor (VIF). It is calculated by dividing 1 by the Tolerance value, so the VIF is always greater than 1. A VIF greater than 10 indicates multicollinearity. Results showed tolerance values of all predictor variables for paid employment were greater than .1 and the VIFs for all predictor variables were less than 10, thus multicollinearity was not a problem.

The coefficient of determination, or R^2 , provides a summary of the variance in the outcome (evidence of paid employment activities) accounted for by the independent variables (Mertler & Vannatta, 2010). In ordinal regression the R^2 statistic cannot be computed in the same way as linear regression. Instead, three approximate values are used, known as pseudo R^2 statistics. The three pseudo R^2 values—Cox and Snell = .462, Nagelkerke = .506, McFadden = .254—indicate the variables in the model predicted between 25.4% and 50.6% of the variability in evidence of paid employment activities found in IEPs.

These pseudo R^2 values also constitute the effect size statistics for paid employment activities. R^2 is commonly used as an effect size estimate in studies involving regression and was selected for this study since it provides a measure of the strength of association between the dependent variable and the predictor variables (Ferguson, 2009). The practical significance of these effect size estimates is that future studies should consider adding more variables to improve the overall model in predicting evidence of paid employment activities in IEPs.

Results in Table 14 show all independent variables that are significantly associated with predicting that an IEP will have full evidence of paid employment activities. Results in

Table 15 show the adjustments for coefficients and standard errors using the SPSS Complex Samples function. Standard errors increased for most independent variables, and the statistically significant findings in the original ordinal regression model for 16-year-olds and 17-year-olds are no longer significant in the adjusted model. This leaves diploma pathway as the only significant predictor that a randomly selected IEP would show full evidence of paid employment activities. The beta coefficients (*B*) represents the estimate for a one unit increase in the odds an IEP would have more evidence of paid employment activities (Mertler & Vannatta, 2010). For the only significant predictor variable, the coefficient in the adjusted model of -5.482 means that when holding all other variables constant, the ordered logit for students on the Future Ready diploma pathway being in a category for higher evidence is -5.482 less than Occupational Course of Study students.

Table 14

Ordinal Regression Results for Full Evidence of Paid Employment Activities in IEPs

	<i>B</i>	Std. Error	Odds Ratio
Future Ready Diploma (compared to OCS)	-3.993	.289	.018***
Disabilities (reference category: Learning Disabilities)	-		
Intellectual Disabilities	-.169	.318	1.184
Emotional Disabilities	.742	.332	2.101
Other Health Impairments	.287	.222	1.333
Autism	.465	.358	1.592

Table 14

(Cont.)

	<i>B</i>	Std. Error	Odds Ratio
Ethnicity (reference category: Caucasian)			
African American	.333	.207	1.395
Hispanic	.149	.324	1.161
Males (vs. Females)	-.059	.182	.943
16-year-olds	-1.086	.330	.337**
17-year-olds	-.783	.333	.457*
18-year-olds	-.586	.352	.556

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

In the adjusted ordinal regression model, students on the Future Ready diploma pathway were less likely to have a selected IEP show more evidence of paid employment activities compared to students on the Occupational Course of Study by a ratio of .004:1. When expressed as a percentage, there is a 99.6% decrease $[(1 - .004) * 100]$ in the odds that a student on the Future Ready diploma pathway (i.e., in comparison to a student in the Occupational Course of Study) will have more evidence of paid employment activities. In addition, the proportional odds assumption was met since the test of parallel lines was not significant (.985).

Table 15

Adjusted Ordinal Regression Results for Full Evidence of Paid Employment Activities in IEPs (Based on Complex Sampling in SPSS version 21)

	<i>B</i>	Std. Error	Odds Ratio
Future Ready Diploma (compared to OCS)	-5.482	.529	.004**
Disabilities (reference category: Learning Disabilities)			
Intellectual Disabilities	-.086	.293	.918
Emotional Disabilities	.827	.408	2.288
Other Health Impairments	.237	.176	1.268
Autism	.460	.456	1.585
Ethnicity (reference category: Caucasian)			
African American	.561	.329	1.753
Hispanic	.170	.374	1.185
Males (vs. Females)	-.066	.159	.936
16-year-olds	-1.047	.299	.351
17-year-olds	-.821	.328	.440
18-year-olds	-.765	.330	.465

** $p < .01$

Independent Living

Statistics for the overall model fit indicated the final model of significant predictors was statistically reliable in predicting whether an IEP would have full evidence (-2 Log Likelihood = 303.994, $\chi^2(6) = 142.435$, $p < .001$). Goodness-of-fit statistics were performed

by calculating the Pearson chi-square statistic, which showed the model is not a good fit. This is because the null hypothesis is rejected, thus the data and the predictions are not similar, $\chi^2(84) = 142.666, p < .001$. A preliminary regression was performed to determine if multicollinearity existed among the predictor variables for independent living. Results showed tolerance values of all predictor variables for independent living were greater than .1, and the VIFs for all predictor variables were less than 10, thus multicollinearity was not a problem. The three pseudo R^2 values—Cox and Snell = .165, Nagelkerke = .178, McFadden = .069—indicate the variables in the model predicted between 6.9% and 17.8% of the variability in evidence of independent living activities found in IEPs. As was the case for paid employment activities, these pseudo R^2 values also constitute the effect size statistics for independent living activities. Similar to the paid employment effect size estimates, the practical significance of the independent living effect size estimates is that future studies should consider adding variables to improve the model for predicting independent living activities in IEPs.

Results in Table 16 show all independent variables that are significantly associated with predicting that an IEP will have full evidence of independent living activities. Results in Table 17 show the adjustments for coefficients and standard errors using the SPSS Complex Samples function. Standard errors increased for most independent variables, and the statistically significant findings in the original model for diploma pathway and students with learning disabilities are no longer significant in the adjusted model. This leaves no variables remaining as significant predictors that a randomly selected IEP would show full

evidence of independent living activities. While no longer statistically significant, diploma pathway still showed a strong odds ratio. Students on the Future Ready diploma pathway were less likely to have a selected IEP show more evidence of independent living activities compared to students on the Occupational Course of Study by a ratio of .106:1.

Table 16

Ordinal Regression Results for Full Evidence of Independent Living Activities in IEPs

	<i>B</i>	Std. Error	Odds Ratio
Future Ready Diploma (compared to OCS) Disabilities (reference category: Learning Disabilities)	-1.640	.192	.194 ^{***}
Intellectual Disabilities	.244	.304	1.277
Emotional Disabilities	.356	.292	1.428
Other Health Impairments	.349	.206	1.418
Autism	.603	.329	1.828
Ethnicity (reference category: Caucasian)			
African American	.052	.193	1.053
Hispanic	-.126	.307	.882
Males (vs. Females)	-.092	.169	.912
16-year-olds	-.062	.289	.940
17-year-olds	.093	.292	1.098
18-year-olds	-.060	.310	.942

^{***} $p < .001$

When expressed as a percentage, there is an 89.4% decrease $(1-.106) * 100$ in the odds that a student on the Future Ready diploma pathway will have full evidence of paid

employment activities. In addition, the beta coefficient for diploma pathway in the adjusted model was -2.244, meaning that when holding all other variables constant, the ordered logit for students on the Future Ready diploma pathway being in a category for higher evidence is -2.244 less than Occupational Course of Study students. The proportional odds assumption was met since the test of parallel lines was not significant (.818).

Table 17

Adjusted Ordinal Regression Results for Full Evidence of Independent Living Activities in IEPs (Based on Complex Sampling in SPSS version 21)

	<i>B</i>	Std. Error	Odds Ratio
Future Ready Diploma (compared to OCS)	-2.244	.337	.106
Disabilities (reference category: Learning Disabilities)			
Intellectual Disabilities	.303	.312	1.354
Emotional Disabilities	.405	.247	1.499
Other Health Impairments	.626	.215	1.871
Autism	.825	.320	2.283
Ethnicity (reference category: Caucasian)			
African American	.242	.223	1.274
Hispanic	.149	.369	1.161
Males (vs. Females)	-.126	.161	.882
16-year-olds	-.138	.413	.871
17-year-olds	.213	.442	1.238
18-year-olds	-.034	.402	.967

Summary

This chapter provided the answers to this study's research questions. The chapter examined the presence of the secondary transition predictors paid employment and independent living in the IEPs of students selected for this study's sample. Results focused primarily on comparing evidence of these predictors among students pursuing different diploma pathways, Future Ready and Occupational Course of Study, but also compared levels of predictor evidence for additional independent variables, including students' disability, ethnicity, gender, and age. Ordinal regression analyses were conducted to determine the odds that each of the independent variables would have full evidence of either paid employment or independent living activities in a randomly selected IEP from the sample. After complex sampling procedures were used to adjust for standard errors, diploma pathway was the only significant predictor remaining in the model for paid employment activities, and no variables remained significant for independent living activities. The next chapter will discuss the implications of this study's findings, as well as provide recommendations for future research.

CHAPTER 5

DISCUSSION

Study Overview

The primary purpose of this study was to determine the evidence level of transition predictors between students pursuing different diploma pathways. The study specifically investigated the secondary transition predictors of paid employment and independent living to see if they are present throughout a student’s IEP, from the transition activities to present levels of performance to annual goals. The study first collected information on the level of evidence present in IEPs of students on each diploma pathway based on their disability category, ethnicity, gender, and age. Evidence was collected on each transition predictor separately. If evidence of a predictor did not exist at all, the IEP was rated “No Evidence” and received a score of 0. If evidence existed on the transition activities page only, the IEP was rated “Some Evidence” and received a score of 1. If evidence existed on both the transition activities page and in the student’s Present Level of Performance, the IEP was rated “Strong Evidence” and received a score of 2. An IEP with evidence of a predictor in all three areas—transition activities page, present level of performance, and included as an annual goal for the student—was rated “Full Evidence” and received a score of 3. The study then calculated the odds that a selected IEP would have full evidence of each transition predictor.

The sample included 538 high school students in an urban district in a southeastern U.S. state. From this total sample, 353 students were enrolled in the Future Ready Course of

Study, the diploma pathway for students whose primary goal after high school is to attend a post-secondary institution (i.e., two- or four-year college). The remaining 185 students in the sample were enrolled in the Occupational Course of Study, the diploma pathway for students whose primary goal after high school is to enter the workforce and become competitively employed. The disability categories in this sample included learning disabilities, intellectual disabilities, emotional disabilities, other health impairments, and autism; participants were African American, Caucasian, or Hispanic, and ranged in age from 16 to 21. The study employed several methods to answer the research questions, including descriptive statistics, ordinal regression, and Spearman's rho correlation.

Summary of Findings

Evidence of Paid Employment Activities in IEPs

The following activities listed in student IEPs—in the Present Level of Performance, or as an Annual Goal—were counted as evidence in the rating scale for paid employment:

- Practice completing a job application, practice interviewing for a job.
- Participating in community based vocational training.
- Practice using public transportation to get to work.
- Practice appropriate social skills in the workplace (i.e., getting along with co-workers, accepting constructive criticism from a supervisor).
- Practice proper hygiene and grooming necessary for the workplace.

From the total sample of students, the mean score for evidence of paid employment in IEPs of students on the Future Ready diploma pathway was .71 ($SD = .58$), while the mean

score for students on the Occupational Course of Study was 2.21 ($SD = .91$). There were three students on the Future Ready diploma pathway with full evidence of paid employment activities in their IEPs, compared to 98 students on the Occupational Course of Study.

Predicting the Odds of Full Evidence of Paid Employment Activities in IEPs

The variables in the original ordinal regression model that showed statistically significant results for predicting the odds that a randomly selected IEP would have more evidence of paid employment activities were diploma pathway and students who were 16 and 17 years of age. The ordinal regression model based on complex sampling procedures adjusted standard errors and significance levels, leaving diploma pathway as the only statistically significant predictor of more evidence of paid employment activities. The adjusted model showed the IEPs of students on the Future Ready diploma pathway were nearly 100% less likely to show full evidence of paid employment activities compared to the IEPs of students on the Occupational Course of Study.

Evidence of Independent Living Activities in IEPs

The following activities listed in student IEPs — as a Transition Activity, in the Present Level of Performance, or as an Annual Goal— were counted as evidence in the rating scale for Independent Living:

- Opening a bank account.
- Developing a personal budget based on needs and wants.
- Taking personal care of clothes (i.e., how to use a laundry machine).
- Preparing a meal using correct measurements for ingredients.

- Making a grocery shopping list.
- Identifying amount of money needed to make purchases at a store.
- Developing appropriate hygiene and grooming skills.

From the total sample of students, the mean score for evidence of independent living activities in the IEPs of students on the Future Ready diploma pathway was 1.01 ($SD = .83$). The mean score for evidence of independent living activities in the IEPs of students on the Occupational Course of Study was 1.79 ($SD = .96$). There were 20 students on the Future Ready diploma pathway with full evidence of independent living activities in their IEPs, compared to 52 students on the Occupational Course of Study.

Predicting the Odds of Full Evidence of Independent Living Activities in IEPs

The original ordinal regression model showed statistically significant results for predicting the odds that a randomly selected IEP would have full evidence of independent living activities for diploma pathway and learning disabilities. The ordinal regression model based on complex sampling procedures adjusted standard errors and significance levels, which left no statistically significant predictors of full evidence of independent living activities.

Discussion of Findings

Ecological Theory of Career Development

The Ecological Theory of Career Development is the framework that is used herein to discuss the study's findings. Because the theory focuses on individual behavior within the context of their environment (Szymanski et al., 1996), it provides IEP team members with

the groundwork from which they can develop a multi-faceted transition plan to address a variety of needs, including activities employment and independent living goals. Moreover, the theory provides a rationale for school personnel to help students transition to adulthood beyond simply helping them find a job or get into college. While this may be enough to help students without disabilities, students with disabilities will need a more comprehensive plan that will help them learn the daily living skills to live independently in their communities. The findings show that the IEPs from the district used in this study lack evidence that schools are supporting students in these critical areas.

Lack of Full Evidence in Transition Predictors

This study found 52% of students on the Occupational Course of Study and one percent of students on the Future Ready diploma pathway had full evidence of Paid Employment activities in their IEPs. In addition, there were 27 % of students on the Occupational Course of Study and 6% of students on the Future Ready diploma pathway with full evidence of independent living activities in their IEPs. For an IEP to have full evidence in either transition predictor, there had to be evidence in the transition activity page, the present level of performance, and in an annual goal, so less than full evidence means the predictor was missing from at least one area. If an IEP had a score of 1 the predictor was evident only in the transition activity page, and if the IEP had a score of 2 the predictor was evident in the transition activity page and the present level of performance. In other words, because the vast majority of IEPs for students on both diploma pathways did not show full evidence on either predictor, they were missing at least one of these components. This

finding is particularly troubling considering one of the requirements from Indicator 13 is to have at least one annual goal and one transition activity support a post-secondary goal (20 U.S.C. 1416 (a)(3)(B)). The legal mandate is to have post-secondary goals supported first by transition activities, and then by at least one IEP annual goal. This study shows that most IEPs had at least evidence of a transition activity, but very few included IEP annual goals to support those activities and therefore were not supporting the post-secondary goals. In this study an annual goal only needed to minimally support a transition activity related paid employment or independent living for it to count as evidence, so IEPs without a score of 3 had annual goals with no connection to the transition activities. This disturbing trend was also noted by Landmark (2009), who found low percentages of IEPs to be compliant with respect to annual goals and transition services supporting post-secondary goals.

One encouraging finding from this study is the strong odds of finding full evidence of paid employment activities for a selected IEP among students on the Occupational Course of Study compared to their peers on the Future Ready diploma pathway. This finding should be expected to some extent given the requirements for OCS students to participate in vocational training both on the school campus and in the community to earn credits toward their diploma. While the purpose of IEPs is to provide individualized goals and services based on each student's unique needs, students are enrolled in the OCS because their primary post-school goal is to enter competitive employment as opposed to entering a two- or four-year college. It should not be a surprise that the post-school goal for students on the OCS is supported with transition activities and annual goals related to the skills needed to obtain paid

employment. Another encouraging finding comes from the lack of difference in evidence of both transition predictors across all independent variables except for diploma pathway. Previous studies have documented disparities in transition planning based on a student's disability (Daviso et al., 2001, McMahan & Baer, 2011) and ethnicity (Landmark, 2009). This study, however, demonstrated that the transition plans in this sample do not show a lack of evidence of paid employment and independent living based on a student's disability, ethnicity, gender, or age. This is an example of the type of appropriate transition planning that is necessary if students with disabilities are to obtain successful post-school outcomes.

Uniqueness of the Study

The present study was unique in several ways. It extended the literature on transition planning but used an ordinal scale instead of a dichotomous scale to measure evidence. The study also looked at transition predictors, instead of best practices in transition. This is a result of the Test, Mazzotti, et al. (2009) study identifying transition predictors using the quality indicator checklist for correlational research (Thompson et al., 2005). This study is also the first attempt at identifying the effectiveness of the Occupational Course of Study by examining the transition planning of a sample of OCS students to a comparative sample of students on a standard diploma (Future Ready).

Limitations

One limitation of this study involves the nature of the data collection, which was a secondary analysis of data. The study looked at IEP documents from a computer database and did not directly observe the IEP meeting process or construction of actual IEPs. In

addition, the study did not disaggregate data on annual goals and how they related to transition goals and services, nor did it capture how the IEP process worked within each school. While forms are the same throughout the district studied, special education departments at the individual high schools may not necessarily utilize the same methods of completing IEP forms. Some schools, for example, may have the student's case manager fill out the IEP entirely on his/her own, while others may have an administrator or department chairperson review the IEP before an approval meeting. In addition, the study did not capture if IEP revisions were made during the meeting as a result of input from students, parents, or adult agency representatives.

The study examined data only on students from one school district, so the findings are difficult to generalize to the larger population of students with disabilities statewide and across the U.S. Although the sample was taken from the largest school district in the state, the impact of the findings do not necessarily translate to other school districts within the state.

Future Research

Future research should focus on the post-school outcomes of students enrolled in the OCS to determine whether the diploma pathway is effective in meeting the needs of its participants. This information would go far toward identifying strengths and areas that need improvement for students currently on this diploma pathway. Studies should also attempt to quantitatively measure the extent to which parents of students enrolled in the OCS impact the

transition activities and IEP annual goals that are related to transition predictors. This could be done through surveys before and after IEP meetings.

Another line of research should examine qualitative data on the types of transition activities and annual goals written and how they can be more effectively implemented. Examples of this could include case studies that draw upon perspectives of various stakeholders as they experience the transition planning process (students, parents, teachers, adult agency representatives).

Research is also needed to determine how other predictors found in the Test, Mazzotti, et al. (2009) study compare across students on different diploma pathways. Studies should first focus on those predictors with the strongest levels of evidence, such as general education inclusion. Additional variables that could potentially impact the quality of transition planning need to be studied further. One example is to see if differences in transition planning exist based on a student's socioeconomic status, measured by whether a student receives free/reduced lunch. Another variable worth investigating is the student's IQ score. While this study considered a specific IQ range as eligibility for inclusion in the study between students enrolled in both diploma pathways, future studies should consider whether IQ differences across different groups of students would lead to differences in transition planning for one group over another.

Implications for Practice

The OCS began in 2000 as a diploma option for students with disabilities whose post-secondary goal is to enter the workforce. At present, research has not measured the post-

school outcomes for graduates, and this study is the first attempt at analyzing how effective the transition planning is for OCS students in one urban district. All local school districts now face greater accountability to ensure students are meeting graduation requirements and exiting with the skills they need to be prepared for the demands of a 21st century workforce. For OCS students within each school district, however, one way to help them meet their requirements is to ensure uniformity in documenting hours worked in training or paid employment to meet their graduation requirements. If a student moves to another town in the same district and is attending a new high school, the staff at that new school can easily obtain records on how many work hours the student has earned up to that point.

Most school districts are significantly smaller in population than the one studied herein, and thus have limited resources, including few opportunities for students to secure paid employment in their communities. One advantage smaller school districts can offer students enrolled in the OCS, however, is more vocational training opportunities on the school campus. Most small school districts have only one or two high schools, compared to 20 in the district used for this study. This allows the district to concentrate resources for vocational training on those one or two high schools, instead of stretching resources over 20 high schools. An example of this is the way high schools in smaller districts are able to establish “school-based enterprises,” in which students earn on campus training hours by learning how to run a business with support from a local business in the community. Examples of this include setting up a car wash business or operating the school store.

The results of this study are further proof that school personnel need greater understanding that effective transition planning for students with disabilities involves more than just checking boxes on forms (Kohler & Field, 2009). More training will be needed in writing annual goals that match transition services and post-secondary goals so that transition predictors such as paid employment and independent living have a better chance at being implemented. Doren et al. (2012) found professional development activities significantly improved the ability of teachers to write higher quality post-secondary goals for employment and education/training. Peterson et al. (2013) suggested a “triangulated” approach to transition planning by writing post-secondary goals that incorporate transition and academic assessments, include state content standards that are relevant to post-secondary goals, and address gaps in skills and knowledge.

Another way to achieve higher quality transition planning would be to incorporate strategies related to self-determination in transition activities and annual goals. Experimental research supports self-determination training for students with disabilities through curricular interventions such as *The Self-Determined Learning Model of Instruction* (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). In addition, research shows that self-determination training increases post-school outcomes for students with disabilities (Wehmeyer & Palmer, 2003; Wehmeyer & Schwartz, 1997) and is another predictor identified by Test, Mazzotti, et al. (2009). One self-determination strategy that could be especially helpful for high school students is to take a more active role in their own IEPs. School personnel can promote this by utilizing research-based programs such as the *Self-*

Directed IEP (Martin et al., 2006). Self-determination was not measured in this study because it is not listed specifically as a transition activity on the IEP forms of the school district used in this study, but learning self-determination skills encompasses many other transition-related skills, including skills that would lead to employment and independent living.

Conclusions

Supporting the transition of adolescent students into adulthood has evolved rapidly in the 30 years since it was originally defined and in the 20 years since it became mandated by federal legislation. An environment of greater accountability now exists to ensure transition plans are meeting minimum legal requirements. This is part of a broader focus on accountability for schools under the legal mandates of the No Child Left Behind Act. The state in which this study was conducted is among the states to obtain a waiver- from having to meet some of the core requirements of the law, such as 100 percent of students be proficient in reading and math by 2014 (U.S. Department of Education, 2012). In exchange for being granted some flexibility with the NCLB requirements, this state agreed to demonstrate progress in a variety of areas, including reducing the proficiency gap by half within six years, and implementing interventions in the lowest performing schools (U.S. Department of Education, 2012). The impact of greater accountability in transition planning is that school districts now put much effort into following the letter of the law to meet minimum compliance standards, but as Landmark (2009) showed, schools are falling short on including IEP goals related to best practices in transition.

The research literature in transition has evolved from best practices toward identifying practices that are predictors of successful post-school outcomes (Test, Mazzotti, et al., 2009). This study investigated how two of these predictors, paid employment and independent living, are addressed in students' IEPs. It also compared evidence of these predictors in the IEPs of students who pursue different pathways to graduation with a diploma. While evidence levels remain low overall, an encouraging sign is that students on the pathway preparing them for competitive employment after high school show greater evidence of employment-related activities. This study found low levels of evidence in both predictor areas for students on the Future Ready diploma pathway. This is one indication that although this population of students will earn a diploma that allows them to access post-secondary institutions, schools should not assume that all of them will attend college. More individualized transition planning is still needed and should be the priority over federal and state curriculum requirements. While meeting graduation requirements is important, post-school outcomes will continue to be poor unless schools take a more individualized approach that considers the complex needs of students with disabilities. Not only does the law require such planning, but students deserve it.

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APPENDIX

Appendix A
IRB Approval

Date: March 13, 2013

Title: A Comparison of Secondary Transition Predictors between Students on Different Diploma Pathways

IRB#: 3164

Dear Peter,

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101. b.4). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review.

NOTE :

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA0000 3429.
2. Any changes to the research must be submitted and approved by the IRB prior to implementation.
3. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days.

Please forward a copy of this letter to your faculty sponsor, if applicable. Thank you.

Sincerely,



Jennifer Ofstein NC State IRB

Appendix B

Statement of Understanding

STATEMENT OF UNDERSTANDING

Enrollment in the *Occupational Course of Study (OCS)*

I understand that successful completion of the *Occupational Course of Study* requires that the following expectations be met:

- Passing grades in all required OCS coursework:
 - English OCS English I, II, III & IV
 - Mathematics OCS Introduction to Math I
 OCS Math A (Algebra I)
 OCS Financial Management
 - Science OCS Applied Science
 OCS Science II (Biology)
 - Social Studies Occ. SS I (Government/US History)
 Occ. SS II (Self-Advocacy /Problem Solving)
 - Occ. Prep. Occupational Preparation I, II, III & IV
 - Health & PE Health & Physical Education
 - Four (4) Career/Technical Education courses

- Additional Requirements:
 - Work-Based Learning:
 - **300 hours** of school-based vocational training that may include school-based enterprises, small business operations, on-campus jobs, and guest speakers.
 - **240 hours** of supervised community-based vocational training that may include such non-paid community-based activities as off-campus job shadowing, vocational assessments, internships and situational assessments. ALL such activities are to occur in established places of business.
 - **360 hours** of competitive paid employment, including supported employment (preferably completed in the 11th & 12th grades).
 - Completion & Presentation of Career Portfolio containing all required components
 - Completion of the computer skills proficiency requirement established by the Individual Education Program (IEP) Team

- Any other local requirements

I understand that in order for competitive employment hours to be counted toward meeting the requirements for the ***Occupational Course of Study***, the placement must meet the following guidelines:

- Staff must approve all employment placements if the hours are to count towards graduation.
- All employment placements must be in an integrated setting within the community.
- Employment placement may be secured by the student, parent/guardian, classroom (OCS) teacher, transition staff, vocational rehabilitation counselor and/or community agency.
- All employment placements must involve the student actually being hired by an established company or business and being included on the business/company payroll.
- Student must be paid at or above minimum wage for all work performed.
- The employment placement must meet Child Labor regulations under the Fair Labor Standards Act) FLSA.
- The employment placement must be open to evaluation of student performance by the Transition Teacher or other personnel/staff.
- Students must turn in appropriate documentation of employment, such as paycheck stubs.

I understand that the vocational training requirements for the ***Occupational Course of Study*** are expected to be completed in a manner that involves moving from school-based training to community-based training culminating in competitive (paid) employment, preferably in the 10th through 12th grades of high school.

I understand that students and their family members are expected to work collaboratively and cooperatively with school personnel in obtaining and maintaining a competitive employment placement. This may involve but not be limited to:

- Participation in transition planning meetings
- Follow-up referral to outside agencies
- Parental provision of transportation outside of school hours, and
- Completion of all required paperwork for the school and service providers.

I understand that appropriate documentation will be required to verify the employment placement including pay stubs, time cards, or other official documentation that can provide information regarding the per hour wage and the number of hours worked. This documentation must be provided by the parent/guardian and/or student.

I understand that obtaining a competitive employment placement may require collaboration with the following agencies:

- Social Security Administration if SSI or SSDI payments are being received

- Vocational Rehabilitation if supported employment, community-based work adjustment, or any other service related to competitive employment is needed

I understand that in order to obtain competitive employment a valid social security number or appropriate work permit(s) from U.S. Immigration will be required.

I understand that a work permit from the Department of Social Services will be required if employment is being obtained for a student under the age of 18.

I understand that insurance coverage through the school insurance program will be required prior to participation in work-based vocational training.

I understand that successful completion of the *Occupational Course of Study* will result in the awarding of a high school diploma that is based on the completion of an approved adapted course of study with some adaptation and modification. The *Occupational Course of Study* is designed to prepare students for employment and is **not** considered appropriate for any student who plans to enroll in a curriculum major at a community college or four-year university. However, students may still enroll in programs at community colleges such as compensatory education, continuing education, and adult basic education classes **after** satisfying any entrance requirements set by the community college.

I understand that successful completion of the requirements for the *Occupational Course of Study* may require enrollment in school longer than the traditional four years.

I understand that upon completion of all requirements for the *Occupational Course of Study* resulting in eligibility for a diploma, that graduation must occur even if the student is not yet 22 years of age.

I understand that there are **three possible options** associated with the completion of all the requirements for the Occupational Course of Study **except** the 360 competitive (paid) hours:

Option 1: Exit – Certificate Only

A student who has completed all required coursework **but not the 360 competitive (paid) hours**, may choose to exit high school with a *Certificate of Achievement* and a transcript. The student who chooses this exit option will be able to participate in graduation exercises. If the student so chooses, he/she may complete the 360 competitive (paid) hours **within two (2) years**, produce the paid stubs to the school and receive the diploma.

Option 2: Exit and Return

A student may exit with a *Certificate of Achievement* and decide to return in the fall (or later) to complete his/her competitive employment requirement. This option is available to students who have not yet reached their 22nd birthday. The student must be enrolled in school and have a current Individualized Education Program (IEP). The IEP must address the transition and/or additional needs related to employment. When the student successfully completes the 360 hours of competitive employment, he/she will be eligible to receive a diploma. This student may participate in graduation exercises to receive a diploma, **if he/she did not participate in graduation exercises at the time of his/her previous exit.**

Option 3: Non Exit

A student that has completed all course work but not (all) the competitive employment requirement may choose **not to exit high school**. The student may return in the fall to complete his/her competitive employment requirement. This option is available to students who have not yet reached their 22nd birthday. The student must be enrolled in school and have a current Individualized Education Program (IEP). The IEP must address the transition and/or additional needs related to employment. When the student successfully completes the 360 hours of competitive employment, he/she will be eligible to participate in graduation exercises and receive a diploma.

The above information was explained on _____ by _____.
All parties have indicated their understanding, and have received a copy of this document.

Student Signature: _____ Date: _____

Parent/Guardian Signature: _____ Date: _____

OCS Teacher Signature: _____ Date: _____

Other: _____ Date: _____

Appendix C

Predictor Implementation School/District Self-Assessment

1

Predictor Implementation School/ District Self-Assessment

National Post-School Outcomes Center
University of Oregon
www.psocenter.org

National Secondary Transition Technical Assistance Center
University of North Carolina at Charlotte
www.nsttac.org

May 2013

This document was developed by the National Post-School Outcomes Center, Eugene, Oregon, (funded by Cooperative Agreement Number H328U090001) with the U.S. Department of Education, Office of Special Education and Rehabilitative Services, and The National Secondary Transition Technical Assistance Center, Charlotte, NC (funded by Cooperative Agreement Number Grant # H328U11001) with the U.S. Department of Education. This document has been reviewed and approved by the Office of Special Education Programs. Opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Department of Education. OSEP Project Officers: Dr. Sekele Awoke and Marlene Simon-Burroughs



National Post-school Outcomes Center
National Secondary Transition Technical Assistances Center



Predictor Implementation School/ District Self-Assessment

The checklist below is intended to provide schools, districts, or other stakeholders in secondary transition with a framework for determining the degree to which their program is implementing practices which are likely to lead to more positive post-school outcomes for students with disabilities. The predictor categories listed have been extracted from high quality correlational research including students with disabilities. See <http://www.nsttac.org/sites/default/files/assets/pdf/pdf/ebps/CorrelationalProcedures.pdf> for more information on the process by which these predictors were identified. The operational definitions and essential program characteristics were derived from experts in the field through a Delphi study (Rowe et al., in progress).

A team should consider the descriptions of predictor categories and each individual program characteristic below, as well as the Degree of Implementation and the Evidence of Implementation scales to guide decisions regarding program strengths, needs, and priorities for change. To ask questions or contribute comments on this or other NPSO/NSTTAC tools, please contact NPSO, drowe3@uoregon.edu or NSTTAC, chfowler@uncc.edu.

Degree of Implementation Scale

- 1- **Not Currently Being Implemented** means students with disabilities with this predictor identified on their IEP or in their program of study **do not** experience this program characteristic as described or **do not** participate in this.
- 2- **Intermittent Implementation** means 25-50% of students with disabilities with this predictor identified on their IEP or in their program of study, experience this program characteristic as described. For example, implemented in some classrooms or schools but not frequently or with consistency.
- 3- **Emerging Implementation** means 50-75% students with disabilities with this predictor identified on their IEP or in their program of study experience this characteristic. For example, this is a priority in the school or district and that concerted efforts are being made to make these program characteristics available to many students with disabilities or possibly through recently adopted policies or procedures or district-wide professional development.
- 4- **Currently Being Implemented** means most or all students with disabilities (e.g., 75%=100%) with this predictor identified on their IEP or in their program of study, experience this program characteristic as described. There is consistent implementation school or district wide.

Types of Implementation Evidence

- No evidence
- copies of curricula, copies of training materials, in some IEPs
- referenced in school or district procedures and policies, documented in IEPs
- Consistent evidence of implementation and impact (e.g., documented in IEPs, program evaluation data, marketing materials)

Predictor Category	Operational Definition and Essential Program Characteristics	Degree of Implementation	Evidence of Implementation
Career Awareness <i>Student Development</i>	<p>Career Awareness is learning about opportunities, education, and skills needed in various occupational pathways to choose a career that matches one's strengths and interests.</p> <ul style="list-style-type: none"> • Provide school-wide comprehensive and systematic opportunities to learn about various careers via job shadowing, internships, guest speakers, 		

<p><i>Program Structures</i></p>	<p>industry tours, Career Technical Education classes, or career fairs.</p> <ul style="list-style-type: none"> • Identify skills and qualifications required for occupations aligned with core content areas. • Embed career awareness in the general curriculum to teach about occupations related to the core content areas. • Make explicit connections between academic skills and how those skills are used in various careers throughout all general education classes. • Provide systematic, age appropriate student assessment of career awareness (e.g., interest inventories, aptitude tests) for students to learn about their preferences and aptitudes for various types of career. • Provide instruction in how to obtain a job in chosen career path. 		
<p>Occupational Courses <i>Student Development Program Structures</i></p>	<p>Occupational courses are individual courses that support career awareness, allow or enable students to explore various career pathways, develop occupational specific skills through instruction, and experiences focused on the their desired employment goals.</p> <ul style="list-style-type: none"> • Embed career awareness activities, career planning, and vocational assessments in all occupational courses. • Design curriculum for each course to include technology, 21st century skills, and employability skills for specific career/career cluster content. • Provide hands-on and community-based opportunities to learn occupational specific skills within each occupational course. • Incorporate Universal Design for Learning principles in CTE programs including cooperative education programs to provide access to students with disabilities. • Provide course offerings throughout the school day so scheduling conflicts do not restrict student access to occupational courses. • Provide occupational courses that represent a wide variety of occupational clusters to provide students course choices that match their preferences, interests, needs, and strengths. 		
<p>Paid Employment/ Work Experience <i>Student Development Program Structures</i></p>	<p>Work experience is any activity that places the student in an authentic workplace, and could include: work sampling, job shadowing, internships, apprenticeships, and paid employment. Paid employment can include existing standard jobs in a company or organization or customized work assignments negotiated with the employer, but these activities always feature competitive pay (e.g., minimum wage) paid directly to the student by the employer.</p> <ul style="list-style-type: none"> • Provide opportunities to participate in job shadowing, work-study, apprenticeships, or internships. <p><i>**Consider work study, apprenticeships, and internship environments</i></p>		

	<p><i>that are culturally sensitive to students from different cultural backgrounds.</i></p> <ul style="list-style-type: none"> • Provide instruction in soft skills (e.g., problem solving, communicating with authority figures, responding to feedback, promptness) and occupational specific skills (e.g., clerical, machine operation). • Provide transportation training, including the use of public transportation and job-site and community safety. • Conduct job performance evaluations by student, school staff, and employer. • Provide instruction in obtaining (e.g., resume development) and maintaining a job. • Develop a process for community-based employment options in integrated settings with a majority of co-workers without disabilities. • Conduct situational vocational assessments to determine appropriate job matches. • Develop a process to enable students to earn high school credit for paid employment work experience. • Link eligible students to appropriate adult services (e.g. Vocational Rehabilitation, Developmental Disabilities Services) services prior to exiting school that will support student in work or further education. • Involve appropriate adult services (e.g., Vocational Rehabilitation or job coach when needed) in the provision of community-based work experiences. • Use age-appropriate assessments to ensure jobs are based on students' strengths, preferences, interest, and needs. • Ensure employment training placements offer opportunities for (1) working 30+ hours/week, (2) making minimum wage or higher with benefits, and (3) utilizing individualized supports and reasonable accommodations. 		
<p>Vocational Education</p> <p><i>Student Development Program Structures</i></p>	<p>Vocational education is a sequence of courses that prepares students for a specific job or career at various levels from trade or craft positions to technical, business, or professional careers.</p> <ul style="list-style-type: none"> • Provide a sequence of entry level and advanced integrated academic and vocational courses designed to improve students' reasoning and problem-solving skills, academic knowledge, work attitudes, specific occupational and/or technical skills, and general skills needed for employment. * • Provide a combination of in-school and community-based academic, competency-based applied, and hands-on learning experiences in the career pathways based on the local labor market. 		

	<ul style="list-style-type: none"> • Provide connection to postsecondary education and/or employment through site visits and connections with support services (e.g., vocational rehabilitation, disability support services). • Provide opportunities to earn certificates in certain career areas (e.g., Certified Nursing Assistant, Welding, Food Handlers Certification). • Develop business partnerships to ensure a relevant curriculum. • Provide career counseling and guidance to assist students in career planning and development aligned with the students' preferences, interests, needs, and skills. • Provide instruction in career development through volunteer work, job shadowing, work-study, apprenticeships, or internships. • Provide accommodation and supports in Career Technical Education (CTE) courses to ensure student access and mastery of content. • Provide instruction in soft skills (e.g., problem solving, communicating with authority figures, responding to feedback, promptness) and occupational specific skills (e.g., clerical, machine operation). • Measure achievement in soft skills (e.g., problem solving, communicating with authority figures, responding to feedback, promptness) and occupational specific skills (e.g., clerical, machine operation). 		
<p>Work Study <i>Program Structures</i></p>	<p>A work study program is a specified sequence of work skills instruction and experiences designed to develop students' work attitudes and general work behaviors by providing students with mutually supportive and integrated academic and vocational instruction.</p> <ul style="list-style-type: none"> • Provide options for paid and nonpaid work experiences both on and off-campus with options for gaining high school credit for completing program requirements in all 16 occupational clusters. • Develop a plan for earning academic credit on the job through an integrated curriculum focused on work-related skills with school personnel, the student, and his/her parents. • Provide supervision and guidance during the development of work behaviors and skills to address problems, concerns, insights, and learning. <i>**Consider culturally responsive behaviors and skills that address cultural concerns of culturally and linguistically diverse (CLD) students</i> • Develop business/school partnerships, by educating employers about the resources of potential employees, to set up training sites. <i>**Provide businesses with culturally responsive strategies to understand the cultural needs, behaviors, and practices of students from CLD backgrounds.</i> • Develop policies to address liability, including student insurance, and 		

	<p>other Department of Labor issues/concerns.</p> <ul style="list-style-type: none"> Develop a process to match student interests with available sites both on and off campus. <i>**Increase the number of available sites by recruiting site partners that reflect the cultural backgrounds of students.</i> Provide experiences in applied real-work settings supported by instruction. Place students in work settings that match their preferences, interests, needs, and skills. <i>**Consider partnerships with businesses owned by CLD communities</i> Provide transportation to vocational training sites. Provide, or partner with adult services to provide, qualified trained staff to job coach as needed. <i>**Staff qualification should include some cultural competencies or training</i> Provide self-evaluation and monitoring instruction to students. Provide students school-based opportunities to reflect, discuss, and share their work placement experiences. Have school personnel and site employees assess and monitor students' progress by using job duty forms and task analysis for various sites. 		
<p>Community Experiences <i>Program Structures</i></p>	<p>Community experiences are activities occurring outside of the school setting, supported with in-class instruction, where students apply academic, social, and/or general work behaviors and skills.</p> <ul style="list-style-type: none"> Allocate sufficient resources to support meaningful community-based experiences. Conduct ecological assessments to determine skills needed for various community environments. Provide instruction on skills needed to safely access community environments as identified via ecological assessments. Conduct transition assessments with students and families to determine appropriate community environments for current and future activities. Use community-based instruction to teach, assess, and monitor the obtainment of desired academic and/or functional skills. Observe and document students' attainment of desired behaviors and skills across diverse environments. Instruct students to use public transportation. Provide supervision during community experiences to guide and direct students in the development of appropriate behaviors and skills needed for specific environments. 		

	<ul style="list-style-type: none"> • Involve parent and adult service providers to support student involvement in community experiences. • Cooperate with community partners (e.g., employers, recreation facilities) to develop community experience sites. • Provide supports for parents to arrange community experiences after school hours. • Train teachers and paraprofessionals in necessary safety, health policies, and liability coverage necessary for students to participate in community experiences. 		
<p>Exit Exam Requirements/ High School Diploma Status</p> <p><i>Student Development Program Structures</i></p>	<p>Exit exams are standardized state tests, assessing single content area (e.g. Algebra, English) or multiple skill areas, with specified levels of proficiency that students must pass in order to obtain a high school diploma. Diploma status is achieved by completing the requirements of the state awarding the diploma including the completion of necessary core curriculum credits.</p> <ul style="list-style-type: none"> • Teach test-taking strategies and study skills instruction. • Assist students to plan for and use appropriate accommodations when taking the test. • Administer standardized practice tests periodically to monitor progress towards benchmarks. • Provide exit exams at the end of targeted courses designated by the state or at the end of a specific grade level (e.g. 11th). • Offer students, meeting criteria, appropriate accommodations, alternate, or alternative assessment procedures. • Provide student remediation assistance if they fail the test. • Provide students with multiple opportunities to take the test as allowed by the school/district for all students. 		
<p>Inclusion in General Education</p> <p><i>Student Development Program Structures</i></p>	<p>Inclusion in general education requires students with disabilities to have access to general education curriculum and be engaged in regular education classes with peers without disabilities.</p> <ul style="list-style-type: none"> • Provide administrative support (e.g., professional development for teachers and paraprofessionals, common planning, providing paraprofessionals) to teachers for students with disabilities included in general education classrooms. • Provide specific instruction to support students with disabilities who are included in general education (e.g., differentiate instruction, learning strategies, study skills, organizational skills, personal management skills). • Evaluate the effectiveness of inclusive programming by using formative 		

	<p>assessment to identify when adjustments are needed to accommodate all students' learning differences (e.g., pace, communication skills).</p> <ul style="list-style-type: none"> • Develop a receptive school atmosphere for including students with disabilities in general education by educating administrators, teachers, other staff, and students about person-first language and disability rights. • Observe and assess integrated environment to identify and provide interventions for needed academic, social, behavior, and communication skills to ensure a conducive learning environment for all students. • Use diverse instructional strategies to meet the learning needs of all students including universal design for learning, technology, and linking instruction to student interests. • Provide professional development for secondary personnel to ensure personnel are qualified to use universal design for learning and evidence-based instructional strategies. • Engage students as active participants in general education instructional processes utilizing multiple models of inclusive learning. 		
<p>Program of Study</p> <p><i>Student Development Program Structures</i></p>	<p>A program of study is an individualized set of courses, experiences, and curriculum designed to develop students' academic and functional achievement to support the attainment of students' desired post-school goals.</p> <ul style="list-style-type: none"> • Ensure program of study is inclusive, academically rigorous, and supported by Universal Design for Learning principles. • Design multiple pathways in the general curriculum for satisfying standard diploma requirements. • Provide clearly defined graduation requirements leading to a state sanctioned exit document. • Establish planning process to assist students in developing their program of study. • Provide multiple opportunities (e.g., career technical education; community-based work, independent living, and community access experiences; school-based enterprises; dual credit through a cooperative agreement) for students to acquire needed credits to achieve standard diploma and ensure a seamless transition to postsecondary education and employment settings. 		
<p>/Self-Determination/ Self-Advocacy</p> <p><i>Student Development</i></p>	<p>Self-Determination is the ability to make choices, solve problems, set goals, evaluate options, take initiative to reach one's goals, and accept consequences of one's actions.</p> <ul style="list-style-type: none"> • Utilize a student driven IEP process to allow students to demonstrate self-awareness, goal setting, problem solving, and self-advocacy. • Collaborate with general education teachers to embed choices into the 		

	<p>general curriculum and daily lessons and provide opportunities for students to practice self-determination skills.</p> <ul style="list-style-type: none"> • Teach students to self-monitor self-determination skills (e.g., accommodations and modifications) and provide opportunities for students to practice the self-monitoring strategy. <p><i>**As you work with students, take into consideration the cultural nuances involved in teaching self-determination skills and providing opportunities to develop self-determination to students from CLD backgrounds.</i></p> <ul style="list-style-type: none"> • Ensure all students, including those with significant disabilities, have a functional communication system to engage in choice making, problem-solving, goal setting, taking initiative to reach goals, and accepting consequences for one’s actions. • Conduct age-appropriate transition assessments in order for students to learn about themselves, set goals, solve problems, use information, make decisions, and to identify long-range goals. • Provide opportunities for students to develop self-awareness by engaging in honest and respectful discussions with students about their self-determination assessment responses. • Provide direct instruction in self-determination using a structured curriculum or evidence-based instructional strategy, with guided practice in natural school and community-based settings. • Foster the development of students’ leadership skills. • Expect and support students to make many routine choices for themselves through the course of a school day. • Work collaboratively with students to facilitate achievement of their goals by informing them of their options and the potential consequences of their choices. 		
<p>Self-Care/ Independent Living Skills</p> <p><i>Student Development</i></p>	<p>Self-care/independent living skills are skills necessary for management of one’s personal self-care and daily independent living, including the personal management skills needed to interact with others, daily living skills, financial management skills, and the self-management of healthcare/wellness needs.</p> <ul style="list-style-type: none"> • Provide instruction, as needed based on assessment data, in (1) financial planning, (2) self-help, (3) cooking, (4) housekeeping, (5) home maintenance, (6) using transportation, (7) clothing care, (8) accessing community services, (9) time/ organizational management, (10) self-determination, (11) social roles/ citizenship, (12) community/peer relationships, or (10) critical thinking and problem solving. • Embed self-care/independent living skills instruction into academic coursework to help students connect academic skills to post-school goals. 		

	<ul style="list-style-type: none"> • Provide instruction in self-care independent living skills in multiple settings including general education, special education, and community. • Provide individual, small group, or whole class instruction in independent living and self-care skills, as appropriate. • Provide students multiple opportunities to practice independent living skills throughout the school day in real-life situations using real-life materials and equipment. <i>**Independent living skills may include skills for functioning in an environment that requires interaction with people from different CLD backgrounds.</i> • Provide transition services (e.g., completing housing application, obtaining Social Security Disability) for students to accomplish postsecondary independent living goals. • Conduct ongoing assessment of self-care/independent living skills to identify and evaluate levels of skill attainment, maintenance, and generalized use of skills in other settings where use of skills are required. • Teach home and community recreation skills that can be done alone or with others in both organized and informal settings. <i>**and in culturally diverse settings</i> 		
<p>Social Skills</p> <p><i>Student Development</i></p>	<p>Social skills are behaviors and attitudes that facilitate communication and cooperation (e.g., social conventions, social problem-solving when engaged in a social interaction, body language, speaking, listening, responding, verbal and written communication).</p> <ul style="list-style-type: none"> • Integrate social skills instruction across the curriculum (e.g., general education and community). • Use a direct instruction curriculum to teach communication, interpersonal, conversational, negotiation, conflict, and group skills in context. • Provide opportunities for students to practice communication, interpersonal, conversational, negotiation, conflict, and group skills in context. • Assist students to use problem-solving skills when difficult interpersonal situations arise in context. • Provide parent and school staff information and training in supporting age-appropriate social skill development for their child, taking into consideration the family’s cultural standards. • Use augmentative communication (AC) and assistive technology (AT) devices to encourage communication for students who use AC/AT. • Use ecological assessments to identify the social skills students will be expected to perform in each context. 		

	<ul style="list-style-type: none"> • Provide opportunities for students to practice social skills that foster authentic social interactions that foster the development of friendships. • Teach students to self evaluate their use of social skills in the appropriate context. • Teach students the social expectations for various environments (e.g., church, school, work, recreation). 		
<p>Interagency Collaboration</p> <p><i>Interagency Collaboration</i></p>	<p>Interagency Collaboration is a clear, purposeful, and carefully designed process that promotes cross agency, cross program, and cross disciplinary collaborative efforts leading to tangible transition outcomes for youth.</p> <ul style="list-style-type: none"> • Develop wide reaching state interagency teams that includes disability related and non-disability related agencies (e.g., Developmental Disabilities, Vocational Rehabilitation, Department of Labor, Social Security Administration) with a common interest in transition service delivery. • Develop and implement formal and informal agreements between agencies responsible for the delivery of transition services. • Develop an agreed upon vision and mission of transition services and programs. • Develop an organizational structure that includes a process for identifying membership (e.g., criteria for membership), terms of services, procedures for replacing members, orientation for new members, and web-based and print membership directories. • Coordinate the development of policies and procedures for service delivery and sharing of resources by both school and community agencies. • Implement a state-wide plan that (1) addresses gaps, (2) includes strategies for blending and braiding funding of other resources, (3) streamlines the transition process, and (4) eradicates duplication of service delivery. • Conduct asset/resource mapping to identify all community agencies that support youth with disabilities in the area as well as gaps in service delivery. • Clearly define roles and responsibilities of each organization a part of the interagency agreement. • Schedule regular times for planning, developing, and measuring the progress and effectiveness of implementing a shared transition service delivery system at all levels (e.g., individual student, school, local, region, state, and nation). • Develop procedures for shared problem-solving to address needs of students with disabilities ad the barriers they may face during transition 		

	<p>process.</p> <ul style="list-style-type: none"> • Develop procedures for school staff to have systematic way to include students, families, community members, and agencies at different levels of the transition process (e.g., when to invite to IEP meetings, when to refer families to meet with agency, when to provide information sheet to family) • Establish multiple methods of communication and information sharing across agencies. • Provide cross-discipline professional development opportunities for all members of interagency council to ensure members are knowledgeable about services and eligibility criteria. 		
<p>Parental Involvement <i>Family Involvement</i></p>	<p>Parent Involvement means parents /families/guardian are active and knowledgeable participants in all aspects of transition planning (e.g., decision-making, providing support, attending meetings, and advocating for their child).</p> <ul style="list-style-type: none"> • Provide relevant information about transition planning to parents through a variety of means (e.g., written, face-to-face, community-based trainings such as Autism Society) at each stage of the transition planning process such as transition from middle to high school, age of majority, graduation. • Link parents with support networks (e.g., networking opportunities with other parents, advocacy groups). • Provide multiple options for involvement (e.g., pre-IEP planning input, flexible IEP meeting times) and alternate ways to obtain input in the transition planning process. <i>**Consider parents' perceptions in transition planning that may conflict with mainstream professional ideas. Some parents from CLD backgrounds may not be supportive of transition activities if they feel the plans are contrary to their expectations.</i> • Establish a welcoming atmosphere in the school by developing a system of ongoing communication and interaction (e.g., e-mail, notes home, home visits, regularly scheduled meetings in addition to IEP meetings). <i>**Consider the language and cultural needs of parents from CLD backgrounds</i> • Provide fairs, brochures, or workshops to educate parents about adult services and post-school supports in the community (e.g., vocational rehabilitation, mental health resources, postsecondary education institutions and supports). <i>**Consider developing material in languages accessible to target communities.</i> • Provide staff training on culturally competent transition planning (e.g. recognizing and honoring differences such as ethnic, socioeconomic, and 		

	<p>values of the family).</p> <ul style="list-style-type: none"> Actively engage parents in interagency transition councils. Collaborate with families to identify how the school and family/guardian can support the student in achieving their desired post-school goals. Share transition assessment results with parents so that parent can use the information to provide training for their child in the home and the community and identify natural supports. 		
<p>Student Support</p> <p><i>Student-Focused Planning Family Involvement Interagency Collaboration Program Structures</i></p>	<p>Student support is a network of people (e.g., family, friends, educators and adult service providers) who provide services and resources in multiple environments to prepare students to obtain their annual transition and post-secondary goals aligned with their preferences, interests, and needs.</p> <ul style="list-style-type: none"> Develop and implement procedures for cultivating and maintaining school and community networks to assist students in obtaining their postsecondary goals. <i>**Consider networks that are culturally, racially, and ethnically representative to accommodate the needs of CLD students.</i> Provide students access to rigorous, differentiated academic instruction. <i>**As well as teachers who use culturally responsive teaching strategies</i> Link students to appropriate individuals who can assist student in obtaining access to assistive technology resources and teach students to use technology to enhance their academic and functional performance. Link students to appropriate individuals that can provide support for financial planning, navigating the health care system, adult services, or transportation. Link students to a community mentor and/or school based mentor/graduation coach. Provide opportunities for meaningful engagement in the community (e.g., clubs, friends, advocacy groups, sports, etc.). Ensure teachers and other service personnel provide ongoing transition assessment to assist in planning for needed supports and resources in school and beyond. 		
<p>Transition Program</p> <p><i>Student-Focused Planning Student</i></p>	<p>A transition program prepares students to move from secondary settings (e.g., middle school/high school) to adult-life, utilizing comprehensive transition planning and education that creates individualized opportunities, services, and supports to help students achieve their post-school goals in education/training, employment, and independent living.</p> <ul style="list-style-type: none"> Provide systems level infrastructure (e.g., highly qualified staff and administrators with defined roles and responsibilities, sufficient budget) 		

<p><i>Development Interagency Collaboration Program Structures</i></p>	<p>to monitor and guide students to obtain post-school goals.</p> <ul style="list-style-type: none"> • Provide integrated instruction in all areas of independent living (e.g., community living, transportation, recreation leisure, self-advocacy, goal setting, decision making) for all students with disabilities. • Provide individualized transition focused curriculum and instruction based on students' postsecondary goals in postsecondary education, employment, and independent living (e.g., self-determination and financial planning). • Provide instruction and training in natural environments supported by classroom instruction. • Provide individualized transition services based on students' postsecondary goals in postsecondary education, employment, and independent living (e.g., self-determination and financial planning). • Provide opportunities for engagement with non-disabled peers in the school and community. • Use interagency collaboration with clearly defined roles and responsibilities to provide coordinated transition services (e.g., Vocational Rehabilitation, Mental Health) at multiple levels (i.e., student, school, districts, region, state) to assist students in meeting their postsecondary goals. • Monitor and assess students' progress in the domains of academics, daily living, personal and social, and occupational. • Use multiple strength-based assessments across multiple domains at different points in time to assist student and IEP teams in post-school planning. • Provide training and resources to families to involvement them in transition planning and connect them to adult agencies and support and information networks. • Conduct program evaluation to assess effectiveness of transition program. 		
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Note: ** recommendations from the Equity Assistance Center (EAC) and Office of Special Education Programs (OSEP) to address cultural relevance and competency. EAC also suggests for every factor or indicator, consider its impact on students from culturally and linguistically diverse backgrounds. Use of mainstream value-based approaches may not serve the needs of all students. Students who come from communal and interdependent cultural backgrounds will need patience and understanding as they are required to acquire individualistic and independents transitional strategies. Educational equity requires that every child be provided with the support and resources they need to be successful in life.