

AN EXAMINATION OF TRANSITION PLANNING PRACTICES IN HIGH SCHOOL  
AND COLLEGE OUTCOMES FOR STUDENTS WITH DISABILITIES

BY

AMY FISK

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AMY K. FISK

STATE UNIVERSITY OF NEW YORK AT FREDONIA, B.A. (2013)

ALFRED UNIVERSITY, M.A. (2015)

ALFRED UNIVERSITY, C.A.S. (2017)

APPROVED BY: Mark Fugate, Ph.D  
Committee Chairperson

Andrea Burch, Psy.D  
Committee Member

Kevin Curtin, Ph.D  
Committee Member

Corrie Burdick, Ph.D  
Committee Member

ACCEPTED BY: Kevin Curtin, Ph.D  
Chairperson, Division of Counseling and School Psychology

ACCEPTED BY: Jay Cerio, Ph.D  
Associate Provost and Director of Graduate Studies

ACCEPTED BY: W. Richard Stephens, Jr., Ph.D  
Provost and Vice President for Academic Affairs

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## Abstract

Research indicates that the trend of students with disabilities choosing to attend college is continually increasing. However, research also suggests that this population may be ill prepared to meet the increased academic demands and level of independence needed at the college level. Research in the field indicates that high schools may not be engaging in practices that are aligned with the transition-planning mandates of the Individuals with Disabilities Education Improvement Act (2004). The current study explored the extent to which high schools are compliant with IDEIA (2004), and are engaging in best practices in transition planning for college-bound students. Results showed that students who had transition plans with a greater level of compliance and college-specific best practices had higher grade point averages. These results have implications for stakeholders at the secondary level in assessing quality of transition planning to promote positive outcomes for students with disabilities pursuing postsecondary education.

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## **Chapter 1**

### **Introduction**

#### **Trends for Students with Disabilities in College**

National studies show that there has been a steady increase of students with disabilities attending postsecondary education institutions over the past few decades. As of the 2011-2012 academic year, approximately 11% of undergraduate college students have self-reported as having a disability in colleges and universities across the United States, compared to only 6% twelve years previously (National Center for Education Statistics [NCES], 1999; NCES, 2015). The increase of students with disabilities choosing to attend college has been attributed to a variety of factors including an increase of students receiving special education services in high school, changes in transition law that emphasize postsecondary education preparedness, and expansion of special education services in high schools, as well as sociopolitical changes, such as an increased emphasis on the importance of higher education in order to be competitive in the workforce (NCES, 2015; Vess, 2007; Wolanin & Steele, 2004).

Despite the increase in this population seeking higher education, students with disabilities continue to enroll in college at lower rates compared to students without disabilities, and are less likely to attend 4-year colleges or universities. Of the students with disabilities who attend some postsecondary education institution, more enroll in 2-year or community colleges (44%) or vocational, business, or technical schools (32%), with only about 19% attending 4-year colleges or universities (National Longitudinal Transition Study II, 2012).

### **College Readiness Among Students with Disabilities**

The literature suggests that students with disabilities are not being adequately prepared during high school to meet the increased demands of a college setting (Cawthon & Cole, 2010; Hamblet, 2014; Martin & Williams-Dieham, 2013; Newman et al., 2011). In terms of academic preparation, students with learning disabilities demonstrate less developed reading and writing skills before entering college compared to students without disabilities (Vogel & Adelman, 1992). Further, students with disabilities are less likely to take general education and/or college prep courses (Gregg, 2007; O'Brien, 2011), and often lack self-advocacy skills, including knowledge of their own disability (Getzel & Thoma, 2008), all of which are vital for success in college.

Given that college readiness encompasses a variety of factors including, but not limited to, academic skill development, development of compensatory skills (i.e., time management, organization, metacognitive skills), and self-determination (Conley, 2007), transition planning practices need to be comprehensive, holistic, and relevant for students with disabilities planning to attend college. However, if college readiness is to be conceptualized as a reflection of transition planning practices at the secondary level, then research shows that high schools may not be engaging in practices necessary to help this population succeed after high school. This includes engaging in best practices related to transition and even more importantly, adhering to federal mandates related to postsecondary transition planning for students with disabilities.

### **Transition Law**

The Individuals with Disabilities Education Act (IDEA) (P.L. 108-446) is a federal education law passed in 1990 “ensur[ing] that all children with disabilities are

entitled to a free and appropriate public education [FAPE] to meet their unique needs and prepare them for further education, employment, and independent living” (American Psychological Association, 2015). As part of the Individuals with Disabilities Education Act (IDEA), schools are responsible for preparing students with disabilities to transition into adult life after high school. Postsecondary transition planning services are required for all students with a documented disability who have an Individualized Education Plan (IEP) once the student turns 16, or younger, as determined by individual states (U.S. Department of Education, 2017). The most recent reauthorization of IDEA, the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA 2004), yielded changes specifically related to postsecondary transition planning mandates. Section 602 (34) of H.R. 1350: IDEIA 2004 outlines mandated components of *transition services*, which are activities for students with documented disabilities that are:

- (a) Designed to be within a results-oriented process, focusing on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;
- (b) Based on the individual child’s needs, taking into account the child’s strengths, preferences, and interests; and
- (c) Include instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and when

appropriate, acquisition of daily living skills and functional vocational evaluation (20 U.S.C. 1401(34)).

The introduction of federal laws within the past few decades have had significant implications for high school students with disabilities wanting to attend college. For example, the Americans with Disabilities Act, as well as Section 504 of the Rehabilitation Act of 1973, both of which are federal anti-discrimination laws, grant individuals with disabilities access to higher education. Further, amendments to the Individuals with Disabilities Education Act have called for better post-high school preparation among students with disabilities. Together, these laws likely have contributed to the steadily increasing rate at which students with disabilities are attending college. However, students with disabilities continue to be less likely to attend 4-year colleges and successfully receive baccalaureate degrees compared to their non-disabled peers. Thus, the most pressing question is whether students with disabilities are being adequately prepared in high school in order to succeed at the college level.

### **Current Postsecondary Transition Practices in High Schools**

Literature on the topic of transition planning for students with disabilities indicates that transition planning practices may not be adequate in helping to prepare this population of students succeed in a postsecondary education program. Research suggests that initial interest in attending college among students with disabilities tends to rapidly decrease over the course of students' high school career (Hitchings, Retish, & Horvath, 2005), and proper transition planning practices tend to be mostly geared toward students with disabilities whose postsecondary goals include independent living and vocational training; not for those wanting to attend college (Powers, 2005). A recent study

conducted by Landmark & Zhang (2012), based from a study conducted by Landmark (2009), examined quality of transition planning as evidenced by content from students' Individual Education Plans (IEPs). An IEP is a written document that is developed, reviewed, and revised by a team and includes a statement of the student's present levels of academic achievement, measureable annual goals, short-term objectives, special education and related services/accommodations provided, and projected date for the beginning of postsecondary transition services (U.S. Department of Education, 2017). According to participants' IEPs, few students with disabilities received transition services that reflect best practices in postsecondary transition planning, and even more alarming, a majority of the IEPs failed to align with IDEIA (2004) mandates related to transition planning. For example, only about half of IEP documents were fully compliant with the components of IDEIA (2004) related to transition, including inviting the appropriate individuals to transition meetings, adhering to timelines related to the age at which the student should be receiving postsecondary transition services, and establishing measurable postsecondary goals. Establishing annual goals and engaging in appropriate transition services that are aligned with the annual goals were included in only about a quarter of IEPs. Landmark and Zhang's (2012) findings show that schools may not be engaging in transition planning that adheres to transition law, nor engaging in additional, research-based practices that help prepare students with disabilities succeed after high school. This has clear and significant implications for students with disabilities planning to move on to postsecondary education.

It is important to note that existing studies related to quality of postsecondary transition planning for students with disabilities are limited and outdated, with a majority

of studies conducted before the 2004 reauthorization of IDEIA. Thus, there needs to be a clearer picture of transition planning practices in high schools post-IDEIA (2004).

Additionally, few studies have empirically examined quality of transition planning specifically for students with disabilities planning to attend college, a population that requires different preparation needs. Therefore, there needs to be more updated research that addresses transition planning practices post-IDEIA (2004) for students with disabilities attending college.

### **Statement of Problem and Purpose of Current Study**

Currently, there are several limitations to the existing research on postsecondary transition planning for students with disabilities planning to attend college. First, the research examining this specific population of students with disabilities is limited, as well as outdated. Second, there is limited research on transition planning in schools after the 2004 reauthorization of IDEIA. Finally, although the literature suggests that students with disabilities are often unprepared for the college environment, there is no research on the relationship between quality of transition planning and college outcomes for students with disabilities. This alone is important to explore, as an empirically supported link between quality transition planning in high school and outcomes in college among students with disabilities would have serious implications for transition planning teams at the secondary level. Therefore, the purpose of the current study is to examine the extent to which transition planning practices align with postsecondary transition planning practices according to IDEIA (2004), as well as best practices in transition planning (Landmark, 2009), and how these practices relate to postsecondary education outcomes for students with disabilities.

## Chapter 2

### Literature Review

#### Postsecondary Education Transition Trends

Approximately 11% percent of undergraduate college students have self-reported as having a disability in colleges and universities across the United States (National Center for Education Statistics, 2015). Over the past two decades, more students with disabilities, particularly students with documented learning disabilities, are attending colleges and universities after graduating from high school (Kosine, 2007; Janiga & Costenbader, 2002; Vess, 2007). According to the National Longitudinal Transition Study II, students with a Specific Learning Disability make up a majority of the population of students with disabilities who attend college (31%), followed by Attention Deficit/Hyperactivity Disorder (18%), Mental illness/Psychiatric condition (15%), and Physical Health Impairment (11%) (University at Washington Disabilities, Opportunities, Internetworking, and Technology, 2016). Though data indicates that approximately 11% of college students have a disability, it is important to note that this statistic is reflective of the students who identify as a student with a disability and register with their college disability services office. There may be more students going to college with documented disabilities, who received special education services in high school, but choose not to identify in order to avoid stigma, or who are unaware that they may be able to receive services at their institutions.

The steady increase of students with disabilities participating in postsecondary education in the United States may be largely attributed to the introduction of federal anti-discrimination laws over the past few decades (Vess, 2007; Wolanin & Steele,

2004). In the K-12 setting, students' with disabilities rights fall under federal education law, the Individuals with Disabilities Education Act. The laws in which students with disabilities are protected *after* high school include Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA). Section 504 is an antidiscrimination law that protects individuals with disabilities in any program receiving federal funding, including schools; “[under Section 504], no otherwise qualified individual with a disability in the United States, as defined in section 7(20), shall, solely by reason of his or her disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance...[including] a college, university, or other postsecondary institution, or a public system of higher education” (GSA Section 508). Section 504 requires that colleges and universities provide appropriate academic adjustments as necessary to ensure that it does not discriminate on the basis of a disability.

Relatedly, the Americans with Disabilities Act, signed into law in 1990, was designed to provide a “clear and comprehensive national mandate for the elimination of discrimination and clear, strong, enforceable standards addressing discrimination by reinstating a broad scope of protection to be available under the law” (ADA, 2017). ADA states that a person has a disability if the individual has a “physical or mental impairment that substantially limits one or more of the major life activities of such individual, the individual has a record of such an impairment; or is regarded as having such impairment” (Cawthon & Cole, 2010). Under ADA, public or private postsecondary institutions, regardless if they receive federal funding, must make reasonable accommodations in order to provide individuals with disabilities an equal opportunity to participate in



courses, programs, and activities. This includes academic adjustments or modifications such as extended time for test taking and use of assistive technology in the classroom, although colleges and universities do not have to provide accommodations that would fundamentally alter the education program. Higher education institutions themselves have the legal right to determine what constitutes as an unreasonable, or unjustified, accommodation.

These laws give college students with disabilities access to higher education, which includes physical access to academic and residence buildings for those with physical disabilities, as well as testing accommodations and use of assistive technology in the classroom for those with cognitive processing disabilities, such as a learning disability. By providing legal protection in the form of access, high school students with disabilities have been given the opportunity to consider college as a postsecondary option. Further, at the secondary level, the reauthorizations of the Individuals with Disabilities Education Act, particularly the 2004 reauthorization, have yielded significant changes in postsecondary transition planning mandates. An increased focus on preparing students for optimal post-high school outcomes, including participation in postsecondary education, has helped create a “clear legislative path from secondary school to higher education” (Wolanin & Steele, 2004, p. xiii).

The increase of this population attending postsecondary education institutions may also be due to the change in the orientation of special education away from remediation and toward student-centered learning, including instruction in study skills, problem-solving, and other learning strategies (Vess, 2007). This may be providing students with disabilities with learning strategies necessary to succeed in a college

setting, as opposed to focusing only on skills related to vocation training. Additionally, advances in assistive technology such as computer software, may be giving students the tools they need to perform to the best of their ability at the college level. Furthermore, a sociocultural shift towards an increased demand for college-educated employees in the workforce may also be aiding in more students with disabilities attending college.

Together, these essential changes have helped provide additional preparation for college academia and career possibilities for students with disabilities, who may not have thought going to college was a viable option.

Statistics derived from the National Longitudinal Transition Study (NLTS II) were collected from a national sample of students with disabilities who were 13 to 16 years old and receiving special education services in grade 7 or above in the 2000-2001 academic year. Participant information, including postsecondary education outcomes, was collected in five waves over a 10-year period. The NLTS-II findings show that students with documented disabilities enroll in postsecondary school comparatively with their non-disabled peers, at 60.1%, and 67.4%, respectively. However, students without disabilities were more likely to attend 4-year colleges or universities (40%) than students with disabilities. Of the students with disabilities who attend some postsecondary education institution, more enroll in 2-year or community colleges (44%) than vocational, business, or technical schools (32%), with only about 19% attending 4-year colleges or universities. Thus, although students with disabilities are enrolling in postsecondary education at a growing rate, less are attending 4-year colleges or universities, which may yield important opportunities and benefits compared to 2-year/community or vocational

and business colleges, including higher salary and career mobility (Lindstrom, Kahn, & Lindsey, 2013).

Students with disabilities who attend 4-year college programs are less likely to complete their college degree requirements than non-disabled students. Specifically, approximately 48% of students without disabilities graduate 4-year college programs, while only about 30% of students with disabilities receive their baccalaureate degree. However, students with disabilities who graduate from college are comparable to students without disabilities in income, employment related to their majors, and graduate school attendance. Not surprisingly, individuals with disabilities who graduate from college demonstrate more favorable outcomes in terms of employment, salary, and job benefits, compared to their peers with disabilities who do not graduate from college (Madaus & Shaw, 2006). These findings suggest that although students with disabilities are pursuing higher education after high school, and have the potential to be successful after receiving a college education, they are less likely to attend 4-year colleges and finish degree requirements compared to their non-disabled peers. Given that a college degree can provide a myriad of favorable post-school outcomes including higher rates of competitive employment, higher weekly earnings, and a greater number of hours worked per week (Lindstrom et al., 2013), it is essential students with disabilities that plan to attend college are adequately prepared to successfully obtain their degrees.

With regard to the NLTS II data, it is important to note that due to the timing of the data collection in comparison to the 2004 reauthorization of IDEIA, the statistics of students with disabilities who attended college and successfully completed degree requirements may not be reflective of the potential changes that IDEIA 2004 may have

facilitated in better preparing this population to succeed in college. Thus, the timing of the NLTS II data collection compared to the timing of the law suggests that this data is more reflective of the effectiveness of transition services prior to the 2004 reauthorization, in which students with disabilities may not have been adequately prepared to succeed in college. Thus, this data supports the need for strict adherence to transition mandates in schools according to IDEIA 2004, which better promotes student preparedness in postsecondary life, including success in college.

### **Introduction to Transition Law**

A major federal education law that has significantly impacted the educational experiences of students with disabilities in schools across the United States is the Individuals with Disabilities Education Act (IDEA) (P.L. 108-446). Originally named the Education for All Handicapped Children Act in 1975, the law was renamed in 1990 as the Individuals with Disabilities Education Act (IDEA) (Cawthon & Cole, 2010). IDEA “ensures that all children with disabilities are entitled to a free and appropriate public education to meet their unique needs and prepare them for further education, employment, and independent living” (American Psychological Association, 2016). Specifically, IDEA governs how schools, and other public/state agencies, provide special education and related services to children and youth with documented disabilities (U.S. Department of Education, 2017).

As part of the Individuals with Disabilities Education Act (IDEA), postsecondary transition planning services are required for all students with a disabilities once the student reaches the age of 16, or younger, as determined by individual states. The major reauthorizations of IDEA have occurred in 1997 and 2004 (Kohler & Field, 2003). The

most recent reauthorization of IDEIA, the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA 2004), yielded notable changes specifically related to postsecondary transition planning mandates. Section 602 (34) of H.R. 1350: IDEIA 2004 outlines mandated components of *transition services*, which are activities for students with documented disabilities that are:

- (d) Designed to be within a results-oriented process, focusing on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;
- (e) Based on the individual child's needs, taking into account the child's strengths, preferences, and interests; and
- (f) Include instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and when appropriate, acquisition of daily living skills and functional vocational evaluation (20 U.S.C. 1401(34)).

### **Main transition considerations**

According to Shaw, Madaus, and Dukes (2010), the primary postsecondary transition considerations for IDEIA 2004 include: 1) Age for beginning the transition planning process, 2) Assessment, eligibility, and reevaluation; and 3) Components of the individualized education program (IEP).

According to IDEIA 2004, postsecondary transition planning must be initiated no later than when the student turns 16 years of age, although transition services may be provided earlier if deemed necessary by the IEP team and updated annually (U.S. Department of Education, 2017). Individual states have the option of mandating that transition planning begin prior to age 16 for students with disabilities. According to Martin, McConnell, and Mays (2011), 60% of states require transition education practices to begin two to three years earlier than the federally required age of 16. Research suggests that starting transition services as soon as eighth grade is beneficial to students with disabilities, particularly those that are college-bound. This would allow students to be able to choose a course of study that will make them competitive for college admissions, as well as have ample opportunities to gain self-awareness related to their disability, and develop compensatory strategies that are key to being successful at the collegiate level (Brinkerhoff, 1996; Shaw et al., 2010).

In terms of assessment, eligibility, and reevaluation, under IDEIA 2004, the student's IEP team must consider if the student continues to meet eligibility for a disability to receive special education services (U.S. Department of Education, 2017). Under IDEIA (2004), a full psychoeducational re-evaluation is not required, and members of the IEP team can utilize other data and clinical judgment to determine if the student is still eligible (Shaw et al., 2010). Regardless if the student undergoes a full re-evaluation, the school district must provide a summary of performance (SOP) prior to the student exiting high school due to graduation or to exceeding the age for services in their state. The SOP includes information on the student's academic achievement, functional

performance, and recommendations for helping to meet the student's postsecondary goals (Wrightslaw, 2010).

Finally, a student's IEP is a key component of the postsecondary transition planning process. An IEP is a written document that is developed, reviewed, and revised by a team and includes a statement of the student's present levels of academic achievement, measureable annual goals, short-term objectives, special education and related services/accommodations provided, and projected date for the beginning of postsecondary transition services (U.S. Department of Education, 2017). Essentially, "the IEP document becomes [once the student is of age to begin transition services] the blueprint for service delivery and for transition planning" (Brinckerhoff, 1996, p. 125). In accordance with IDEIA 2004, a student's IEP must include appropriate, measurable (i.e., includes a timeline for completion and mastery criteria) postsecondary goals based on age-appropriate transition assessments. According to Sitlington and Payne (2004), transition assessment is defined as the process of collecting data on the student's needs, preferences, and interests as they relate to their current activities and postsecondary transition goals. Specifically, transition assessments are used to identify appropriate instruction, supports, and services that assist in the transition from school to post-school life. Transition assessments can be categorized into three main groups: formal, informal, and alternative/performance-based (Thoma & Tamura, 2013). Formal, or standardized, assessments may include standardized cognitive and achievement tests, aptitude tests, and measures to assess students' adaptive functioning. Informal methods may include semi-structured interviews with the student and their parents/guardians, as well as transitional planning inventories, such as the Transition Planning Inventory, to collect data on the

student's interests and goals after high school. Developing a portfolio that includes a variety of information including student work samples, copies of evaluations, resumes, and student self-evaluations, is an example of an alternative/performance-based assessment.

### **Changes in transition law**

The two major reauthorizations of IDEA have occurred in 1997 and 2004 (Kohler & Field, 2003). Each reauthorization has provided more specific and proactive regulatory changes in the transition planning mandates, continually attempting to promote optimal post-high school outcomes for students with disabilities. For instance, upon the enactment of IDEA in 1990, it is required that the student's IEP include a specific statement of needed transition services, and students' interests, preferences, and needs be considered throughout the postsecondary transition planning process. The 1997 amendment of IDEA expanded on this focus of providing quality transition planning by requiring that transition services, including the student's course of study, be listed on their IEP when the student reaches age 14. These legislative changes placed an emphasis on tailoring a student's education to their postsecondary aspirations (Kohler & Field, 2003). The most recent 2004 reauthorization of IDEIA has further expanded on the above legislative addendums related to transition law. These changes have significant implications for transition planning in high schools.

The U.S. Department of Education (2011) outlines several significant changes in IDEIA (2004) from the previous 1997 reauthorization related to requirements for postsecondary transition planning. First and likely the most essential, the definition of transition services has been changed from an *outcome*-oriented process, to a *results-*



oriented process as of the most recent 2004 reauthorization of IDEIA. In a results-oriented transition planning process, districts must engage in data-driven decision-making to prepare for postsecondary success, including collecting and reporting data related to transition planning activities occurring in their district. The language change of transition planning needing to be a *results*-oriented process reflects the shift to a larger focus on attainment of academic and functional achievement and explicit goal-setting based on transition assessment, ultimately to promote optimal student outcomes after high school (National Center on Special Education Transition, 2007). Another major change according to IDEIA 2004 related to transition planning is that IEP transition goals need be relevant and measurable, and developed based on appropriate transition assessments related to training, education, and employment, as well as the student's subsequent courses of study. Relatedly, another change is that the purpose of IDEIA 2004 now includes preparing children with disabilities for post-secondary education, in addition to employment and independent living. Furthermore, according to IDEIA 2004, transition services as part of the IEP are required to begin when the student reaches age 16, whereas prior to the 2004 reauthorization, these requirements began when the student reached 14. However, IDEIA (2004) states that transition-planning process may begin sooner. The literature suggests that starting transition services earlier may be beneficial, as curriculum decisions such as course level and areas of study can affect a student's eligibility for college admission, as well as their preparation for college-level work (Shaw et al., 2010). Another major change under IDEIA 2004 is that school districts are no longer required to conduct formal standardized testing as part of the re-evaluation process to determine if the student continues to qualify for special education services. Instead, schools must provide a

summary of the student's academic achievement and functional performance, (Summary of Performance, SOP) including recommendations on how to assist the student in meeting the student's postsecondary goals before the student exits high school. This has important, and potentially problematic implications for students with learning disabilities going to college, as a student may not have received testing in several years, but many colleges and universities, as well as standardized testing agencies, require that testing which confirms the presence of a disability has been conducted in the past three to five years to be eligible to receive accommodations.

In summary, changes made in IDEIA (2004) mandate that schools engage in data-driven decision-making to optimize post-high schools outcomes for students with disabilities, including pursuit of postsecondary education. However, since the age of eligibility to receive transition services has increased, and psychoeducational re-evaluations are no longer required, schools need to be engaging in transition planning practices that help their students with disabilities be adequately prepared for the college environment.

### **Legal differences between high school and college**

The Individuals with Disabilities Education Improvement Act of 2004 also mandates that schools inform students with disabilities of their postsecondary rights, no later than one year before the student reaches the age of majority (U.S. Department of Education, 2017). This is an important component of transition planning, as the rights of students with disabilities dramatically change after leaving high school, and the regulations outlined by IDEIA 2004 are no longer applicable in the postsecondary setting (Gil, 2007; Shaw et al., 2010).

One major difference between high school and college is that parents/guardians are no longer legally involved in the educational decision-making process once a student reaches the age of 18 (Kosine, 2007). Instead, it is the sole responsibility of the student to self-identify as a student with a documented disability with their college/university disability services office if they are seeking accommodations and services. Thus, as opposed to high school in which the school district is responsible for identification of a potential disability and providing relevant services, students with disabilities must be their own advocates for their academic needs to be successful in a college setting. Further, although colleges are required to provide students with disabilities with reasonable academic adjustments to ensure *access* to instruction and programming, as outlined by Section 504 and the Americans with Disabilities Act, college students with disabilities are no longer afforded with the same guarantees that they were in high school. For example, students no longer have an IEP to ensure an appropriate education and related services, or an IEP team to ensure that accommodations and services are being provided (Newman et al., 2011). Additionally, according to Shaw et al. (2010), colleges and universities are not required to alter curriculum in any way, or waive major/course requirements, regardless of the nature of the student's disability. For instance, if a student has a language-based learning disability, they may not receive an exemption from a foreign language course if it is a necessity toward their major. Further, students can be denied accommodations that are considered unreasonable or irrelevant to the student's disability. Thus, post-secondary institutions are only required to provide students with disabilities an equal *opportunity* to learn, not necessarily to ensure equal academic *performance* results of their non-disabled peers (Cawthon & Cole, 2010). Therefore,

students with disabilities must be prepared to function independently at the college level, and that explicit preparation needs to begin prior to entering college.

### **Assessment of Transition Planning Practices**

As part of the 2004 reauthorization of IDEIA, the U.S. Department of Education mandated that individual states must develop six-year performance plans (State Performance Plans, or SPPs) beginning in 2005. The SPPs are to be developed around 20 various indicators of school success, and data is collected and submitted on an annual basis via Annual Performance Reports (APR) (National Secondary Transition Technical Assistance Center, 2016). Indicator 13, Secondary Transition IEP Requirements, assesses the percent of youth (100% as a target percentage) with documented disabilities aged 16 and above with IEPs that include the following components/guidelines: (a) Measureable postsecondary goals; (b) Updated Annually; (c) Based on age-appropriate transition assessments; (d) Transition services/activities, including courses of study; (e) Annual IEP goals reflective of transition needs; (f) Student invitation to the IEP meeting; and (g) Outside agency invitation, with prior consent. The National Secondary Transition Technical Assistance Center (NSTTAC) and the Office of Special Education Programs (OSEP) of the U.S. Department of Education developed an Indicator 13 Checklist, which provides states and school districts with a resource for data collection and use. Although states use a variety of checklists to measure Indicator 13 data, including the NSTTAC I-13 checklist, 30% of states did not report what checklist was used as their data source as of 2013-2014. (NSTTAC, 2016). According to data collected by NSTTAC (2016), as of the 2013-2014 federal fiscal year, state averages in compliance to IDEIA ranged from 48% to 100%, with a mean of 90%; a 10% increase in the mean from 2009-2010.

Although 33 states (55%) showed progress with performance in compliance, only seven states (12%) reported 100% compliance to IDEIA for Indicator 13. These findings suggest that although states may be making progress in terms of compliance to IDEIA transition planning mandates, a large majority is still not reaching full compliance. Additionally, states may not be using valid, evidence-based methods for collecting compliance data.

The research examining quality of transition planning practices suggests that transition planning practices in high schools may not be in compliance with IDEIA mandates, nor adequate in helping to prepare students with disabilities succeed in postsecondary education programs. A study conducted by Hitchings, Retish, and Horvath (2005) showed that students' interest in attending postsecondary education as stated on their IEPs declined from 77% to 47% between 10<sup>th</sup> and 12<sup>th</sup> grade. Further, students who expressed an interest in postsecondary education were not enrolled in college preparatory courses, and only 3% of students had 4-year IEP plans leading to postsecondary education. It may be important to note that given the time in which this study was conducted, these findings may not necessarily be reflective of the systems-wide changes school districts may have made to their transition programming in response to the IDEIA (2004) reauthorization. However, these results provide evidence for the need for adherence to IDEIA (2004), given the lack of adequate planning as evidenced by student IEPs. In a meta-analysis conducted by Powers (2005), previous research studies that have examined the quality of transition planning according to information stated on student's IEPs, found that there are limited specific goals and objectives made to help students reach their primary post-high school goals. Powers (2005) also found that although

postsecondary education was listed as a primary transition goal on nearly 50% of transition plans, the greatest number of actions steps, or specific activities related to the student's goal, and the highest implementation of those steps to meet those goals were associated with vocational goals. Thus, there may be a bias toward moving students with disabilities toward vocation as a postsecondary goal rather than college. Overall, over a third of the transition plans did not include action steps, and only 6.4% of the goals included accommodations and supports necessary for the student to reach their primary goal. It is important to note that the studies included in Powers's (2005) meta-analysis are also outdated, with a majority of them being conducted over 20 years ago. These findings not only further support the need for better transition planning practices in secondary schools, but they also call for updated research on quality of transition planning in response to the IDEIA (2004) reauthorization, which places more emphasis on goal-oriented, comprehensive, and data-driven transition planning for students with disabilities.

The research that has been done related to compliance to IDEIA (2004) shows that IEPs may not be fully aligned with federal mandates on postsecondary transition or reflecting best practices. In a study conducted by Landmark (2009), the researcher wanted to examine the extent to which IEP documents showed compliance to components of transition planning according to IDEIA (2004), as well as evidence of best practices related to postsecondary transition planning. The five IDEIA (2004) components included (a) who was invited and contributed to the meeting (i.e., IEP Team), (b) whether timelines regarding implementation of transition services were met (i.e., Timelines), (c) whether the postsecondary goals were present and measurable, or

included a timeline for completion and criteria for mastery (i.e., Postsecondary Goals), (d) whether the annual goals were measurable and supportive of the postsecondary goals (i.e., Annual Goals), and (e) whether the different components of transition services were addressed, including instruction/course of study, related services, community experiences, development of employment and other post-school adult living objectives, acquisition of daily living skills, and provision of functional vocational evaluation (i.e., Transition Services). The eight best practices for postsecondary transition in the study included community/agency collaboration, paid or unpaid work experience, parent/family involvement, employment preparation program participation, general education inclusion, social skills training, daily living skills training, and self-determination training. The researcher used an instrument designed to assess the above components and best practices among 212 IEPs. Results showed that the mean level of compliance according to the IEPs for each of the five IDEIA (2004) components ranged from 68% to 88%. However, the level of *full* compliance for each component ranged only from 22% to 56%. The component that was in most compliance on the IEPs included IEP team (56.60%), with Annual Goals being the component in which there was least compliance (22.64%). The researchers also calculated overall compliance, or 100% of compliance for all of the components in an IEP. With a maximum score of 5 for the overall compliance, the mean score was 2.03. These findings suggest that overall, schools are not fully complying with transition planning mandates in accordance to IDEIA (2004). With regard to best practices, daily living skills training was the most evident in the IEP documents (92%), followed by employment preparation (76%), social skills training (77%), family involvement (72%), community/agency collaboration (59%), general education inclusion

(46%), paid or unpaid work experience (40%). Finally, self-determination skills training was apparent in only 30% of the IEP documents. These findings suggest that schools need to be engaging in more comprehensive transition-planning practices, with a particular need to address family involvement and self-determination skills training; two key areas that help yield positive post-school outcomes for students with disabilities.

In a follow-up study conducted by Landmark and Zhang (2012), the researchers utilized the Landmark (2009) instrument and also examined the extent to which IEP documents showed evidence of compliance to IDEIA (2004) and best practices in transition, as well as the relationship between compliance and best practices. Landmark and Zhang (2012) found that only about one quarter of the IEPs addressed all of the required components of transition planning mandates in accordance with IDEIA 2004. Further, only about one quarter of the IEPs indicated that a student received self-determination skill training, a critical skill for students with disabilities going to college. Not surprisingly, Landmark and Zhang (2012) reported a moderately high correlation between adherence to transition law and enactment of best practices for postsecondary transition planning. This indicates that schools that are adhering to IDEIA (2004) mandates may also be engaging in best practices related to postsecondary transition.

The results of these studies show that although basic compliance to federal transition law is an important part of ensuring quality of postsecondary transition planning, schools may not be doing this to the fullest extent. A critical, but missing research inquiry should include later student outcomes as they relate to the extent to which transition services in high school are in compliance with transition law and best



practices. For students with disabilities going to college, these later outcomes may be reflective of their academic performance their first year of college.

As noted throughout this section, the research on transition for students with disabilities is both limited and outdated. Therefore, there is a major need for updated research on assessment of transition planning practices that is reflective of IDEIA 2004, as the reauthorization has significant implications for transition planning, including data-driven decision making, to promote optimal post-high school outcomes for students with disabilities. Furthermore, given that most of the research in the field of transition has given less attention to college-bound students with disabilities, particularly those with learning disabilities (Janina & Costenbader, 2002), there is also a need for research that focuses specifically on students with disabilities going to college, as this population has different transition needs in terms of skill development related to academics and self-management.

### **College Readiness for Students with Disabilities**

Besides the legal differences between high school and college regarding the federal laws that students with disabilities are protected under, there are other significant differences between secondary and postsecondary settings that yield essential implications for students with disabilities (Brinkerhoff, 1996; Janiga & Costenbader, 2002; Vess, 2007). First, there is much less direct instructor contact and opportunity for one-on-one assistance in college compared to high school. In high school, students may have contact with their teacher every day of the week, while in college, classes typically meet between one, and three times a week. College students are required to dedicate considerably more time outside of the classroom to study and learn material on their own.

Further, larger class sizes in college can also prevent students with disabilities from receiving the individualized attention they may have had in high school. Additionally, college courses typically include long-range assignments compared to short-term assignments and frequent opportunities to improve one's grade as experienced in high school. For example, while students may receive a grade at the end of every chapter or unit covered in high school, a college student's grade for a course may be based only on midterm and final exams. One of the more major differences between high school and college is that the college environment requires students to function independently, as they have more unstructured time and less supervision by parents and teachers to make sure they are getting work done and are able to balance academia and non-curricular activities (e.g., daily life skills, involvement in clubs, time spent with friends). Together, these significant differences between the secondary and postsecondary levels can yield difficulties for students with learning disabilities, as they are less likely to receive consistent feedback from instructors, and are required to engage in a high level of self-management to be successful.

Research in the field of postsecondary transition suggests that students with disabilities are not being adequately prepared during high school to meet the increased demands of a college setting (Cawthon & Cole, 2010; Hamblet, 2014; Martin & Williams-Dieham, 2013; Newman et al., 2011). Specifically, research suggests that students with disabilities are not prepared in terms of academic skill development, as they spend less time in general education courses, and are less likely to enroll in college prep courses that would prepare them for the increased academic rigors within the college setting (Gregg, 2007; O'Brien, 2011). Furthermore, research in the field suggests that

aside from skills in reading, writing, and math, students with disabilities often lack skills that may be equally important, if not more important than academic skills; self-awareness and self-determination/advocacy. In a Delphi study conducted by Milsom and Dietz (2009), a total of 17 participants who were experts in the fields of special education, school counseling, college disability services, and academic affairs, were asked to operationally define college readiness specifically for students with learning disabilities. Results showed that academic skills (i.e., reading, writing, basic math skills), as well as development of positive personal characteristics (i.e., confidence, persistence, resilience, self-discipline), and self-knowledge regarding one's disability were equally weighted in terms of importance for college readiness for students with disabilities. Additional research in the field has supported the importance of college readiness for students with disabilities as a holistic, multifaceted construct and including mastery of skills in academics, self-management (i.e., time management, organization, motivation, etc.), and self-advocacy (Hamblet 2014; Kohler & Field, 2003; Vess, 2007). Foley (2006) asserts that the combination of decreased academic support and the need for increased independence in the college setting, as opposed to the high school setting, tends to result in frustration and poorer outcomes among students with disabilities, even for those who may have experienced success in high school. Thus, students need to be prepared for the increased academic rigors of college (e.g., writing a college-level research paper), while also be equipped with the self-management tools necessary to succeed in the collegiate environment (e.g., employing effective time-management strategies).

Although the above review suggests that students with disabilities tend to be ill-equipped to succeed in the college environment and tend to demonstrate poorer academic

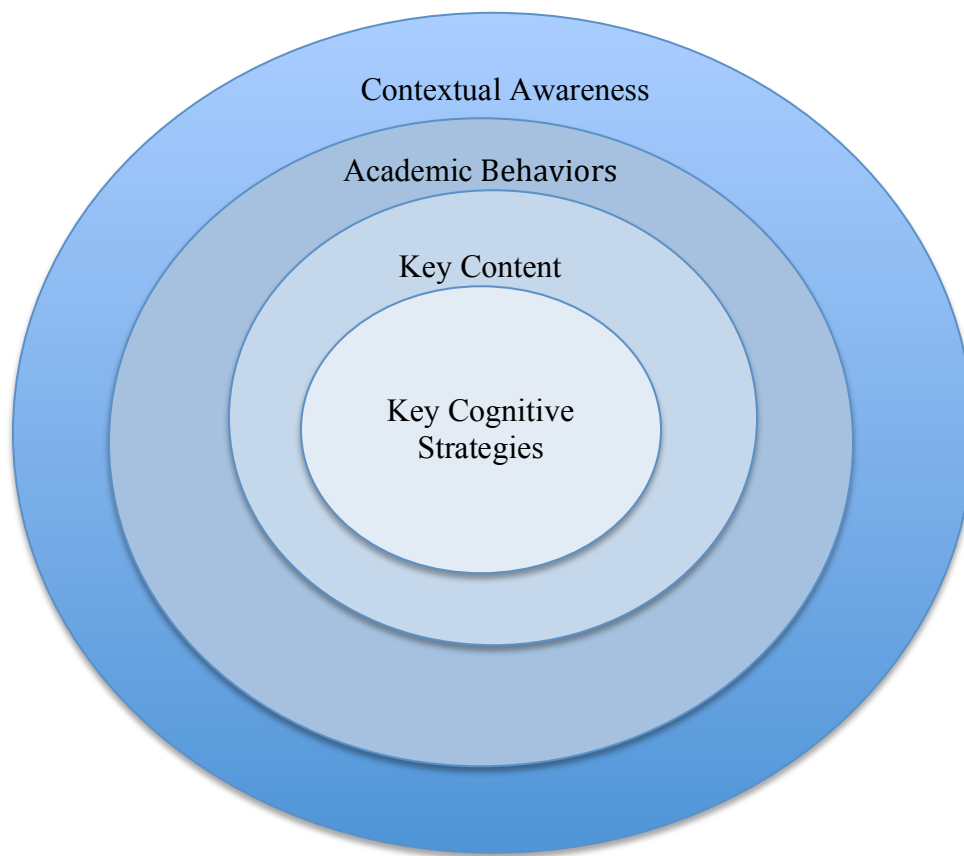
skills development compared to students without disabilities, a study conducted by Vogel and Alderman (1992) showed that students with learning disabilities who were provided with special academic advising in preparation for college were comparable in graduation rates, to their non-disabled peers. Additionally, these students with disabilities actually had higher GPAs upon graduation from college, and had lower academic failure rates. It was notable that the students with disabilities also took longer to complete their degrees, as they took a reduced course load. The findings of this study show that providing students with support may yield positive educational outcomes for students with disabilities in college.

Conley (2007) developed an ecological model of college readiness for students with disabilities, illustrating how readiness is a multifaceted concept (Refer to Figure 1). The four key areas shown in the model include key cognitive strategies, key content, academic behaviors, and contextual skills and awareness. First, key cognitive strategies that are often required at the college level include problem solving, engaging in research to seek out, analyze, and compare and contrast information, engaging in well-reasoned argumentation, interpreting information, and reaching conclusions. As opposed to high school, where students oftentimes regurgitate information, college students are required to engage in critical, higher order thinking. Second, key academic content that should be explored at the high school level to best prepare for the variety of courses often required at the college level include English, math, science, social studies, world languages, and the arts. Furthermore, Conley (2007) suggests that in addition to content knowledge, students with disabilities who are entering college need to develop effective academic behaviors and other compensatory strategies, including self-management. This includes

developing good time management (e.g., use of calendars, to-do lists, prioritizing study time, etc.), stress management, task prioritizing, employing campus resources, taking class notes, and communicating with instructors and advisors. Finally, given that the high school and college environments pose drastic differences, students with disabilities must also have contextual knowledge associated with an acculturation to college, including applying for financial aid, having knowledge of the norms of the academic culture and how to appropriately interact with professors and peers/roommates, and becoming involved in the campus community.

Figure 1

*Conley (2007) Ecological Model of College Readiness*



College readiness for students with disabilities encompasses essential skills from self-advocacy to time management, all of which are necessary for this population to succeed in college. Preparedness for students with disabilities going to college needs to be multifaceted, deliberate, and targeted toward the specific needs of the student. Implementing evidence-based practices for transition planning can help this population be better prepared for success in postsecondary education.

### **Predictors of college achievement for students with disabilities**

Several “pre-college” and “at-college” predictors have been identified as critical factors in determining success at the college level (Fike & Fike, 2008; Gifford, Briceno-Perrriott, & Mianzo, 2006; Mamiseishvili & Koch, 2011). At-college predictors include classroom experience, academic advising, involvement in extracurricular activities, financial aid availability, and faculty involvement. Pre-college predictors include internal student characteristics, standardized test scores (e.g., ACT/SAT), high school grades, study skills, academic skill development, SES, and parent’s level of education. Shapiro, D., Dundar, A., Huie, F., Wakhungu, P., Yuan, X., Nathan, A & Hwang, Y., A. (2017) found that Black and Hispanic students are less likely to complete their postsecondary degrees compared to White and Asian students. However, research shows that minority students are more likely to attend low-funded high schools with less academic supports, widening the achievement gap between minority and White students, both at the secondary and postsecondary levels. Fletcher and Tienda (2017) found that quality of high school attended is a meaningful predictor of GPA within a student’s first year of college, even when controlling for other factors such as high schools grades, test scores, and class rank. Quality of high school would have clear implications for the

students with disabilities preparing to attend college, particularly for students of color, as schools may not have the resources to enact quality transition planning practices for this population, such as adequate staffing, availability of AP courses, or transition-planning programming (e.g., college fairs).

According to Kuh, Cruce, Shoup, and Kinzie (2008), there are a myriad of factors other than traditional indicators of student success (ACT/SAT scores and high school grades) that influence students' achievement in college. These include, but are not limited to, student background, institution type, social interactions, student's perceptions of the learning environment, and the quality of effort made towards their academics. For example, in their study, Kuh et al. (2008) examined how student engagement (e.g., time spent studying, time spent in co-curricular activities) during the first year of college impacted GPA and retention for the second year, as well as the mediating effect of engagement on GPA and retention when student characteristics (e.g., race and ethnicity) and prior academic achievement (e.g., ACT/SAT scores) were taken into account. Results showed that student engagement in educationally purposeful activities positively related to first-year GPA and persistence between first and second year of college. Although ACT/SAT mattered to first-year grades, once other college experiences were taken into account, they mattered significantly less. Further, student engagement in educationally purposeful activities had a significant effect on persistence, even when controlling for background characteristics, particularly for African American students.

The literature specifically examining students' with disabilities success in college also suggests that both pre-college, and at-college factors predict this population's performance at the postsecondary level. Although traditional predictors of college

success such as high school grades and SAT/ACT performance continue to be cited as effective predictors of college achievement for this population (The College Board Report 2002; 2012), research is suggesting that additional variables may play an even more significant role in contributing to the achievement of college students, particularly those with disabilities (Murray & Wren, 2003). These variables include academic and social integration to the college setting, Locus of Control, and extent of services received through university disability services.

According to Tinto's Social Integration Model, student's experiences at college have direct impacts on their institutional and goal commitment, and thus retention (DeDappo, 2009). Academic integration is defined as the student's satisfaction with his/her experiences with the academic systems at the college and their perceived intellectual development and growth. Further, it is the extent to which students view their interpersonal relationships with faculty and peers as promoting intellectual growth and development. Social integration is the interaction between the individual and the social systems of the institution, peer groups, faculty, administration, and extracurricular activities. It is the extent to which a student perceives others in the campus community as caring about them personally and having an interest in them. The more integrated students are academically and socially, the more likely they are to persist at the collegiate level. Research done by DeDappo (2009) suggests that social integration is particularly important terms of intent to persist for students with disabilities. The authors hypothesized that students with disabilities may rely on social support systems even more so than their nondisabled peers to help them persist through college. Results showed that level of social integration accounted for a significant amount of variance in predicting



intent to persist among college students with a learning disability, even when controlling for background characteristics. DeDappo (2009) suggested that these results have important implications for transition planning practices, specifically, that students should be developing self-determination skills in order to become academically and socially integrated while in college.

In addition to student engagement and integration to the college environment, research is also suggesting that other internal factors, such as Locus of Control, influence students' motivation and willingness to persist through college, which in turn, impacts achievement (Gifford et al., 2006). Locus of Control (LOC) refers to a person's belief about their control over life events, in which people with an internal LOC believe that their own actions yield outcomes (both positive and negative), while people with an external LOC believe that outcomes are determined by forces out of their control, such as luck or fate. In a study conducted by Gifford et al. (2006), college students with disabilities who scored low on the Adult Nowicki-Strickland Internal External Control Scale (ANS-IE) (i.e., "internals") had higher GPAs, while those who scored higher (i.e., "externals") had lower GPAs. Students who demonstrate an external LOC are less likely to rely on their own efforts and seek out the supports needed to succeed at college level. Thus, there is a need to emphasize personal responsibility for success, which involves promoting self-autonomy, self-determination, and self-efficacy among college students with disabilities.

Another potential predictor of achievement for college students with disabilities that has been cited in the literature is the level of services that students with disabilities receive through their university disability services office. While universities are required

by the American with Disabilities Act to provide accommodations to students with disabilities who are deemed qualified to receive them, the level of support for students with disabilities across universities can vary, from providing minimal accommodations (i.e., extended test time, alternate location for exams), to having individualized, regularly scheduled support with trained professionals (Shaw et al., 2010). See Table 1. Although research suggests that use of some accommodations can predict achievement among college students with disabilities (O'Neill, Markward, & French, 2012), this particular population may also benefit from comprehensive, individualized support at the college level. In their longitudinal study, Troiano, Liefeld, and Trachtenberg (2010) hypothesized that college students with a learning disability who consistently attend academic support centers that provide comprehensive support to receive help with academic skill development and study strategies have higher academic success (i.e., higher GPA) than those who attend less often or not at all. Results showed that participants who attended more than 50% of their appointments had higher GPAs, with majority of students earning over a 3.5 GPA. Those that attended fewer than half of appointments had GPAs between failing-2.5, most earning GPA of 1.5 or lower.

Table 1

*Continuum of University Disability Services Support*

Decentralized services	Loosely coordinated services	Centrally coordinated services	Data-based services
Disability contact person may have multiple responsibilities	Disability contact person	Full-time disability coordinator	Full-time program director; assistant director; additional staff
		Services located in Office for Students with Disabilities or other on-campus site	Services located in Office for Students with Disabilities
Basic services as mandated under Section 504	Generic 504 support services and accommodations	Full range of accommodations	Full range of accommodations
Few formal policies	Procedures in place for gaining access to services	Policies and procedures in place	Comprehensive policies and procedures
	Peer tutors available for all students	Emphasis on student self-advocacy	Emphasis on student self-advocacy
	Students referred to other on-campus services (e.g., counseling and/or career services, residential life)	Assistive technology may be available	Assistive technology available
		Specially trained disability specialists may be available	Individualized support plan available

From McGuire, J.M., & Shaw, S.F. (2005). Resource guide of support services for students with learning disabilities in Connecticut colleges and universities (p. 6). University of Connecticut, Center on Postsecondary Education and Disability, as cited by Shaw, S.F., Madaus, J. W., & Dukes III, L.L. (2010). *Preparing students with disabilities for college success*. Baltimore, MD: Paul H. Brookes Publishing Co.

When assessing predictors of achievement for students with disabilities at the college level, traditional predictors of success, including IQ, SAT/ACT, and previous achievement may not be sufficient predictors of success for students with disabilities in college (Murray & Wren, 2006). Though limited, research suggests that other factors

including student background, level of student engagement, Locus of Control, and extent of university support, impact the extent to which students with disabilities are successful at the postsecondary level. Given that many of these factors should be addressed prior to students attending college, there has been a call for research in transition planning at the secondary level as a possible predictor of academic success for students with disabilities (Benz, Lindstrom & Tovanoff, 2002; DeDappo, 2009; Test, Mazzotti, Mustain, Fowler, Kortering, & Kohler, 2009). However, there are currently no studies to assess quality of transition planning as predictor of college success for students with disabilities.

Examining the relationship between transition planning practices in high schools and postsecondary outcomes for college students with disabilities is critical for understanding the importance of providing quality transition planning for this population.

### **Best Practices in Postsecondary Transition Planning**

According to Greene (2003), best practices in transition can be defined as “a number of specific recommendations for facilitating successful movement from school to adult life for youth with disabilities” (p. 155, as cited by Landmark, 2009). For students with disabilities attending college, these specific recommendations should aid students in a smooth and successful transition to postsecondary education.

Although Kohler’s (1996) Taxonomy for Transition Planning is not specifically designed for students with disabilities going to college, the taxonomy is a research-based and highly referenced model for best practices in transition planning to promote post-high school success for students with disabilities. This model highlights the need for comprehensive transition planning in five key areas (Kohler, 1996; Project10: Transition Education Network, 2016), (1) Student-focused planning; (2) Student development; (3)

Interagency collaboration; (4) Program structure; and (5) Family Involvement. Student-focused planning promotes self-determination, and uses assessment data to help the student develop postsecondary education or training goals. Specific practices include developing measurable and specific postsecondary goals in the IEP, ensuring that the student is involved in the planning process, and providing documentation of the student's interests and preferences. Student development emphasizes postsecondary skill development via school-and-work-based learning opportunities. Specific practices include self-determination skills training (i.e., goal setting and decision making), identification and development of accommodations, encouraging structured work experience, and providing academic, cognitive, and adaptive behavior as well as curriculum-based, assessments. Interagency collaboration facilitates involvement of out-of-school organizations, businesses and agencies that aid in transition planning processes. Specific practices related to interagency collaboration include collaboration between postsecondary education institutions and the school district, development of formal/contractual interagency agreements, and collaborative consultation between special, general, and vocational educators. Program structure refers to the organized and effective systems-wide delivery of transition-related services. Specific practices related to this component include providing education in the least restrictive environment, engaging in annual evaluation of interdisciplinary policy and procedures, and providing pre-service training on transition practices. Finally, family involvement facilitates collaboration among the student, their family, school personnel, and other service providers in effectively planning and delivering quality transition-related services. Specific practices include parent/family member attendance at IEP meetings, responding to the family's

needs, and providing training on transition-related planning processes, including their child's legal rights after high school.

Additional studies related to predictors of postsecondary success for students with disabilities that have been conducted in the past two decades (Test et al., 2009) support Kohler's (1993) taxonomy of transition planning. In a study conducted by Test et al. (2009), the researchers conducted a systematic review of the secondary transition correlational literature using quality indicators by Thompson et al. (2005) to identify in-school predictors of improved post school outcomes for students with disabilities. Sixteen predictor categories correlated with improved outcomes in areas of education, employment, and/or independent living. Eleven significantly correlated specifically with post school education outcomes. Four predictors significantly correlated with postsecondary education moderately (i.e., a priori studies with consistent significant correlations between predictor and outcome variable and data to calculate effect size), while seven predictors had a potential correlation (i.e., one a priori study, and/or two or more exploratory studies with significant correlations between predictor and outcome variable). Table 1 lists the above predictors and the associated level of correlation with postsecondary education outcomes. The table also provides definitions for these predictors developed via a follow-up a Delphi study conducted by Rowe, Alverson, Unruh, Fowler, Kellems, and Test (2015), to better operationally define the predictors identified by Test et al. (2009). The National Technical Assistance Center on Transition (NTACT) (2016) cites the predictors identified by Test et al. (2009) as research-based predictors of postsecondary success for students with disabilities in the areas of

education, employment, and independent living. Table 2 lists the predictors for postsecondary education.

Table 2

*Evidence-Based Predictors of Postsecondary Education Success*

<b>Predictor for Postsecondary Education</b>	<b>Level of Correlation</b>	<b>Operational Definition</b>
Inclusion in general education	Mod	Requires students with disabilities to have access to general education curriculum and be engaged in regular education classes with peers without disabilities.
Paid employment/work experience	Mod	Any activity that places the student in an authentic workplace and could include work sampling, job shadowing, internships, apprenticeships, and paid employment.
Transition program	Mod	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.
Vocational education	Mod	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.
Student support	Potential	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 postsecondary goals aligned with their preferences, interests, and needs.

Social skills	Potential	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).
Self-care/independent living	Potential	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 health care/wellness needs.
Self-advocacy	Potential	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.
Occupational courses	Potential	Individual courses that support career awareness, allow or enable students to explore various career pathways, develop occupational specific skills through instruction, and experienced focused on their desired employment goals.
Interagency collaboration	Potential	Clear, purposeful, and carefully designed process that promotes cross-agency, cross-program, and cross-disciplinary collaborative efforts leading to tangible transition outcomes for youth.
Career awareness	Potential	Learning about opportunities, education, and skills needed in various occupational pathways to choose a career that matches one's strengths and interests

The following best practices in transition planning for students with disabilities that will be included in the proposed study are derived from Landmark's (2009)



instrument on transition planning. The instrument includes eight transition-planning practices identified by Landmark (2009) that were taken from Kohler's (1996) taxonomy of transition planning, and are substantiated by additional research in the field-Community/agency collaboration; Paid/unpaid work experience; Parent/family involvement; General education inclusion; Employment preparation programming; Daily living skills; Social skills training; and Self-determination training. The literature included in these practice descriptions has been updated from Landmark's (2009) study and supports these practices for general transition. Table 3 outlines these best practices and associated publications, except for daily living and social skills training, as there was no literature specifically for transition planning to postsecondary education that addressed these two areas.

### **Landmark (2009) substantiated best practices**

#### *Community/agency collaboration*

Strong interagency collaboration between school-and-community-based professionals is essential for effective postsecondary transition planning for students with disabilities (Barr, 1995; Garrison-Wade, 2009; Levinson, 2004; Ulmer, 2005) . Specific to students with disabilities planning to attend college, collaboration with university disability service personnel is essential, as they can provide a perspective on how students and their families can best prepare for college life. In a qualitative study conducted by Elkins and Spearman (2005), disability services professionals reported that they are often given insufficient information they need to best serve their students with learning disabilities. Specifically, psychoeducational reports are often outdated and IEP reports are not specific enough to make decisions on if the student should receive

services, and if so, what accommodations would be appropriate. Collaboration with these professionals would help students better navigate the transition to college, and more importantly, may make the difference between the student receiving the services they need or going through college without any needed supports.

*Paid/unpaid work experience*

Although a majority of the literature on transition supporting the importance of encouraging work experience as a general transition practice, there is some research to suggest that work experience is beneficial specifically for students with disabilities going to college (Brinkerhoff, 1996; Vess, 2007). According to Vess (2007), postsecondary transition should include encouraging the student to engage in shadowing/work experiences, as postsecondary education transition goals should be made with knowledge of future career options.

There is also evidence to suggest that work-based experiences, which focus on school-community collaboration to promote vocational development, career awareness, and employee readiness for students in high school, may be beneficial for students with emotional and behavioral disorders. Work-based activities can include work experiences, school-based enterprises, service learning, and internships (Curtin & Garcia, 2011). Findings from a study conducted by Curtin and Garcia (2011) showed that high school students who participated in service learning and paid internships improved in terms of overall work performance, social skills, work conformance, and personal presentation. Improvements, particularly in the area of social competence, produced even greater significance for students who participated in service learning, indicating that this may be an effective intervention for this population at the secondary level. Although most of the

research on postsecondary education for students with disabilities focuses on students with learning disabilities, given the increase of students with disabilities seeking higher education, there may also be an increase of students with emotional and behavioral disorders going to college. Providing work-based learning experiences should be considered as part of the transition planning process for this population to promote positive academic and social-emotional outcomes.

#### *Parent/family involvement*

Research suggests that family involvement, specifically, parental involvement, in their child's transition planning process should be considered best practice (Kohler & Field, 2003). However, research also suggests that parents are often uninvolved in the transition decision-making process, as many families are not even aware that students with learning disabilities can attend 4-year-plus programs, let alone are educated on how to prepare for the application process and advocate for accommodations and services (Hamblet, 2014). Hamblet (2014) suggests that schools can promote family involvement by hosting a "transition night," and educating them about the college environment and services, including the change in their child's legal rights after high school, as well as inviting disability service personnel at the postsecondary level to the IEP meeting to help parents better understand the differences between high school and college.

#### *General education inclusion*

Research in the field of postsecondary transition suggests that students with disabilities planning on attending postsecondary education often do not take rigorous enough coursework necessary to prepare them academically for a college workload (Gregg, 2007; O'Brien, 2011). Specifically, according to Gregg (2007), students with

learning disabilities are less likely than students without disabilities to participate in general education courses, and are even less likely to take college prep courses that will ultimately help them adjust to the academic rigor when they enter college.

In a study conducted by Hitchings, Retish, and Horvath (2005), the researchers examined the prevalence of interest in postsecondary education among students with disabilities across two high schools and the extent to which rigorous, 4-year plans of study were being developed for students with disabilities who had a career goal requiring postsecondary education. The final sample included 110 IEPs, where student indicated an interest in community college or 4-year as a transition goal. In evaluating students' IEPs and final transcripts, results showed that although 77% of IEPs indicated an interest in postsecondary in 10th grade, this percentage dropped to 53% by 11th grade, and to 47% by 12th grade. Transcripts showed that the students who indicated an interest in postsecondary education in ninth grade changed to less rigorous, non-college-bound courses over four years, with only 5% of students actually enrolled in college prep courses and just over 4% spending a large majority of their academic day in the general education curriculum. Further, none of the students enrolled in language or computer-based courses. These findings suggest that despite an interest in pursuing college at a young age, they are not being encouraged to participate in courses that will prepare them to be successful in college, likely contributing to a decline in interest to go to college by the time the student reaches their senior year of high school. Hitchings et al. (2005) assert that it is imperative for transition planning to begin as soon as possible, and for professionals in transition to help the student develop solid 4-year academic plans, stressing general education inclusion, as well as college prep coursework.

### *Employment preparation programming*

Much of the research on postsecondary transition planning focuses on transition planning practices for students with disabilities in general. For those planning to move on to the work force upon graduating from high school, employment preparation is an obvious choice for helping the student be prepared to succeed after high school. However, some research also supports the importance of employment preparation programming for students with disabilities planning to attend 2-and-4-year colleges after high school (Levinson, 2004; Test et al., 2009; Vess, 2007). According to Vess (2007), career planning should be an integral part of the transition planning process for students with disabilities attending college. Although a student's interest in a particular career may change over the course of middle school and high school, transition assessment should help inform the student's future career interest, thereby informing a course of study and experiences that would aid in the student's preparation for a college major. Further, including other important stakeholders, such as Vocational Rehabilitation counselors, secondary vocational teachers, and career counselors in IEP meetings would be beneficial.

### *Daily living skills*

According to Landmark (2009), daily living skills training is shown to be best practice for transition planning for students with disabilities who need to learn skills for everyday life, including bathing, dressing, toileting, and eating. Although daily living skills has not been addressed in the literature as best practice specifically for college-bound students with disabilities, other important independent living skills, such as money

management, and doing laundry, are important skills to acquire before attending college (Child Mind Institute, 2016).

### *Social skills training*

Similar to daily living skills training, social skills training is shown to be a substantiated transition planning process when students demonstrate poor social skills. Although the literature on postsecondary transition planning for students with disabilities has not addressed the need for social skills training for this population, students with autism spectrum disorders and other developmental disabilities may greatly benefit from social skills training. According to Wolf, Thierfeld-Brown, and Kukiela-Bork (2009), as rates of students with disabilities attending postsecondary education has steadily been increasing, prevalence of students with an autism spectrum disorder on college campuses has also been increasing. Given that this population may have different needs from other students with learning, and other “invisible” disabilities, students with autism need to be prepared to navigate the college environment successfully. In addition to knowing how to appropriately interact with faculty and peers, a critical skill for college students with autism is learning how to become an effective self-advocate and learning how to best communicate their needs with professors and disability services personnel. (Child Mind Institute, 2016).

### *Self-determination training*

Self-determination can be defined as “knowing and believing in oneself, making decisions, and initiating action to reach goals” (Gil, 2007, p. 14), and is cited most in the literature as being one of the most critical skills for college students with disabilities to obtain in order to be successful in college. Self-determination also includes knowing

one's disability, being able to articulate associated strengths and weaknesses, and being able to communicate one's needs related to the disability, According to Vess (2007), given that students with disabilities are held to the same standards as their non-disabled peers, developing self-determination skills is critical for success in college, as students must be able to function separately from parents, teachers, and special education case managers who advocated and problem-solved for them in high school. Thus, students need to be able to develop skills sets including self-awareness and self-advocacy. Vess (2007) also suggests that students with disabilities gain at least a basic understanding of policies and procedures of their chosen college institution, including, but not limited to, reading a course catalogue and registering for classes, working with an academic advisor to schedule semester course loads, knowing specific requirements for their major, calendar dates for course withdrawal, policies on academic probation/dismissal, and policies on academic integrity/conduct (this may be particularly important for students with learning disabilities that struggle with writing, and may intentionally, or unintentionally plagiarize written work).

Despite the abundance of literature supporting the importance of self-determination training in promoting positive postsecondary outcomes (Barr, 1995; Brinckerhoff, 1996; Getzel & Thoma, 2008; Hamblet, 2014; Janiga & Costenbader, 2002; Martin & Williams-Diehm, 2002; Vess, 2007) research suggests that students with disabilities in college tend to lack self-determination and self-advocacy, key components for success at the postsecondary education level (Getzel & Thoma, 2008; Janiga & Costenbader, 2002). A study examining college administrators' perceptions of college readiness among students with disabilities found that this population often lacks self-

advocacy skills, come to college without much knowledge on the college environment and the level of academic expectations, and are less aware of their own strengths and weaknesses (Janiga & Costenbader, 2002). A study conducted by Getzel and Thoma (2008) sought to identify skills that effective self-advocates use to ensure they stay in college and obtain needed supports, as well as identify the essential self-determination skills to remain and persist in college. The researchers created focus groups using semi-structured interviews for data collection with 34 students with documented disabilities from 2 (38%)-and-4-year colleges (62%). The researchers coded for emergent themes. The main components of self-advocacy that the participants identified as critical to college success included: (a) problem-solving, (b) learning about oneself (and one's disability), (c) goal-setting, and (d) self-management. The themes of self-advocacy that the participants identified as important to staying in college and receiving supports included: (a) seeking services from DS office, (b) forming relationships with professors, (c) developing support systems on campus, and (d) gaining self-awareness and understanding of themselves to persevere. The results show that for the college setting, self-determination is largely related to the actions needing to be taken to seek out services and secure supports. Further, the participants indicated that would have preferred having knowledge of problem-solving skills, as well as resources for being successful as a student with a disability, while in high school, as gaining information on their disability came mostly from the Internet. These latter findings mirror results from a study conducted by Lightner, Kipps-Vaughan, Schulte, and Trice (2012), identifying when college students with disabilities seek services and why, as well as what their high school transition services were like. Participants were categorized in three groups: early



(registered with disability services at the beginning of their freshman year or during the summer before starting college- 19%); later freshman (by the second semester of their freshman year- 26%), and late (by the second semester of their sophomore year- 55%). By end of first semester of their sophomore year, the early group had higher GPAs and credits earned than either of the late groups. For the late groups, most participants reported that they sought services because of academic problems (i.e., failed tests, failed courses, being placed on academic probation). For both the later freshman and late group, four themes emerged regarding reasons for not seeking services earlier on: lack of time, lack of knowledge, wanting to establish an identity independent of their disability status, and feeling that things were going well/in denial that things not going well. However, lack of knowledge was most prominent by the late group, and interestingly, although the early group discussed high school personnel such as school psychologists, special education teachers, and guidance counselors as encouraging them to seek services in early on in college, participants in the late freshman and late groups did not mention high school personnel in encouraging them to seek services. Furthermore, only 10 of 23 students in the late group ever recalled attending an IEP meeting in high school, while all students in the early group recalled going to them and having transition preparation for college in high school. Other studies suggest that many students with disabilities in college have poor basic knowledge of their IEPs from high school and what transition services they received, a large majority reported not recalling ever having a discussion on how to seek services and accommodations before attending college (Cawthon & Cole, 2010). These findings indicate that there needs to be an increase of home-school collaboration, student inclusion in IEP meetings, awareness of postsecondary options,

and collaboration with disability services offices. The fact that over half of students interviewed were part of late group in the Lightner et al. (2012) study is evidence that high schools may not be adequately preparing students planning to go to college. Together, these findings suggest that students with disabilities are not being adequately prepared for the college setting. It is rather alarming that in these studies, a majority of students reported having little knowledge of their disability before entering college and were likely to seek out services only after experiencing academic problems. Thus, preparation at the high school level that at the very least provides students with knowledge on their disability and knowledge of differences in the college environment, as well as giving them ample opportunities to practice self-advocacy skills, is critical to helping students with disabilities be prepared for the postsecondary level.

Table 3

*Landmark (2009) Best Practices for College Students with Disabilities*

Authors	Comm. Collab.	Pd/Unpd Work	Parent Involve	Emp Prep	Gen Ed	Self-Determin.
Gil (2007)	X		X			X
Vess (2007)	X	X	X		X	X
Hamblet (2014)	X					X
O'Brien (2011)					X	
Hitchings et al. (2005)					X	
Gregg (2007)					X	
Milsom & Dietz (2009)						X
Getzel & Thoma (2008)						X
Janiga & Costenbader (2002)						X
Ulmer (2005)	X					
Elkins & Spearman (2005)	X					X
Kohler & Field (2003)	X		X			X
Barr (1995)	X					X
Brinckerhoff (1996)	X	X				X
Foley (2009)		X				X
Garrison-Wade (2009)						X
Levinson (n.d.)	X		X	X		X
Lighter (2012)	X		X			X
Martin & Williams-Diehm (2013)						X
Test et al. (2009)	X			X	X	
Shaw et al. (2009)	X					X
Siltington (2003)						X

### **Best practices for college-bound students with disabilities**

Although most of the above practices have been supported by the research on effective transition practices for college-bound students with disabilities, with the exception of daily living skills and social skills training, the literature includes other important considerations for best practice, as students with disabilities going to college need to adopt additional skill sets in order to succeed in a postsecondary education setting. In Vess's (2007) article on best practices in transition planning for students with disabilities planning to attend college, the author outlines additional postsecondary transition practices that are key in helping students with disabilities be prepared for the college environment. Much of the literature on postsecondary transition planning for college-bound students with disabilities support Vess's (2007) research-supported recommendations for best practice. Therefore, five additional best practices that are identified by Vess (2007) and additional literature as critical to helping students with disabilities prepare for transition to postsecondary education have been added to this literature review. The author includes the following five best practices; documentation, compensatory strategy development, assistive technology, college prep coursework, and student leadership. Table 4 outlines these best practices and associated publications.

#### *Documentation*

The literature related to best practices in preparing students with disabilities for college emphasizes the importance of ensuring that students have the appropriate documentation to be able to receive supports at the college level (Barr, 1995; Gill, 2007; Gregg, 2007; Hamblet, 2014; Shaw, Dukes, & Madaus, 2012; Siltington, 2003; Vess, 2014.). According to Siltington (2003), colleges and secondary special education are

moving different directions in terms of documentation requirements for students with disabilities, with secondary schools moving toward more informal methods for evaluating students' disability statuses, and colleges continuing to adhere to more formal, stricter standards for evaluating eligibility for services. Specifically, as of the 2004 reauthorization of IDEIA, school districts are no longer required to conduct a full reevaluation to determine if students continue to qualify for services (Madaus & Shaw, 2006). However, colleges and universities reserve the right to require full psychoeducational/neuropsychological evaluations that include standardized tests illustrating a student's cognitive functioning and academic achievement. For students wanting to attend college, they may not be able to receive services at the postsecondary level if the college does not consider them qualified for services because they have not had an updated evaluation in several years. Best practices indicate that students with disabilities should have comprehensive evaluation at some point in high school before graduation (Madaus & Shaw, 2006; Vess, 2007).

In addition to providing a comprehensive reevaluation, it is important to develop a quality Summary of Performance (Madaus & Shaw, 2006). Given that schools are not required to conduct exit assessments prior to a student's graduation from high school, IDEIA (2004) mandates that schools complete a SOP, which includes a student's academic achievement, functional performance, and recommendations on how to assist the student in meeting their postsecondary goals. There are several resources and examples of quality SOPs available to school professionals. The SOP, if developed over time with the student's transition team, can provide an excellent opportunity for the student to gain self-awareness of their own disability, areas of strengths and weaknesses,

and essential accommodations, modifications and assistive technology needs; information that will be helpful to inform accommodations and other needs once the student enters college.

*Compensatory strategy development*

In addition to academic skill development, and participation in a college prep curriculum, research suggests that students with disabilities should be taught specific learning management strategies to better prepare for the increased academic demands of the college setting (Barr, 1995; Conley, 2007; Elkins & Spearman, 2005; Foley, 2006; Hamblet, 2014; Haizazi, 1999; Janinga & Costenbader, 2002; Milson & Dietz, 2009; Trainin & Swanson, 2005; Vess, 2007). According to Trainin and Swanson (2005), students with learning disabilities could utilize metacognitive strategies to compensate for cognitive deficits to succeed in a college environment. Metacognition related to academics can be defined by three components: (a) active control over learning-related behaviors (i.e., when, how much, with whom), (b) self-regulation of motivation and affect, and (c) control over various cognitive strategies (Trainin & Swanson, 2005). In their study, Trainin and Swanson assessed whether college students with a Learning Disability (LD) use metacognitive strategies to compensate for cognitive processing deficits and how this influences their success in college compared to their nondisabled peers (NLD). Participants included 40 students, 20 with Learning Disability (LD), and 20 non-Learning Disabled (NLD) from four Southern California universities. Participants were given measures of phonological processing, as well as comparison measures on cognitive processing and metacognition. GPA was used as a measure of college success. Results showed that students with LD performed poorer than NLD students on tests of

cognitive processing such as word reading and speed of processing. Students with LD also indicated lower self-efficacy and perceived control, as well as higher test anxiety. However, students with LD reported a higher use of self-regulation strategies such as managing resources, time management, and peer learning compared to NLD students. Further, there was a significant correlation between strategy use and GPA for LD students, and students with LD with high strategy use had higher achievement than NLD students. Help-seeking behavior also yielded higher GPA for students with LD. The researchers concluded that students with LD tend to benefit more from high strategy use than NLD students, and that these findings have clear implications for school professionals working with students with disabilities in preparing them for success in college. Given that development of effective compensatory learning strategies could have a mediating effect on outcomes in college for students with learning disabilities, it is essential that they are given explicit instruction for applying these strategies in the classroom to best prepare for college coursework.

#### *Assistive technology*

An additional challenge for students with disabilities in terms of postsecondary transition is the barriers related to assistive technology (Sharpe, Johnson, Izzo, & Murray, 2005). Assistive technology is any piece of technology or equipment that helps someone to perform a task, such as writing, reading, walking, hearing, etc. According to Houchins (2001), assistive technology (AT) plays an essential role in the lives of students with disabilities, and can influence whether a student is able to receive an appropriate education in the least restrictive environment. It influences a student's communication abilities, mobility, learning abilities, and ability to participate in recreational activities.

Examples of assistive technology may include text-to-speech software, note-taking software, or audio recording devices. A Delphi study conducted by Houchins (2001) examined AT barriers to the secondary and post-secondary transition needs of students with disabilities. Study participants included 27 experts in the field of technology representing a variety of degrees including special education, engineering, counseling, and psychology. Statistically agreed-upon barriers included lack of follow-up once a student receives their AT equipment, lack of individual student awareness of where to turn for help, and lack of knowledge of AT among faculty. Four main themes were derived that would help combat these barriers for students in need of AT. These include increasing AT instruction, improving student self-determination, using best transition practices, and establishing an AT infrastructure (i.e., developing policy for AT access for students with disabilities transitioning from high school). These findings suggest that high schools need to better prepare students with disabilities for utilizing assistive technology in the college classroom, including how to advocate for use of AT with college faculty.

#### *College prep coursework*

Although the literature supports general education inclusion for students with disabilities in promoting optimal postsecondary outcomes, research specifically targeting college-bound students with disabilities suggests that inclusion in general education classes may not be sufficient in preparing this population for college. Students with disabilities need to plan to take college prep coursework in order to prepare for the increased academic rigors of college, particularly in terms of reading, writing, and math (Barr, 1995; Foley, 2006; Hamblet, 2014). According to Barr (1995), a high school



transcript that shows diversity in a variety of academic domains (i.e., science, math, history, literature, foreign language) is attractive for college admissions, and a course of study that reflect the student's interest in choosing a major will help them be prepared once in college (Hitchings, Retish, & Horvath, 2005).

A related, but important consideration is that waiving certain courses in high school due to the perceived level of difficulty is not beneficial for students with disabilities who want to pursue postsecondary education (Barr, 1995; Hamblet, 2014). First, eliminating certain courses limits the range of colleges students may select to apply, given that many colleges have competitive admissions requirements, regardless if the student has a documented disability. Additionally, at the college level, students with disabilities are not exempt from certain classes that are deemed necessary for their major. Taking college prep coursework is an excellent opportunity for students with disabilities to try out various accommodations, begin to wean off accommodations that may not be available in college (i.e., spelling exemption on written work), and develop effective compensatory strategies, such as creating study materials and listening to audio-recorded lectures.

### *Student leadership*

There is a breadth of research supporting the importance of students with disabilities developing self-determination skills in order to be successful after the completion of high school. Specifically, the research suggests that encouraging high student participation in the development of their IEP during postsecondary transition programming is a key method for the development of students' self-determination skills. However, the literature also suggests that student participation in IEP meetings is often

limited to student attendance, as opposed to student leadership of the meeting (Mason, Field, & Sawilosky, 2000; Martin & Williams-Diehm, 2013), where students are actively involved in the development their IEP. Therefore, there should be an important distinction made between student *participation* and student *leadership* in the IEP process, as student leadership best helps the student gain self-determination skills, vital for post-school success (Brinckeroff, 1996; Foley, 2006; Garrison-Wade, 2009; Lightner, 2012; Shaw, Madaus, & Benerjee, 2009).

In a study conducted by Mason, Field, and Sawilowsky (2004), survey responses from 523 general education and special education teachers, administrators, higher education staff indicated that students might not be actively participating during IEP meetings. Although the participants ranked student involvement in IEP development and teaching self-determination as very important, overall, they reported being dissatisfied with current instructional activities and perceived preparation to provide instruction in these skills. Further, participants rated student involvement in IEP meetings as minimal (46%), while only 5% reported that students provided input prior to the meeting. Despite the increased emphasis on providing quality transition services as per IDEIA 2004, less than 10% reported having a district-wide plan for teaching self-determination/self-advocacy skills. Furthermore, participants also expressed interest in more training. These findings illustrate two key issues. First, students may be invited to IEP meetings, but are not being active participants, let alone leaders in their own postsecondary transition planning. Second, school professionals may not be prepared to teach students with disabilities how to be leaders in this process. Therefore, there needs to be a greater focus on professional development in best practices related to transition, including teaching

students with disabilities to actively participate, and optimally, to lead their own IEP meetings.

As part of a study conducted by Cawthon and Cole (2010), the researchers examined the level of knowledge students with disabilities have regarding their disability, available services, and strategies for self-advocacy. Researchers gathered qualitative information from 110 undergraduate participants from large 4-year university via a survey with checklists and open-ended questions. Most of the participants reported that they were not sure how their diagnosis was made (70%), and less than 10% remembered covering academic goals, instructional strategies, and discussing their role in the transition planning process in high school IEP meetings. Even more alarming, 91% of students did not recall ever having an IEP, although all participants reported receiving accommodations for which IEP would have been necessary. Additionally, nearly half of the participants reported having no guidance on the college process as a student with a disability, such as contacting the disability services office. Only 2% reported that they had a discussion about how to communicate what services and accommodations were important for their success in college during their last high school IEP meeting. These findings suggest that overall, students with disabilities may lack basic knowledge of their IEP plans in high school, and are not being active participants in their own postsecondary transition planning process.

Research supports that programming targeted for increasing student leadership in the transition planning process is effective in increasing student involvement in the IEP process (Brinckerhoff, 1996; Foley, 2006; Gil, 2007; Lightner, 2012). For example, Martin, Van Dycke, Christensen, Greene, Gardner, and Lovett (2006) found that

compared to a control group, high school students with disabilities who received instruction from teachers using the *Self-Directed IEP* instructional program attended more IEP meetings, started and led more meetings, talked more, employed more leadership, and had a significant increase in their positive views on transition. Martin et al., (2006) suggest that despite the increase of student leadership after receiving explicit instruction, IEP meetings for the high school students continued to focus more on academic concerns, rather than focused discussions on transition issues. As an additional consideration, research suggests that the strongest predictors of student involvement in the IEP transition planning process include: goal-attainment skills; job competence; family interactions- democratic/non-controlling; family value of student engagement; and inclusion in general education curriculum while receiving special education services (Martin & Williams-Diehm, 2013).

Table 4

*Added College Best Practices*

Authors	Doc	College Prep	Student Leader	AT	Comp. Strategies
Hamblet (2014)	X	X	X	X	X
Vess (2007)	X		X		X
Gregg (2007)	X				X
Conley (2007)					X
O'Brian (2011)					X
Trainin & Swanson (2005)					X
Milsom & Dietz (2009)					X
Elkins & Spearman (2005)	X		X	X	X
Brinckerhoff (1996)	X		X		X
Barr (1995)	X	X	X		X
Foley (2009)		X			X
Garrison-Wade (2009)			X	X	X
Gil (2007)	X		X		
Janiga & Costenbader (2002)					X
Lighter (2012)			X		
Sharpe et al. (2005)				X	
Shaw et al. (2009)			X		
Shaw et al. (2012)	X				
Siltington (2003)	X			X	X
Mason & Field (2004)			X		
Madaus & Shaw (2006)	X				
Martin & Williams-Diehm (2009)			X		

## **Proposed Study Rationale and Research Questions**

Postsecondary education is considered a particularly important transition outcome for students with disabilities because of the positive impact of a college degree on outcomes in adulthood (Madaus & Shaw, 2006). However, research suggests that students with disabilities are often not prepared to succeed in the collegiate environment across a variety of domains, including academic skill development, self-management, and self-determination. Additionally, the literature in post-secondary transition suggests that high schools may not be fully complying with federal law on transition planning mandates. However, even compliance to law may not be enough to help promote success among students with disabilities post- high school (DeFur, 2003). Thus, schools should be engaging in additional research-based practices in order to best prepare students for the college environment. There appears to be a major discrepancy between students' interest in postsecondary education and relevant, specific, and goal-oriented transition planning practices that may aid that student in actually reaching that goal. These gaps in transition planning practices may be contributing to students' with disabilities lack of preparedness for college, including noncompliance with federal law related to postsecondary transition planning. Further, the literature on postsecondary transition planning and later postsecondary outcomes is also missing. This is problematic, as a research-based link between quality of transition planning and later outcomes for students with disabilities would have major implications for transition-planning stakeholders in secondary schools.

There has been an increase of literature on postsecondary transition for students with disabilities in attempts to identify predictors of post school success to inform

program design/best practices, ultimately to improve transition programming at secondary level (Test et al., 2009). However, research on how transition-planning practices impact students with disabilities attending post secondary education is very limited. More research could shed light on the impact quality of transition planning has on student's later outcomes in college. Thus, the purpose of this study is to build on existing research that examines compliance to IDEA (2004) transition planning mandates and current best practices in the field by specifically focusing on students with disabilities going to college, and more importantly, examining the relationship between quality of transition planning practices and later academic outcomes. These findings may have significant implications for secondary school professionals engaging in transition planning with students with disabilities and their families. The proposed study would address the following research questions:

1. What is the extent to which schools are following transition-planning mandates in accordance with the Individuals with Disabilities Education Improvement Act of 2004 for students with disabilities?
2. What is the extent to which schools are engaging in best practices (Landmark 2009) related to transition for students with disabilities planning to attend college according to their IEP?
3. What is the extent to which schools are engaging in college best practices related to transition planning for students with disabilities planning to attend college according to their IEP?

4. Is there a relationship between greater compliance related to IDEIA 2004 and best practices (Landmark, 2009), as well as college best practices with higher end-of-first-year GPAs for students with disabilities in college?
5. Is there a relationship between compliance to IDEIA 2004, best practices (Landmark, 2009), and college best practices and disability category and race for students with disabilities?



## **Chapter 3**

### **Methodology**

#### **Participants**

Participants included undergraduate students in their freshman, sophomore, junior, or senior year who are registered with a 4-year university disabilities service center and who identify as having any of the following documented disabilities that fall under the following four categories; Developmental (i.e., Autism Spectrum Disorder), Learning (i.e., Specific Learning Disability), Other Health Impairment (i.e., ADHD, or Mood Disorders), and Emotional Disturbance. The criteria for participant inclusion in the study are students who reported having an IEP as of their last academic year prior to graduation of high school, and who had graduated during or after 2004. This cutoff date was chosen because the IDEIA reauthorization of 2004 yielded significant changes in the mandates required for postsecondary transition planning for secondary settings.

#### **Transition-Planning Instrument**

The researcher used an adaptation of an instrument originally developed by Landmark (2009) to examine the extent to which IEPs reflect compliance to IDEIA, as well as best practices in transition-planning for students with disabilities.

The original instrument was developed by Landmark (2009), and is based on existing instruments measuring compliance and best practices as reflected in the transition component of IEP documents (i.e., Everson, Zhang, & Guillory, 2001; National Secondary Transition Technical Assistance Center [NSTTAC], 2006; Powers et al., 2005; TEA, 2007b, as cited by Landmark, 2009). Landmark's (2009) measure was piloted with three leaders in the transition field to assess content validity, as well as with a small

sample of IEPs to check for clarity of the questions. Items from the adapted instrument used for the current study are comprised of questions that contribute to three main variables; Compliance, Best Practices, and College Best Practices. The compliance variable was designed specifically to align with the changes made in the 2004 reauthorization of the Individuals with Disabilities Education Improvement Act relating to transition planning practices for students with disabilities. The items related to best practices were generated from an extensive literature review by Landmark (2009) and were based on Kohler's (1996) taxonomy of best practices in transition planning. The author added the College Best Practice variable and associated items to assess practices specifically for students with disabilities planning to attend college that are supported by research. Additional descriptive items related to the compliance and practice portions of the instrument, as well as student demographic information, is also included in the instrument.

A total of ten of the items from the original instrument were removed for the purposes of the current study, as some of the items from the original instrument were designed for the Texas public school systems, which had a unified IEP design at the time of the original Landmark study. The final instrument is comprised of a total of 69 items. See appendix A.

## **Current Study Variables**

### **Demographic variables**

Previous studies examining transition-planning practices have primarily included ethnicity and disability category as additional variables, and were included in the current study. Ethnicity categories include White, African American, and Other. Disability

categories include Developmental, Learning disorders, Other Health Impairment, and Emotional Disturbance. Other demographic variables that are presented include participant age and high school district type (urban, suburban, or rural).

### **Transition-planning variables**

The transition-planning variables include compliance, practices, and the added variable, college best practices, and all serve as independent variables in the model.

#### *Compliance*

The compliance variable, which is comprised of 23 questions, measures the five primary component areas according to the Individuals with Disabilities Education Improvement Act of 2004 transition requirements and include (a) attendance in IEP meetings, (b) timelines, (c) measurable postsecondary goals, (d) relevant annual goals, and (e) relevant transition services.

#### *Practices*

The practice variable, which is comprised of 10 questions, includes eight transition practices supported by research. The practices were derived from Kohler's (1996) taxonomy and Landmark's (2009) extensive literature review of best practices substantiated by research. The variables include community agency collaboration, family involvement, general education inclusion, paid or unpaid work experience, employment preparation program participation, social skills training, daily living skills training, and self-determination training.

#### *College best practices*

An added variable to this study, College Best Practices, which is comprised of 9 questions, includes five transition practices specifically for students with disabilities

planning to attend college that are supported by research. These five transition practices include documentation, compensatory strategy development, college prep coursework, assistive technology, and student leadership.

### **Dependent variable**

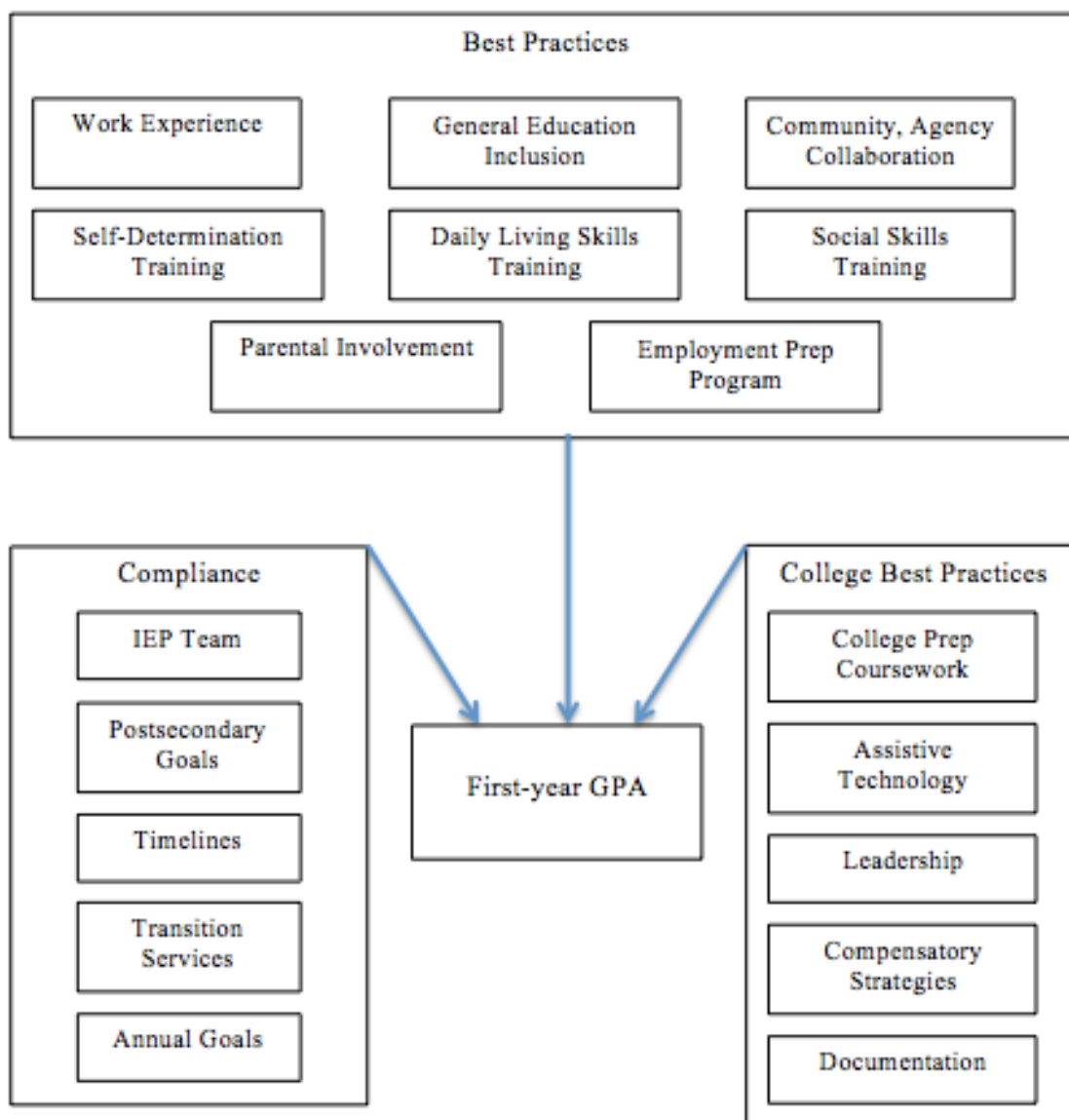
The dependent variable is student outcome as measured by end-of-first-year college grade point average (GPA) on a 4.0 scale. Research suggests that GPA is an appropriate measure of college success because it reflects adaptation to the college learning environment (Trainin & Swanson, 2005). The author obtained consent to view participant's transcripts to obtain GPA information, as opposed to participant self-report, to aid in maintaining internal validity of the study.

### **Design**

The current study analyzes the relationship between the quality of transition-planning practices as outlined in students' IEPs, and academic outcomes after the student's first year of college. See figure 2.

The researcher collected archival data by obtaining permission to review participant's high school IEPs and Summaries of Performance, as well as end-of-first-year college GPA. An advantage to this design as opposed to conducting a longitudinal study from high school students is that most studies that examine transition-planning practices in high schools have a limited sample from one or two school districts in the same area. By collecting data from college students, different high school districts are represented in the sample, thereby improving the generalizability of results.

Figure 2

*Conceptual Model of the Current Study*

## **Procedure**

### **Consent**

The researcher sent letters of request for conducting research to directors of university disability service centers across New York State, as well as national college disability center e-mail listservs. Follow up e-mails and phone calls were also made to recruit participating colleges. When universities replied indicating an interest in assisting with the data collection, the researcher provided letters requesting consent for the university disability service providers to distribute to students with documented disabilities who are eligible for, and receiving, services in order to gain consent to review their most recent IEP and Summary of Performance (SOP) documents from high school, as well as collect end-of-first-year GPA information. Refer to Appendices D and E to review the research request letters that were sent to university disability service directors and prospective participants. A total of three, 4-year, residential universities (1 urban, 1 suburban, 1 rural) agreed to participate in the current study. It should be noted that many of the universities did not respond to the researcher, or indicated that there was insufficient time and staffing to participate.

### **Data Collection**

After receiving consent, the researcher accessed participant's IEPs and SOPs from the student, disability services office, or their high school district, or via mail, e-mail, or fax. The researcher provided copies of the student's written consents to the high schools prior to obtaining any document. In most cases, the researcher needed to obtain students' SOPs from their high schools, as they did not include this piece of documentation when registering for their college disability services office. Each participant/IEP was given a

subject number, and identifying information on the IEP was concealed. Paper copies of IEPs were kept in a locked filing cabinet in the researcher's office.

The researcher utilized the instrument to examine the compliance and practice components of the IEP, marking '1' for 'yes' responses, and '0' for 'no' responses. For example, for the item, "Is the education/training postsecondary goal in the IEP measurable," if the goal was measurable, then the researcher marked '1', and if not, the researcher would mark '0.' The researcher also marked '1' for items that were not applicable to the student. For example, by law, schools are required to inform students and parents/guardians of the transfer of legal rights from parent to student upon graduation when the student reaches the age of 17. If a student was 16 years old at the time that the IEP was written, then the researcher would mark that item as '1.' Additionally, the researcher also marked '0' for items in which information was not available in the IEP, such as information on parental consent for outside agency collaboration. Values were inputted in an excel spreadsheet and summed for each of the compliance, best practices, and college best practices variables.

Descriptive information, such as student demographic data, was also inputted in the excel spreadsheet. Participating universities provided data on the student's end-of-first-year GPA, which was also inputted in the excel spreadsheet.

### **Data Analysis**

Data analysis for the current study was conducted in two parts. First, items that contributed to each of the compliance, best practices (Landmark 2009), and college best practices variables were summed and divided by the number of items that contributed to each variable, producing a percentage for each of the three variables ('Total Compliance,'

‘Total Best Practices,’ and ‘Total College Best Practices’). There were a total of 22 items that contributed to the compliance variable, 10 items for the practices variable, and nine items for the college best practices variable. Additionally, within each of the three variables, the researcher computed percentages for each of the sub-variables (five for compliance, eight for best practices, and five for college best practices) to determine how many IEPs were fully compliant for each of the sub-variables (e.g., every item for each sub-variable was scored ‘1’).

Next, the IEPs were grouped based on their level of compliance or best practice. An IEP that was 40-70% compliant was placed in the ‘moderately compliant’ group (n = 11), and 71-100% compliant was placed in the ‘highly compliant group’ (n = 8). For the best practices variable, IEPs that showed 30-49% of the practices were placed in the ‘low best practices group’ (n = 8) and 50-80% in the ‘moderate best practices’ group (n = 11). For the best practices college variable, IEPs that showed 0-30% of the practices were placed in the ‘low best practices college’ group (n = 10), and 31-60% in the ‘moderate best practices college’ group (n = 9). These percentages were determined by the researcher in order to create balanced groups for statistical analysis.

Once the grouping variables were created, the researcher conducted a one-tailed independent sample t-test to compare the mean GPAs between the two groups for each of the three variables, for a total of six t-tests. It was hypothesized that IEPs higher in compliance, as well as best practices and college best practices, would have higher mean GPAs. This analysis allowed the researcher to assess the extent to which IEPs low, moderate, or high in compliance and best practices were related to achievement in the



first year of college. A compare means analysis was also chosen because regression analysis was not statistically viable due to the small sample size.

This researcher also wanted to examine the relationship between race and disability category on student GPA, as well as any mediating effects of race and disability category on compliance and best practice on GPA, as previous research indicates that minority students have lower GPAs than White students, and studies on transition planning have included these variables in analysis. Information on race was obtained via the student's IEP. The researcher coded race ('1' = White, '2' = Non-White) and disability category ('1' = Autism, '2' = Other Health Impairment, '3' = Learning Disability, and '4' = Emotional Disturbance) and then entered the data in the excel spreadsheet. Race was collapsed into two categories to create a more balanced sample size across groups during analysis, as there were notably more White students compared to African American and Other. The researcher conducted a two-way factorial ANOVA to assess the relationships between race and disability category for each of the compliance and best practices variables, for a total of six ANOVA tests. Race and disability category were also computed into percentages and presented as descriptive data.

## Chapter 4

### Results

The current study examined the extent to which Individual Education Plans (IEPs) among college-bound students with disabilities reflect the transition planning mandates according to the 2004 reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA), best practices for transition planning identified through previous research (Landmark, 2009), and best practices specifically for college-bound students. The researcher used an adapted version of an existing instrument from Landmark (2009) to review the IEPs.

#### Participant Demographics

A total of three 4-year, residential universities (1 rural, 1 suburban, 1 urban) agreed to participate in the current study. It should be noted that many college disability service offices did not respond to the researcher or declined to participate due to limited time and staffing. The participating disability services offices recruited students registered with their offices to gain consent for their high school IEPs and Summaries of Performance. The total final sample was  $n=19$  students. The average age of students at the time that their most recent IEP from high school was written was 17. The high schools in which the participating subjects attended were represented by five different states, with a majority from New York State; New York ( $n=12$ ), Connecticut ( $n=1$ ), Massachusetts ( $n=1$ ), Virginia ( $n=3$ ), and New Hampshire ( $n=1$ ), as well as Washington, D.C. ( $n=1$ ). A majority of the school districts were suburban ( $n=13$ ), while five were urban and one rural.

A majority of the sample was male (63%) and white (63%). In terms of disability category, there were more students with Autism at 36%, Learning Disability and Other Health Impairment each at 26%, and Emotional Disturbance representing 10%. See Table 5.

Table 5

*Participant Demographics*

		<i>N</i>	<b>Percentage</b>
<b>Gender</b>	Male	12	63.15%
	Female	7	36.84%
<b>Ethnicity</b>	White	12	63.16%
	African American	4	21.05%
	Other	3	15.79%
<b>Disability Category</b>	Autism	7	36.84%
	Learning Disability	5	26.31%
	Other Health Impairment	5	26.31%
	Emotional Disturbance	2	10.52%

Results of the transition-planning variables, Compliance, Best Practices, and College Best Practices, are presented below. See Appendix A-C for the data collection instrument, codebook, and a table of the items on the instrument that corresponded with each of the variables and sub-variables.

**Compliance to IDEIA (2004)**

According to the Individuals with Disabilities Education Improvement Act of 2004, there are five transition-planning elements required for a student's Individual Education Plan; IEP Team, Timelines, Measureable Postsecondary Goals, Annual Goals, and Transition Services. The range of compliance across the 22 items that contributed to the five variables was 40-90%, with the average percent of compliance at 67%. It should

be noted that the results below should be interpreted with caution for two reasons; 1) The limited sample size for this study, 2) Items that were not evident in the IEPs were coded as ‘no.’ For some of the items, this information could have been available from another document in a student’s transition file from high school, which could change the score for those items. A summary of results for each of the five variables is presented below. See 6 for a summary of percentages.

Table 6

*Compliance Results*

Compliance Variable	Results
IEP Team	<ul style="list-style-type: none"> <li>• 0% total compliance</li> <li>• 47% showed that all of the required individuals attended the IEP meeting (a majority did not have this information included in the IEP document at all)</li> <li>• Only two of the IEPs indicated parental consent for contribution/involvement of an outside agency in the development</li> </ul>
Timelines	<ul style="list-style-type: none"> <li>• 63% of IEPs had total compliance in this area</li> <li>• 100% of the IEPs included transition services</li> <li>• 63% of the IEPs indicated that the parent and student had been informed of the transfer of rights upon graduation</li> <li>• 74% of the IEPs included a Summary of Performance. The researcher was unable to obtain a SOP for four of the IEPs.</li> </ul>
Measurable Postsecondary Goals	<ul style="list-style-type: none"> <li>• 42% of IEPs had total compliance in this area</li> <li>• 52% of IEPs had measurable education and employment postsecondary goals, each.</li> <li>• 42% of IEPs had measureable independent</li> </ul>

	<p>living goals.</p> <ul style="list-style-type: none"> <li>• 100% of education/training goals, 89% of employment goals, and 63% of independent living goals were developed via interviews.</li> <li>• Only 5% of education goals and 15% of employment goals were developed via formal interest inventories, or other evidence-based transition assessments.</li> <li>• Many of the employment goals listed an area of interest (e.g., arts, or technology), but did not specify what type of career or job the student was exploring.</li> </ul>
Annual Goals	<ul style="list-style-type: none"> <li>• Only 10% of IEPs were fully compliant in this area</li> <li>• All but one IEP included annual goals. There were an average of 4.42 goals in the IEPs.</li> <li>• 94% of annual goals were measurable</li> <li>• 94% of annual goals were related to the education/training postsecondary goal</li> <li>• 31% of annual goals were related to the employment postsecondary goal</li> <li>• Only 15% of annual goals were related to the independent living postsecondary goal</li> </ul>
Transition Services	<ul style="list-style-type: none"> <li>• 31% of IEPs showed total compliance in this area</li> <li>• 76% of the IEPs had all of the required transition services addressed <ul style="list-style-type: none"> <li>i. 78.95% included Instruction, 100% included Course of Study, 84% included Related Services, 89% included Community/Agency Collaboration, 100% included Employment Preparation/Adult Living, and 78.95% included Daily Living Skills.</li> </ul> </li> <li>• 100% of IEPs had transition services aligned with the student's education/training goal,</li> <li>• 78% had transition serviced aligned with the employment goal</li> </ul>

	<ul style="list-style-type: none"><li>• Only 52% had transition services aligned with the independent living goal</li></ul>
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### **IEP team**

Results showed that nearly half of the IEPs included information on who attended the IEP meeting, and only two of the IEPs indicated that the parents consented to participation from an outside agency, which is required under IDEIA. Although a large majority of the IEPs did not include this information, it could have been available on a separate document in the student's file from high school. However, having this information on the IEP document would be helpful in knowing who contributed to the transition-planning process.

It is critical that all required members of the IEP team are attending and contributing to the development of the IEP. Specifically, it is essential that students are not only attending all their IEP meetings, but also contributing to decision-making in a meaningful way. Research indicates that students do not often attend their own IEP meetings, and do not participate actively in the transition planning process (Mason, Field, & Sawilosky, 2000; Martin & Williams-Diehm, 2013). However, students are responsible for advocating for themselves after high school, and should be aware of their functional performance, and what services and accommodations are needed in relation to their disability.

### **Timelines**

Results showed that transition services were put into place once the student reached 16 years of age, and schools wrote Summaries of Performance. However, only approximately 60% of IEPs indicated that students and parents had been informed about

the transfer of rights post- high school (though this information could have been listed on a separate document). It is critical that both parents and students understand the differences in a student's legal rights once they reach college, as parents are not privy to information or have decision-making power, and students are tasked with advocating for themselves.

### **Postsecondary goals**

See table 7 for a list of the postsecondary goals. Although schools are including postsecondary education, employment, and independent living skills goals on IEPs, only about half of the goals were measurable (i.e., written as an outcome, not a process). Many of the goals stated 'student XYZ wants to go to college.' A measurable postsecondary education goal would state, 'After graduating from high school in June 2018, student XYZ will attend a 2-year community college to pursue an associates degree in marketing.' A measurable goal not only meets federal standards according to IDEIA (2004), but it also helps the team make more informed decisions regarding the student's annual goals and transition services (e.g., researching 2-year programs, reviewing the required curriculum for a marketing major, etc.).

Table 7

*Postsecondary Goal Types*

<b>Postsecondary Goal</b>	<b>Goal Type</b>	<b>N</b>	<b>Percentage</b>
Education/Training	University (4 year)	15	78.95%
	Community (2 year)	3	15.79%
	Technical School	1	5.26%
Employment	Part Time	1	5.26%
	Full Time	4	21.05%
	Competitive	5	26.32%
	Supported/Sheltered	0	0%
	Other	7	36.84%
Independent Living	Community Living	12	63.16%
	Daily Living/Self-Care	0	0%
	Other	1	5.26%

**Annual goals**

All but one of the IEPs showed measurable annual goals, and had an annual goal that aligned with the education/training postsecondary goal. However, less than half of the IEPs had an annual goal that aided in employment preparation, and less than a quarter had an annual goal for independent living skills. Although it was expected that the IEPs would have more academic-based annual goals, given that all of the participants were college-bound, schools also need to prepare students for employment to help them choose a college program/major that aligns with their desired career path. It is also critical that college-bound students learn independent living skills, as students who reside in the residential halls are required to stay organized, clean their rooms and do their own laundry, find transportation, and manage their own money if they live on a college campus.



### **Transition services**

A majority of the IEPs included all of the required transition services components. Further, most of the IEPs had transition services that aligned with the student's education and employment postsecondary goals; however, less than half of the IEPs had transition services that aligned with students' independent living goals. It should be mentioned that qualitatively, the researcher noted that many of the transition services listed were vague and did not provide sufficient information on how the school was preparing the student to go to college. For example, many of the IEPs indicated for 'course of study' that the student was finishing the requirements for a high school diploma, but did not give any indication anywhere else in the IEP of what kind of course work the student was taking that aligned with the student's postsecondary education interests. The IEP document should serve as a blueprint for transition planning, and all activities related to aiding in the student's transition to college and/or employment should be documented accordingly.

### **Compliance and college achievement**

One of the purposes of the current study was to examine if there was a relationship between extent of compliance to IDEIA 2004 transition-planning mandates and achievement once the student went to college. This research hypothesized that students with IEPs that demonstrated higher compliance would have higher mean GPAs at the end of their first year in college. Results indicated that the 'highly compliant' ( $M = 3.14$ ,  $SD = .39$ ) group had a greater mean GPA than the 'moderately compliant' ( $M = 2.75$ ,  $SD = .81$ ) group, though it did not reach statistical significance  $t(17) = 1.26$ ,  $p = .11$ . See Table 8.

Table 8

*Compliance and College Achievement Compare Means T-Test*

Variable	Mean	SD	Min	Max	<i>t</i>	<i>p</i>
Mod Compliance (n=11)	2.75	0.81	1.33	3.93	1.26	0.11
High Compliance (n=8)	3.14	0.39	2.46	3.67		

The overall mean GPA was higher for IEPs that showed greater compliance to the five transition planning components, and the mean difference among the highly compliant and moderately compliant groups approached statistical significance. This supports the research hypothesis that IEPs that show higher compliance to transition-planning mandates per the Individuals with Disabilities Education Improvement Act of 2004 would yield higher GPAs in a student's first year of college.

It should be noted that none of the IEPs were fully compliant across all five components of IDEIA. This indicates that schools have a long way to go in terms of providing quality transition planning that at the very least, aligns with federal requirements in helping students with disabilities achieve successful post-high school outcomes.

### **Best Practices**

Landmark's (2009) original eight evidence-based best practices for transition planning were examined. The range of IEPs that showed the presence of these practices was 30-80%, with an average percent of 48%. A summary of results is presented below. See table 9 for a summary of percentages.

Table 9

*Best Practices Results*

Best Practice Variable	Results
Community-Agency Collaboration	<ul style="list-style-type: none"> <li>• Only one IEP showed ‘total practices’ in this area.</li> <li>• Only 10% had an indication of any contribution or collaboration with an outside agency for transition-planning</li> </ul>
Family Involvement	<ul style="list-style-type: none"> <li>• 52% of the IEPs showed an indication of parent contribution</li> </ul>
General Education Inclusion	<ul style="list-style-type: none"> <li>• 84% of the IEPs showed ‘total practices’ in this area, in which a large majority of IEPs showed that the student was placed in a mainstream environment (89.47%) and/or participated in statewide testing (94.74%). <ul style="list-style-type: none"> <li>i. 15.79% were fully mainstreamed; 47.37% participated in Resource Room less than 21% of their day; 26.32% participated in Resource Room between 21-50% of their day; 10.53% of students were placed in an alternative location.</li> <li>ii. About half of students had either a ‘Distinguished’ (e.g., Advanced, or Regent’s) graduation goal (47.37%), or ‘Recommended’ goal (e.g., Regular High School Diploma) (42%). Only two IEPs did not specify a graduation goal.</li> </ul> </li> </ul>
Work Experience	<ul style="list-style-type: none"> <li>• Less than half of the IEPs showed that the student engaged in, or was planning of engage in, work experience (42%)</li> </ul>
Employment Preparation	<ul style="list-style-type: none"> <li>• 30% of the IEPs showed that the student had, or was planning to, participate in employment preparation training. <ul style="list-style-type: none"> <li>i. 10% of students had participated, or were planning to participate in Community Based Instruction, or intern for a community organization.</li> </ul> </li> </ul>

	<p>ii. Nearly half of the students indicated an interest in an arts-based career path (47.37%), while 21% indicated an interest in technology. The remaining 30% of IEPs indicated a different employment goal, or did not list an employment goal.</p>
Social Skills Training	<ul style="list-style-type: none"> <li>• 84% of the IEPs showed that students were receiving social skills training or had well-developed social skills</li> </ul>
Daily Living Skills Training	<ul style="list-style-type: none"> <li>• 89% of the IEPs showed that students were receiving daily living skills training or had well-developed daily living skills</li> </ul>
Self-Determination Skills Training	<ul style="list-style-type: none"> <li>• 73% of the IEPs showed that students were receiving self-determination training in some capacity, or had good self-advocacy</li> </ul>

Overall, results showed that only half of the IEPs indicated that schools are engaging in best practices for postsecondary transition planning. The practice that most of the IEPs showed was general education inclusion, as most students were mainstreamed in the general education classroom and participated in statewide assessments. This was predicted, given that the population is college-bound, as opposed to students whose postsecondary goals are related to vocational rehabilitation or assisted living. Only half of the IEPs indicated family contribution in transition-planning, though it is likely that family participated in decision-making more than the IEP indicated. Only two of the IEPs showed any outside community/agency collaboration. Less than half of the IEPs showed that students were participating, or were planning to participate, in any kind of paid or unpaid work experience or employment preparation program. Although the participants were college-bound, students would benefit from having a part-time job in high school, and/or participating in programming that could lead to a particular career interest. Results

also showed that a majority of students either had social skills or daily living skills training, or demonstrated appropriate skill development in these areas. Given that about a third of the participant pool had a classification of autism, this statistic was predicted. About  $\frac{3}{4}$  of the IEPs showed that students had self-determination training (e.g., learning how to request accommodations, engaging in the career search process, calling colleges), or had already demonstrated good self-advocacy skills. This statistic was surprising, given that the research shows that students with disabilities in college tend to lack self-advocacy skills.

### **Best practices and college achievement**

One of the purposes of the current study was to examine if there was a relationship between the implementation of best practices for transition-planning for students with disabilities and achievement once the student went to college. This researcher hypothesized that students with IEPs that showed best practices would have higher mean GPAs at the end of their first year in college. Contrary to the researcher's predictions, results indicated a slightly higher mean GPA for the 'Low Best Practices' group ( $M = 3.03$ ,  $SD = .87$ ) compared to the 'Moderate Best Practices' group ( $M = 2.83$ ,  $SD = .54$ ), which was not statistically significant  $t(17) = .64$ ,  $p = .27$ . See Table 10. It is still important to acknowledge that previous research supports the implementation of these practices for transition planning and IEP development.

Table 10

*Best Practices and College Achievement Compare Means T-Test*

Variable	Mean	SD	Min	Max	<i>t</i>	<i>p</i>
Low BP (n=8)	3.03	0.87	1.33	3.93	0.64	0.27
Moderate BP (n=11)	2.83	0.54	1.85	3.67		

**College Best Practices**

The added five best practices identified for the current study as important for transition planning specifically for college-bound students were examined. The range of IEPs that showed the presence of these practices was 0-55%, with an average of 26%. See Table 11 for the compliance variables and their corresponding items. A summary of results is presented below. See table 11 for a summary of percentages.

Table 11

*College Best Practices Results*

College Best Practices Variables	Results
Documentation	<ul style="list-style-type: none"> <li>47% of the IEPs showed that the student had received a full re-evaluation (cognitive and achievement testing) within their high school years</li> </ul>
College Prep Coursework	<ul style="list-style-type: none"> <li>Only one IEP showed total best practices in this area</li> <li>30% of IEPs indicated that a student had taken, or is planning to take, an Advanced Placement course</li> <li>Only one IEP showed that a student was taking college-level coursework.</li> </ul>
Compensatory Strategy Development	<ul style="list-style-type: none"> <li>47% of the IEPs indicated that students</li> </ul>

	had received both study skill and self-management instruction
Student Leadership	<ul style="list-style-type: none"> <li>0% of the IEPs indicated that students had participated in programming aimed at teaching them leadership in their IEP meetings and the development of the IEP as it relates to transition planning.</li> </ul>
Assistive Technology Instruction	<ul style="list-style-type: none"> <li>Only 15% of the IEPs showed that students were utilizing AT in school, and only one IEP showed that they had received targeted instruction on using AT in the postsecondary environment.</li> </ul>

Overall, the IEPs only showed an average of 26% of total college best practices. Nearly half of the IEPs indicated that students had received a full psychoeducational re-evaluation during high school. Many of the IEPs indicated that a student had received a partial re-evaluation (e.g., only cognitive or achievement), or did not provide any information regarding updated testing. College-bound students with disabilities are encouraged to receive a full psychoeducational evaluation for two reasons. First, many colleges and universities require updated documentation supporting the presence of a disability in order to receive services. Additionally, an updated evaluation provides important information regarding the student's level of current functioning; helping disability services to work with the student in requesting appropriate accommodations for college. While about half of the IEPs indicated that students were receiving instruction on study and self-management skills (e.g., time management, organization, interpersonal coping strategies), only 30% were taking advanced placement, or college prep courses, and only one took a college-level course. The research suggests that college students with disabilities are often unprepared to meet the increased academic rigor of college. It is

critical that high schools help college-bound students prepare academically by teaching them evidence based test taking and study strategies, and encouraging students to take college level coursework, weaning off of unnecessary accommodations. Furthermore, no IEPs indicated that students were receiving instruction on taking a leadership role in the transition planning process, specifically, for the IEP meeting. Previous research indicates that students are often not major players on the IEP team; however, college requires students to become their own self-advocates and be able to understand and articulate how their disability impacts their functioning in and out of the classroom. Finally, few students were utilizing assistive technologies in school, and only one of those students was receiving instruction on using AT in the college setting. Though some students may not require assistive technology, given that there is a great deal of independence required of students at the college level, AT could aid the student in taking ownership of their learning. For example, the student could learn to use technologies for note taking, writing a research paper, or for time-management.

### **College best practices and achievement**

One of the purposes of the current study was to examine if there was a relationship between the implementation of best practices for transition planning for college-bound students and achievement once the student went to college. This researcher hypothesized that students with IEPs that showed best practices would have higher mean GPAs at the end of their first year in college. Results indicated a statistically significant higher GPA for the ‘Moderate College Best Practices’ Group ( $M = 3.15$ ,  $SD = .59$ ), compared to the ‘Low College Best Practices’ group ( $M = 2.60$ ,  $SD = .66$ ) at the .05 level,  $t(17) = 1.92$ ,  $p = .04$ . See Table 12. This supports the research hypothesis that IEPs



that showed a greater number of college best practices would yield higher end-of-first year GPA.

Table 12

*College Best Practices and Achievement Compare Means T-Test*

Variable	Mean	SD	Min	Max	<i>t</i>	<i>p</i>
Low College BP (n=10)	2.60	0.66	1.33	3.49	1.92	*0.04
Moderate College BP (n=9)	3.15	0.59	2.26	3.93		

\*<.05

**Disability Category and Race**

This researcher conducted two-factor analyses to examine the relationship between disability category and race on the three independent variables, compliance, best practices (Landmark, 2009), and college best practices as they related to student GPA. Results revealed no significant main effects for compliance,  $F(1, 19) = .145, p = .710$  or disability,  $F(3, 19) = .341, p = .796$  on student GPA, nor a significant interaction effect between compliance and disability,  $F(1, 19) = .119, p = .735$ . Results showed no significant main effects for best practices,  $F(1, 19) = .254, p = .623$ , or disability,  $F(3, 19) = .907, p = .466$ , on student GPA nor a significant interaction effect between best practices and disability,  $F(2, 19) = .366, p = .701$ . Similar to the previous analyses, there were no significant main effects for college best practices,  $F(1, 19) = 1.526, p = .242$ , or disability,  $F(3, 19) = .756, p = .542$ , nor a significant interaction effect between college best practices and disability,  $F(3, 19) = .309, p = .818$ .

Results showed statistically significant relationships between race and the three independent variables on student GPA. Specifically, there was a significant main effect for compliance and race,  $F(1, 19) = 7.042, p = .018$ , in which White students ( $M = 3.16, SD = .168$ ) had significantly higher GPAs compared to non-White students ( $M = 2.45, SD = .209$ ). There were no significant interaction effects between compliance and race,  $F(1, 19) = 2.93, p = .108$ . There was a significant main effect for best practices and race,  $F(1, 19) = 4.50, p = .051$ , in which White students ( $M = 3.17, SD = .186$ ) had significantly higher GPAs compared to non-White students ( $M = 2.52, SD = .243$ ). There were no significant interaction effects between best practices and race,  $F(1, 19) = 1.112, p = .308$ . Similar to the results from the other two variables, there was a significant main effect for college best practices and race,  $F(1, 19) = 7.042, p = .018$ , in which White students ( $M = 3.17, SD = .168$ ) had significantly higher GPAs compared to non-White students ( $M = 2.45, SD = .209$ ). There were no significant interaction effects between college best practices and race,  $F(1, 19) = 2.929, p = .108$ .

Power analyses conducted on each of the two-factor analyses revealed that in order for an effect of this size to be detected (80% chance) as significant at the .05 level, a sample of approximately 380 participants would be required. Therefore, given the low sample size in the current study, there is an increased possibility of a spurious result, in which there are no statically significant group differences between the groups for compliance, best practices, and college best practices, and race. Therefore, these results should therefore interpreted with caution.

## **Chapter 5**

### **Discussion**

#### **Summary of Current Study**

Research suggests that although more students with disabilities are attending 2- and 4-year colleges after graduating high school, they are not prepared to meet the increased demands of the postsecondary education setting (Cawthon & Cole, 2010; Hamblet, 2014; Martin & Williams-Dieham, 2013; Newman et al., 2011). Students with disabilities tend to show lack of preparedness with academic skill development, self-management (e.g., time-management, organization), social skills, and self-advocacy.

According to the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), high schools are required to provide specific transition planning services to promote successful post-school outcomes for students with disabilities. These services are to be documented in a student's Individualized Education Plan (IEP) once the student reaches the age of 16 or earlier. Research suggests that in addition to adhering to transition planning mandates, there are other best practices that high schools should engage in in order to best prepare students for their postsecondary lives. The literature also supports specific best practices for college-bound students with disabilities, as this particular postsecondary goal requires a greater degree of preparation prior to graduation, such as understanding legal rights in college, managing a college schedule, and navigating a new social environment. Though limited, the existing literature suggests that high schools may not be compliant according to IDEIA (2004) mandates, nor engaging in best practices for transition-planning, thereby failing to adequately prepare this population in the transition-planning process for their goals after high school.

The existing research on postsecondary transition planning for students with disabilities is limited, and has not focused on the college-bound student. The purpose of the current study is to build on existing research that examines compliance to IDEA (2004) transition planning mandates and current best practices in the field by specifically focusing on students with disabilities going to college. The exploratory purpose of this study is to examine the relationship between quality of transition planning practices and later academic outcomes (e.g., end-of-first-year GPA). The researcher utilized an adaptation of an existing instrument from Landmark (2009) to review IEPs to examine evidence of compliance to IDEIA (2004) and best practices. A total of 19 IEPs were reviewed. A summary of results as they relate to the research questions is presented below.

### **Summary of Results**

1. What is the extent to which schools are following transition-planning mandates in accordance with the Individuals with Disabilities Education Improvement Act of 2004 for students with disabilities?

Overall, results from the current study indicate that schools are not fully compliant with the five components of IDEIA (40-90%; an average of 67%). Results from the current study are consistent with previous studies that examined the compliance components of Individual Education Plans. Landmark (2009) and Landmark and Zhang (2012) found less than half of IEPs showing full compliance, however, in the current study, none of the IEPs were fully compliant for all five compliance components. In the Landmark (2009) study, IEPs demonstrated the greatest level of compliance for IEP Team, while this was the component with the lowest percentage in the current study. This

could be largely due to the fact that researchers in the Landmark (2009) study had access to the students' transition file, and therefore had multiple methods and documents for ascertaining who attended and contributed to students' IEP meetings. However, consistent with the current study, Landmark (2009) found lower levels of compliance for measurable postsecondary goals. Further, data collected from The National Secondary Transition Technical Assistance Center (NSTTAC) and the Office of Special Education Programs (OSEP) of the U.S. Department of Education (2016) found that as of 2013-2014, IEPs demonstrate 48-100% (90% average) full compliance to IDEA.

In the current study, all of the IEPs showed that transition planning services were implemented once the student turned 16 years old, 76% addressed all of the required transition services (e.g., Instruction, Course of Study, Related Services, Community/Agency Collaboration, Employment Preparation/Adult Living, and Daily Living Skills), 74% included a Summary of Performance, and 94% had measurable annual goals. However, the researcher noted that schools were merely addressing the minimum requirements of compliance for annual goals and transition services. For example, although a majority of the IEPs had annual goals that technically aligned with the student's education postsecondary goal because they were academically related (e.g., writing, reading or math goals), these goals may not be adequate in preparing students for the college environment. Very few IEPs had goals that including teaching students study skills, exam preparation, note taking, or time-management; skills that are necessary for a student to succeed in a college-level course. In addition to creating annual goals that reflect students' functional limitations in high school, it is also important that college-bound students are receiving explicit instruction in other academic skills that will prepare

them for a college-level course, as previous research indicates that college students with disabilities often do not have adequately developed academic skills (Cawthon & Cole, 2010; Hamblet, 2014; Martin & Williams-Dieham, 2013; Newman et al., 2011).

Furthermore, although a majority of IEPs addressed all the transition services required per IDEIA 2004, the researcher noted that they were often vague and did not provide sufficient information on any specific transition planning activities that were being done.

For example, the employment component may state ‘the student is pursuing a high school diploma,’ but that does not provide any information of what kind of courses the student has taken or is planning to take. In addition, for another transition services component, post-school living objectives, most of the IEPs had stated ‘not applicable at this time.’

Though this is compliant per IDEIA regulations because that component was addressed in the document, the definition of independent living skills needs to be re-assessed.

Currently, independent living or daily living skills are conceptualized as basic self-care skills, with goals being developed for students whose postsecondary goals may include participating in assistive living and/or supported employment programming. However, college-bound students need to have well-developed independent living skills when going to college, particularly if they are living in a residential hall or apartment with roommates. These may include but are not limited to, doing laundry, keeping a space clean and organized, taking public transportation, and managing money. Schools can work with the student and family to develop annual independent living goals by assessing students’ skills in these areas.

IEPs showed less compliance related to having information on who attended the IEP meeting (47%) and indicating if a discussion on transfer of rights occurred (63%)

(though this information could have been included in a student's transition file from high school). It is critical that there is evidence that students are not only attending the IEP meetings, but also contributing in the decision-making process for transition planning. Previous research indicates that student involvement in IEP meetings is often limited to meeting attendance, and even so, many students do not attend their own IEP meetings (Mason, Field, & Sawilosky, 2000; Martin & Williams-Diehm, 2013). By their 12<sup>th</sup> grade year, students should be assuming a leadership role within the IEP meeting.

Further, many of the IEPs did not have postsecondary goals that aligned with IDEIA's definition of a measurable goal (52% for education/employment, and 42% for independent living goals). Most of the IEPs did not indicate that schools were utilizing evidence-based transition assessments, other than student interviews, to help develop the postsecondary education, employment, or independent living goals. Formal transition assessments (e.g., surveys, inventories, or structured interviews) would help provide information related to students' skills and interests post-high school, such as the Transition Planning Inventory (Siltington & Payne, 2009). Thoma and Tamura (2013) recommend two college readiness questionnaires, A Guide to Assessing College Readiness (Landmark College, 2009) and the Transition Assessment and Goal Generator (TAGG; Martin et al., 2012), which are designed to assess students' specific knowledge and skill sets for the college environment including academic skills, time management skills, career interests, and knowledge of strengths and limitations.

2. What is the extent to which schools are engaging in best practices related to transition for students with disabilities planning to attend college according to their IEP?

Overall, results from the current study show that schools are not fully engaging in evidence-based practices (an average of 48%). This is consistent with Landmark (2009), who found that only about half of IEPs had evidence of the eight best practices in transition. In the Landmark (2009) study, the practices that IEPs showed least were self-determination training, work experience, general education inclusion, and community-agency collaboration. While the current study also showed the least amount of IEPs that had evidence of community-agency collaboration and work experience, there was also poor evidence of family involvement and employment preparation.

Results indicated that 89% of IEPs had evidence of student inclusion in the general education setting. This percentage was higher than Landmark (2009) (46%), as they collected data from students with a variety of disabilities, while the current study collected data from college-bound students. Though students were mainstreamed in the general education environment, few participated in advanced placement/college prep (30%), or college-level coursework (5%), aimed at preparing students for the increased academic rigor of college courses, which is consistent with the literature (Gregg, 2007; O'Brien, 2011).

As per the instrument, IEPs were graded as 'yes' if it explicitly stated that they were receiving instruction in daily living, social skill, or self-determination training, or had well developed skills in these areas. Many IEPs indicated that students already had age-appropriate daily living (89%) and self-determination (73%) skills and were receiving social skills training (84%) (1/3 of the sample had a diagnosis of Autism). The results of self-determination contradicted previous research that suggests that college students have poor self-determination when they are in the college environment,



including knowing how to articulate how their disability impacts them academically, and what accommodations and/or strategies help them overcome those challenges (Getzel & Thoma, 2008; Janiga & Costenbader, 2002; Milsom and Dietz, 2009). It may be prudent to assess the current definition of self-determination, particularly as it relates to college students with disabilities. According to Gil (2007), self-determination is defined as ‘knowing and believing in oneself, making decisions, and initiating action to reach goals (p. 14)’. However, this broad definition does not adequately address the specific skills that college students with disabilities need in the college setting. Though self-determination and self-advocacy are often used interchangeably in the literature, self-advocacy can be defined as ‘an individual’s ability to defectively communicate, convey, negotiate or assert his or her own interests, desires, needs, and rights. It involved making informed decisions and taking responsibility for those decisions’ (VanReusen et al., 1994, as cited in LD Online, 2018). College-bound students with good self-advocacy skills will know their legal rights as student with a disability, articulate how their disability impacts them in the academic environment, and identify accommodations that would address those challenges. Schools should work with students and families to build these skills prior to graduation from high school.

Only one IEP showed evidence of best practices related to community/agency collaboration in the transition planning process, and only 52% showed evidence of family involvement. The reason the statistic related to family involvement could have been different from the Landmark (2009) study was that Landmark had access to the students’ transition file, which may have had more evidence of parental contribution to decision making and transition planning. In relation to family involvement specifically for college-

bound students, transition planning should balance family involvement with empowering students' independence. At the college level, parents do not have decision-making power, and the student is responsible for advocating for themselves to get their needs met. Thus, parents should be taught how to become the vehicle for which the student learns how to navigate the postsecondary environment. This may include providing literature on transition to the postsecondary education environment for students with disabilities, teaching the critical differences between IDEIA and ADA (the law that college students are protected under post-high school), and identifying campus supports for parents to encourage their student to access once they arrive at college (e.g., academic support centers, counseling center, academic advisors). Finally, results also showed that only 42% of students had work experience, or employment preparation programming (30%). While the statistic for work experience mirrors Landmark's (2009) findings, less students participated in employment preparation programming in the current study than in Landmark's study (76%). This could be due to the fact that the participants in the current study are college-bound, while Landmark's participants had a wider variety of postsecondary goals (not just education goals). However, although students may be college-bound, work/employment prep experience can be important in helping the student to explore potential careers and thus, college majors. Work experience also helps build real-world skills that easily translate to the college environment, such as time-management, leadership, problem solving, and communication with supervisors (e.g., professors) and colleagues (e.g., classmates and roommates).

3. What is the extent to which schools are engaging in college best practices related to transition planning for students with disabilities planning to attend college according to their IEP?

The current study found that overall, schools are not fully engaging in practices aimed at preparing students for the college setting (an average of 26%). Only about half of students had received a full re-evaluation (e.g., cognitive and academic) prior to graduation (47%). It is critical that students receive a full re-evaluation prior to entering college for two main reasons. First, many college disability services offices require students to submit updated documentation supporting the presence of a disability. Second, updated data helps the disability services office and the student determine classroom and housing accommodations that would be reasonable in addressing the student's functional limitations. Another reason to conduct a comprehensive evaluation prior to graduation is that once the student leaves the high school environment, private evaluations can be extremely cost prohibitive.

Less than half of IEPs indicated that students had received explicit instruction on compensatory strategies (e.g., study, test-taking, note-taking, time-management and organization) (47%). The literature supports the need for college-bound students with disabilities to gain explicit instruction on learning strategies to be prepared for the college classroom (Barr, 1995; Conley, 2007; Elkins & Spearman, 2005; Foley, 2006; Hamblet, 2014; Haizazi, 1999; Janinga & Costenbader, 2002; Milson & Dietz, 2009; Trainin & Swanson, 2005; Vess, 2007).

Results also showed that only 15% of students were utilizing assistive technology to aid in their academic growth. Assistive technology is any piece of technology or

equipment that helps someone to perform a task, such as writing, reading, walking, hearing, etc. For college students with cognitive processing deficits, this can include software to aid in reading and writing, and apps for organization and time-management.

One of the most notable results of the current study was that none of the IEPs showed that students had received instruction on taking a leadership role within the transition-planning process. Previous research in the field suggests that students are rarely prepared for their IEP meetings and often do not play an active role in the transition planning process (Mason, Field, & Sawilosky, 2000; Martin & Williams-Diehm, 2013). Student leadership in the development of the IEP needs to be fostered over the course of a student's high school career, and is a critical component to quality transition planning (Brinckerhoff, 1996; Foley, 2006; Gil, 2007; Lightner, 2012). Schools should ensure that the student attends all of their IEP meetings and participates in decision-making regarding services, accommodations, and transition activities. Research supports The Self-Directed IEP (1996), a curriculum designed to promote student involvement and leadership among students with disabilities (Martin, Van Dycke, Christensen, Greene, Gardner, and Lovett, 2006).

4. Is there a relationship between compliance related to IDEIA 2004 and best practices with higher end-of-first-year GPAs for students with disabilities in college?

Results from the current study indicate that students with IEPs that demonstrated greater compliance to IDEIA, as well as college best practices, had higher GPAs. There was a statistically significant link between college best practices and GPA, in which students whose IEPs showed greater best practices specific to college readiness had better achievement in their first year of college ( $M = 3.15$ ,  $SD = .59$ ) at the .05 level,  $t(17) =$

1.92,  $p = .04$ . This is an important finding, as there had not previously been an empirical link between best practices for college-bound students and later postsecondary education achievement, which has clear implications for stakeholders at the secondary, and postsecondary levels.

5. Is there a relationship between compliance to IDEIA 2004, best practices (Landmark, 2009), and college best practices and disability category and race for students with disabilities?

Results from the current study showed no relationship between disability category and any of the three transition planning variables. This contradicts Landmark's (2009) research showing differences among disability categories related to extent of compliance to IDEIA. Specifically, students with emotional and learning disabilities were statistically significantly less likely to have IEPs that were compliant with regard to Annual Goals and Transition Services. Future research in this area with greater and more balanced sample sizes for disability category may reflect results from previous studies.

Results from previous studies show differences among race related to extent of compliance to IDEIA. Specifically, Landmark (2009) found that African American students were less likely to have IEPs that showed compliance with regard to IEP Team, while Hispanic students were less likely to have IEPs that demonstrated compliance for Annual Goals. The current study also found a statistically significant relationship between race across all three transition planning variables at the .05 level, in which White students had higher overall GPAs compared to non-white students. However, it is important that this result is examined more critically. First, though the results were

statistically significant, there needed to have been a larger sample size to achieve greater statistical power and generalizability.

More importantly, there are a myriad of factors that contribute to educational achievement, including but not limited to, socioeconomic status, parental education, and institutional support, all of which are linked to race/ethnicity. Research shows that non-White students are more likely to be in low-funded educational environments. According to data from the National Center for Education Statistics, as of 2016, among all public schools, 41% of students of color were in high-poverty schools while only 8.5% of white students were. High-poverty schools are less likely to have adequate financial and staffing support in order to implement quality transition planning practices, such as having a designated transition counselor, offering Advanced Placement courses, or providing the latest assistive technologies. Relatedly, the students and families that attend high-poverty schools may not have the resources to properly prepare for the college environment, such as transportation to a work placement, time and means to attend transition planning meetings in person, or knowledge on the college application process. Research on the effects of race on achievement, particularly among minority students with disabilities, should take into account other related sociopolitical factors. Therefore, these results should not only inform schools on quality transition planning, but it also calls for more equitable funding for schools to have the opportunity to enact quality transition planning for students with disabilities, particularly for students of color.

### **Final Thoughts**

In summary, results from the current study are consistent with state and national studies, indicating that schools continue to not be fully compliant with the transition-

planning mandates from the Individuals with Disabilities Education Improvement Act (2004). Further, results related to best practices for transition planning are consistent with previous studies indicating that college students are often unprepared in the college environment related to academic skill development and self-management. Thus, schools may not be engaging in practices that aid in positive post-school outcomes for students with disabilities. In addition, the current study revealed that when compared across all three compliance, best practices, and college best practices variables, there was a statistically significant relationship between race and student GPA, in which White students had higher GPAs compared to non-White students. This is reflective of findings from previous studies, including Landmark and Zhang (2012), showing that IEPs of African American and Hispanic students were less likely to have evidence of some areas of compliance and best practice.

The postsecondary education setting is dramatically different than high school in a variety of ways; students are no longer protected under the same federal education laws, and they do not receive the same level of services to ensure their success. College students, regardless of disability, are charged with a significantly higher degree of independence in order to successfully navigate their new environment. Stakeholders at the secondary level may not be cognizant of the fact that early, targeted interventions are critical for college-bound students with disabilities. Schools seem to be merely ‘checking the box’ for many transition components of the IEP, as opposed to developing and implementing a comprehensive transition plan that addresses specific skills and competencies students need to be independent and successful in their college programs.

## **Study Limitations**

The current study posed a number of limitations. First, there was a limited sample size. The study design required college disability services personnel to recruit participants and collect IEP/SOP documentation as well as GPA information. This would have required time and staffing that disability services offices do not currently have. Relatedly, though the study design allowed for generalizability in terms of geographic location of school districts represented in the sample, there were too few participants to have strong external validity overall. Further, there was overrepresentation of White students, students with Autism, and male students. Results could reflect indirect relationships between these demographic factors and college achievement. A second limitation was availability of information during data collection. Though the IEP should be comprehensive and include detailed information on transition activities, who is involved, skill development, etc., this information could have been documented elsewhere in a student's transition file, which the researcher did not have access to. Finally, there are other potential confounding variables that were not explored in the current study, but may contribute to overall achievement including, but not limited to, previous achievement (e.g., high school SAT/ACT scores), socioeconomic status, and level of support at the participating college disability services offices, as research indicates that postsecondary institutions that provide an elevated level of support for students with disabilities may yield better achievement (Troiano, Liefeld, & Trachtenberg, 2010).

Despite the number of limitations in this study, it explored a significant gap in the current literature on postsecondary transition planning for students with disabilities. If we are to conceptualize quality transition planning as a predictor of later college outcomes



for students with disabilities, it is critical that we examine the extent to which high schools are engaging in preventative, intentional practices that address the unique needs of college-bound students. College has become a more reachable goal for students with disabilities, now more than ever, and has the potential to help this population lead successful lives. It is important that schools are playing their part in helping students with disabilities and their families be prepared for the transition to college and reach their fullest potential.

### **Future Research**

Future research in the area of postsecondary transition planning should continue to examine transition planning among college-bound students with disabilities, given the increasing trend of this population of students graduating from high school. If the current study were replicated, a larger sample size would aid in the ability to conduct more sophisticated data analysis and provide greater empirical evidence of the relationship between quality transition planning and first year GPA. A larger sample size would also aid in the generalizability of results, and allow researchers to further examine the impact of disability category and race on compliance to IDEIA and best practices as they relate to college achievement, perhaps via stratified sampling. It would also be prudent to examine extent of transition planning supports for students with disabilities across states, as some states may provide an elevated level of supports than others. Additional demographic factors should also be examined as potential mediators of college achievement including high school and college sizes and geographic locations, extent of college supports, parental education/socioeconomic status, and achievement in high school. Furthermore, an alternative method to the current study could include a

longitudinal design, in which data is collected while the student is in high school, and then GPA information is collected at the end of their first year of college. This would allow a researcher to obtain a student's transition file, and therefore, more information on transition planning activities. Future research should also examine perceptions from relevant personnel at the secondary level (e.g., school psychologists, school counselors, special education teachers, students and families) related to the transition planning process for students with disabilities planning to attend college.

It is paramount that the literature on postsecondary transition planning for college-bound students with disabilities continues to grow in order for stakeholders to provide the students and families the tools they need to transition to the next chapter in their lives.

### **Implications and Recommendations for Practice**

Results from the current study call for a major need to re-examine the transition-planning practices in high schools for their college-bound students with disabilities. It is also critical that postsecondary institutions do their part in helping potential students prepare for the transition to college. Specific recommendations for high school transition planning personnel, as well as college disability services personnel at the college level, are presented in detail in appendix F. However, below are a few key areas of concern.

#### **Recommendations for high schools**

##### *Compliance*

First, transition-planning personnel at the secondary level should be familiarized with the transition-planning mandates per IDEIA (2004). Specifically, schools should utilize the U.S. Department of Education Indicator 13 checklist to ensure that they are

meeting compliance standards for transition planning and IEP writing, including writing measurable goals based on evidence-based transition assessments, making sure the annual goals are aligned with the students' postsecondary goals, ensuring that all of the required individuals have been invited to the students' IEP meetings, and following guidelines for the Summary of Performance. Indicator 13 can be found online.

Further, schools are required to inform students and parents of the transfer of legal rights post high school. Once a student enters the postsecondary education environment, their rights change from IDEIA to the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, both of which are laws that prohibit discrimination and ensure that individuals with disabilities have access to the college setting. Parents do not have decision-making power once their student enters college, and it is the responsibility of the student to advocate for their needs.

#### *Best practices*

Going beyond compliance, it would be prudent for schools to develop specific transition-planning policies and procedures for college-bound students with disabilities to help them prepare for their new environment.

Although it is critical that key stakeholders on the transition planning team are familiarized with IDEIA mandates and Indicator 13, transition-planning personnel should participate in professional development and learn about best practices in preparing students with disabilities for college. There is a wealth of information online and in print on evidence-based practices for stakeholders at the secondary level. Specific recommendations and resources are listed in appendix F. Full citations for book and online resources are listed in the References section.

Given that college requires the student to demonstrate a greater amount of self-advocacy and independence, it is critical that schools engage in the transition-planning process early to help the student and their family prepare. For example, the students' course of study should match their interests and skills and prepare them for the academic rigor of a college program. Students should be given explicit instruction on academic strategies, such as skills for studying, time management, and organization, as well as instruction on independent living skills (e.g., laundry, medication management, budgeting, transportation use). Also, schools should help the student decide the appropriate postsecondary education environment that reflects the students' interests and academic and independent living skills. For example, if a student may not be prepared for a four-year degree program, the student may consider taking a part-time course load at a local community college while they continue to live at home for the first two years.

Most importantly, schools need to provide opportunities for the student to take on a leadership role in the transition planning process. This includes educating the student on how to articulate their strengths and challenges related to their disability, and ensuring that the student attends and participates in their IEP meetings and learns how to self-advocate their needs in the classroom.

### **Recommendations for Colleges**

Colleges can collaborate with stakeholders at the secondary level to help prepare students with disabilities make a smoother, informed transition to college. This can include communicating with guidance and/or transition counselors regarding processes for self-identifying as a student with a disability and requesting accommodations,

providing information on the on-and-off-campus resources available to the student, and assessing the students' level of readiness academically and socially.

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## Appendix A

## Data Collection Instrument

Reviewer's Initials \_\_\_\_\_ Date Reviewed \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

<p><b>General Information:</b> The data collection instrument consists of four categories of questions: descriptive, compliance with IDEIA, best practices, and college best practices. Descriptive questions are shaded and enumerated using the letter <i>D</i>. The compliance questions are enumerated using the letter <i>C</i>, the best practices questions are enumerated using the letter <i>P</i>, and the college best practices questions are enumerated using the letter <i>P</i><sub>1</sub>.</p> <p><b>Instructions:</b> Using the IEP document as the source of information, <b>answer all of the descriptive questions first. Then, using the answers to the descriptive questions, answer the compliance and practices questions.</b></p>	
D1	<b>Study ID:</b> _____ (Assigned by reviewer)
D2	<b>Most Current IEP Date:</b> _____/_____/_____
D3	<b>Ethnicity:</b> <input type="checkbox"/> African American <input type="checkbox"/> Hispanic <input type="checkbox"/> White <input type="checkbox"/> Other <input type="checkbox"/> Not listed in IEP
D4	<b>Disability:</b> (Mark 1 for primary disability, 2 for secondary, and 3 for tertiary). <input type="checkbox"/> AU <input type="checkbox"/> ED <input type="checkbox"/> ID <input type="checkbox"/> LD <input type="checkbox"/> Deaf-blind <input type="checkbox"/> Deaf <input type="checkbox"/> Hearing Imp. <input type="checkbox"/> Multiple <input type="checkbox"/> OI <input type="checkbox"/> OHI <input type="checkbox"/> SI <input type="checkbox"/> TBI <input type="checkbox"/> VI
D5	<b>Age at Most Current Transition IEP Date:</b> _____ (or DOB) _____/_____/_____
C1	<b>If the student is age 15 or older, are transition services in place?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C2	<b>Is there any indication that the parents have been advised that upon age of majority rights transfer to the student?</b> (Must be advised by the time child is 17 years) <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No
C3	<b>Is a summary of performance included?</b> <input type="checkbox"/> N/A if this is not a dismissal meeting <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can not determine
D6	<b>What components of the summary of performance are present?</b> (Mark all that apply.) <input type="checkbox"/> N/A <input type="checkbox"/> No summary of performance <input type="checkbox"/> Summary of academic achievement <input type="checkbox"/> Summary of functional performance <input type="checkbox"/> Recommendation(s) on how to assist the child in meeting PS goals
C4	<b>If this is the dismissal meeting, does the summary of performance include BOTH a summary of academic achievement and functional performance?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No

C5	. <b>If this is the dismissal meeting, does the summary of performance include recommendations on how to assist the child in meeting postsecondary (PS) goals?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>2</sub> 1	. <b>Did the student receive a full psychoeducational/neuropsychological re-evaluation, which included formal standardized testing for cognitive functioning and academic achievement during high school?</b> <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No
D7	<b>Instructional Setting:</b>  <input type="checkbox"/> Fully Mainstream <input type="checkbox"/> Resource, < 21% <input type="checkbox"/> Resource 21% - 50% <input type="checkbox"/> Resource >50% <input type="checkbox"/> Self-contained <21% <input type="checkbox"/> Self-contained 21%-50% <input type="checkbox"/> Self-contained >50% <input type="checkbox"/> Separate campus/alternative setting <input type="checkbox"/> Other: _____
P1	<b>Is the student mainstreamed?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P2	<b>State standardized testing supportive of general education?</b>  <input type="checkbox"/> Yes: accommodated <input type="checkbox"/> No: modified or alternate
P <sub>2</sub> 2	<b>Was the student enrolled in courses designed for college preparation, including Advanced Placement courses?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>2</sub> 3	<b>Was the student enrolled in any college-level coursework, including online and distance-learning?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>2</sub> 4	<b>Did the student receive targeted instruction on effective study skills for the post-secondary environment?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>2</sub> 5	<b>Did the student receive instruction on effective self-management skills (e.g., time-management, organization, stress-management)?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D8	<b>Are there transition services that are likely to be provided or paid for by outside agencies within the upcoming year?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C6	<b>To the extent appropriate did the parents or the student who has reached the age of majority consent to the invitation of a representative from an outside agency?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can not determine
C7	<b>Did ALL of the required individuals (i.e., student, parent, general education teacher, special education teacher, administrator, and agency representative—if applicable) attend or contribute to the meeting?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can not determine
P3	. <b>Is there any indication that the parent/guardian contributed to the</b>

	<b>development of the transition components of the IEP document?</b> [ ] Yes [ ] No
P4	<b>Is there any indication that agency representatives contributed to the development of the transition components?</b> (Only mark <i>Yes</i> if an agency representative was marked on D11.) [ ] Yes [ ] No
P5	<b>Did the school/district provide any community agency information?</b> [ ] Yes [ ] No
D9	<b>What is the student's (projected) graduation type?</b> [ ] Distinguished achievement [ ] Recommended plan [ ] Minimum plan [ ] Not specified
D10	<b>What type of education/training PS goal does the student have?</b> (If more than one education/training goal, only use the first goal.)  [ ] No education/training goal [ ] On-the-job training [ ] Technical school [ ] Community college [ ] University [ ] Other: _____
C8	<b>Is the education/training PS goal measurable (i.e., occurs after graduation AND is an outcome, not a process)?</b> [ ] Yes [ ] No
D11	<b>Is there evidence that the education/training PS goal was based on an age-appropriate transition assessment?</b> (Mark all that apply.) [ ] No [ ] Yes, please specify:  [ ] Interest inventories [ ] Formal or informal interviews with student/parent [ ] Other evaluation data [ ] Teacher information [ ] IEP documentation (i.e., IEP notes only that the goal was based on transition assessment but does not specify type of assessment)
C9	<b>Is there evidence that the education/training PS goal was based upon at least one age appropriate transition assessment?</b> [ ] Yes [ ] No
D12	<b>What type of employment PS goal does the student have?</b> (If more than one employment goal, only use the first goal. Mark all that apply.)  [ ] No employment goal [ ] Full time [ ] Part time [ ] Competitive [ ] Supported [ ] Sheltered [ ] Other: _____
C10	<b>Is the employment PS goal measurable (i.e., occurs after graduation AND is an outcome, not a process)?</b> [ ] Yes [ ] No
D13	<b>Is there evidence that the employment PS goal was based on an age-appropriate transition assessment?</b> (Mark all that apply.) [ ] No [ ] Yes,

	<p>please specify:</p> <p><input type="checkbox"/> Interest inventories <input type="checkbox"/> Formal or informal interviews with student/parent <input type="checkbox"/> Other evaluation data <input type="checkbox"/> Teacher information <input type="checkbox"/> IEP documentation (i.e., IEP notes goal was based on transition assessment but does not specify type of assessment)</p>
C11	<p><b>Is there evidence that the employment PS goal was based upon at least one age appropriate transition assessment?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
D14	<p><b>Employment PS goal career cluster:</b></p> <p><input type="checkbox"/> N/A, because no employment goal <input type="checkbox"/> N/A, because career not indicated <input type="checkbox"/> Agriculture, food, &amp; natural resources <input type="checkbox"/> Architecture &amp; construction <input type="checkbox"/> Business, management, &amp; administration <input type="checkbox"/> Finance <input type="checkbox"/> Health science <input type="checkbox"/> Human services <input type="checkbox"/> Law, public safety, corrections, &amp; security</p> <p><input type="checkbox"/> Arts, AV technology, &amp; communication <input type="checkbox"/> Education &amp; training <input type="checkbox"/> Government &amp; public administration <input type="checkbox"/> Hospitality &amp; tourism</p> <p><input type="checkbox"/> Information technology <input type="checkbox"/> Manufacturing <input type="checkbox"/> Marketing, sales, &amp; service <input type="checkbox"/> Science, technology, engineering, &amp; math <input type="checkbox"/> Transportation, distribution, &amp; logistics</p>
D15	<p><b>Does the IEP document describe student's previous or current work experience?</b></p> <p>No, please categorize: <input type="checkbox"/> Not described or mentioned <input type="checkbox"/> Indicates student has no experience Yes , please categorize: <input type="checkbox"/> Paid employment <input type="checkbox"/> Unpaid/volunteer experience <input type="checkbox"/> Unknown</p>
P6	<p><b>Has the student engaged in previous paid or unpaid work experience OR is there any indication that the student will experience any paid or unpaid work experience?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p>
D16	<p><b>Is there any indication that the student has participated in any employment preparation program(s)?</b></p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes, please categorize: (Mark all that apply.)</p> <p><input type="checkbox"/> Community based instruction <input type="checkbox"/> Work based learning <input type="checkbox"/> Cooperative classes <input type="checkbox"/> LIFE Skills class <input type="checkbox"/> Other: _____</p>
P7	<p><b>Has the student participated in any employment preparation programming, or are there plans for the student to participate?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No</p>

D17	<b>What type of independent living PS goal does the student have?</b> (If more than one independent living goal, only use the first goal; Mark all that apply.) <input type="checkbox"/> No independent living goal <input type="checkbox"/> Community living (e.g., transportation, recreation) <input type="checkbox"/> Daily living (e.g., cooking) <input type="checkbox"/> Self-care (e.g., sexuality, hygiene) <input type="checkbox"/> Other: _____
C12	<b>Is the independent living PS goal measurable (i.e., occurs after graduation AND is an outcome, not a process)?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D18	<b>Is there evidence that the independent living goal was based on an age-appropriate transition assessment?</b> (Mark all that apply) <input type="checkbox"/> No <input type="checkbox"/> Yes, please specify:  <input type="checkbox"/> Interest inventories <input type="checkbox"/> Formal or informal interviews with student or parent <input type="checkbox"/> Other evaluation data <input type="checkbox"/> Teacher information <input type="checkbox"/> IEP documentation (i.e., IEP notes only that the goal was based on transition assessment but does not specify type of assessment)
C13	<b>Is the independent living PS goal based upon age appropriate transition assessments?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C14	<b>Are 100% of the annual goals measurable?</b> <input type="checkbox"/> N/A: no annual goals present <input type="checkbox"/> Yes <input type="checkbox"/> No
D19	<b>How many annual goals reasonably enable (support) the child to meet the:</b> <b>education/training PS goal?</b> _____ <input type="checkbox"/> N/A <b>employment PS goal?</b> _____ <input type="checkbox"/> N/A <b>independent living PS goal?</b> _____ <input type="checkbox"/> N/A  (Note: One annual goal can be used to meet more than one postsecondary goal.)
C15	<b>Is there at least one annual goal that supports the child's education/training PS goal?</b> <input type="checkbox"/> N/A: no annual goal(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: no postsecondary goal(s)
C16	<b>Is there at least one annual goal that supports the student's employment PS goal?</b> <input type="checkbox"/> N/A: no annual goal(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: no postsecondary goal(s)
C17	<b>Is there at least one annual goal that supports the child's independent living PS goal, if appropriate?</b> <input type="checkbox"/> N/A: no annual goal(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: no postsecondary goal(s)
D20	<b>Are there transition services that address social skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>

	N/A: student has appropriate social skills
D21	. <b>Are there annual goals or objectives that address social skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: student has appropriate social skills
P8	<b>Is there any indication (annual goals, or transition services) that the student has received/is receiving social skills training OR that the student has appropriate social skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D22	. <b>Are there transition services that address self-determination?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: student has appropriate self-determination skills
D23	. <b>Are there annual goals or objectives that address self-determination?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: student has appropriate self-determination skills
P <sub>26</sub>	<b>Did the student participate in programming (e.g., <i>Self-Directed IEP; Who's Future Is It Anyway</i>), or receive instruction on leading their IEP meetings?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No  <b>If so, please specify:</b>
P9	<b>Is there any indication (annual goals or transition services) that the student has received/is receiving instruction/training on self-determination (e.g., how to request services/accommodations, etc.) OR that the student has appropriate self-determination skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D24	. <b>Are there transition services that address functional, daily living skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: student has appropriate daily living skills
D25	. <b>Are there annual goals or objectives that address functional, daily living skills?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A: student has appropriate daily living skills
P <sub>27</sub>	<b>Was the student utilizing assistive technology in school?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>28</sub>	<b>Has the student received instruction on utilizing assistive technology to help meet their needs in school?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P <sub>29</sub>	<b>Has the student received instruction on use of assistive technology in postsecondary education settings?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
P10	<b>Is there any indication (PS goals, annual goals, or transition services) that the student has received/is receiving functional, daily living skills training OR that the student has appropriate functional, daily living skills?</b>

	<input type="checkbox"/> Yes <input type="checkbox"/> No
D26	<b>Which transition services are addressed?</b> (Mark all that apply.) <input type="checkbox"/> Instruction <input type="checkbox"/> Course of study (Mark this if the graduation type is indicated.) <input type="checkbox"/> <input type="checkbox"/> Related service(s) <input type="checkbox"/> Community experience(s) <input type="checkbox"/> Development of employment & other post-school adult living objectives <input type="checkbox"/> Acquisition of daily living skills, when appropriate <input type="checkbox"/> Provision of a functional vocational evaluation, when appropriate
C18	. <b>Are 100% of the required transition services (i.e., instruction, course of  study, related services, community experience, employment &amp;  adult living objectives) addressed?</b> (Note: Some students may not need all of the transition services, but they will still be compliant on this aspect if the documentation indicates that the services are not needed and why. In this study, the graduation type indicates the course of study.) <input type="checkbox"/> Yes <input type="checkbox"/> No
C19	. <b>Are the transition services aligned with the child's education/training PS  goal?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C20	. <b>Are the transition services aligned with the child's employment PS goal?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C21	<b>Are the transition services aligned with the child's independent living PS  goal?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D27	<b>Is there any indication that the child's needs, strengths, preferences, and  interests were discussed or captured in the IEP documentation?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
C22	<b>Is there evidence that the transition services were based on the child's  needs, strengths, preferences, or interests?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
D28	<b>Gender</b> <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Other



## Appendix B

## Instrument Code Book

<b>Description of Variable</b>	<b>Coding Instructions</b>	<b>Variable Type</b>
IEP Date	mm/dd/yy	Descriptive
Ethnicity	1=African American 2=Hispanic 3=White 4=Other	Descriptive
Disability Category	1= Dev 2=Psych/OHI 3= SLD	Descriptive
Birthdate	mm/dd/yy	Descriptive
Age	Age in years	Descriptive
If the student is age 15 or older, are transition services in place?	1= yes, 0=no	Compliance
Is there any indication that the parents have been advised that upon age of majority rights transfer to the student?	->1= yes, 0= no	Compliance
Is a summary of performance included?	->1= yes, 0= no	Compliance
Are all the SOP component present?	->1 = yes, 0= no	Descriptive
If this is the dismissal meeting, does the summary of performance include BOTH a summary of academic achievement and functional performance?	->1= yes, 0= no	Compliance
If this is the dismissal meeting, does the summary of performance include recommendations on how to assist the child in meeting postsecondary (PS) goals?	->1= yes, 0= no	Compliance
Did the student receive a full psychoeducational/neuropsychological re-evaluation, which included formal standardized testing for cognitive functioning and academic achievement during high school?	1= yes, 0= no	Best Practice: College
Instructional setting code	0= fully mainstream 1= resource, <21% 2=resource 21%-50%	Descriptive

	3= resource >50% 4= self-contained <21% 5= self-contained 21%-50% 6= self-contained >50% 7= separate campus/alternative setting 8= other	
Mainstreamed?	1= yes, 0= no	Best Practice
State standardized testing supports general education?	1= yes, 0= no	Best Practice
Was the student enrolled in courses designed for college preparation, including Advanced Placement courses?	1= yes, 0= no	Best Practice: College
Was the student enrolled in any college-level coursework, including online and distance-learning?	1= yes, 0= no	Best Practice: College
Did the student receive instruction on effective study skills?	1= yes, 0= no	Best Practice: College
Did the student receive instruction on effective self-management skills (e.g., time-management, organization, stress-management)?	1= yes, 0= no	Best Practice: College
Are there transition services that are likely to be provided or paid for by outside agencies within the upcoming year?	1= yes, 0= no	Best Practice
To the extent appropriate, is there an indication that the parents or the student who has reached the age of majority consent to the invitation of a representative from an outside agency?	1= yes, 0= no	Compliance
Is there an indication that ALL of the required individuals (i.e., student, parent, general education teacher, special education teacher, administrator, and agency representative—if answer to D10 is Yes) attend or contribute to the meeting?	1= yes, 0= no	Compliance

Is there any indication that the parent/guardian contributed to the development of the transition components of the IEP document?	1= yes, 0= no	Best Practice
Is there any indication that agency representatives contributed to the development of the transition components?	1= yes, 0= no	Best Practice
Did the school/district provide any community agency information?	1= yes, 0= no	Best Practice
What is the student's graduation type?	0=not specified 1= minimum 2=recommended 3=distinguished	Descriptive
What type of education/training PS goal does the student have?	0=no goal 1=on the job training 2=technical school 3=community college 4=university 5=other	Descriptive
Is the education/training PS goal measurable?	1= yes, 0= no	Compliance
Is there evidence that the education/training PS goal was based on an age- appropriate transition assessment?	1= yes, 0= no	Descriptive
Edu/Training PS: interest inventories?	1= yes, 0= no	Descriptive
Edu/Training PS: formal/informal interview with student/parent?	1= yes, 0= no	Descriptive
Edu/Training PS: other eval. data?	1= yes, 0= no	Descriptive
Edu/Training PS: teacher information?	1= yes, 0=no	Descriptive
Edu/Training PS: IEP documentation?	1= yes, 0= no	Descriptive

Is there evidence that the education/training PS goal was based upon at least one age appropriate transition assessment?	1= yes, 0= no	Compliance
Emp PS goal?	1= yes, 0= no	Descriptive
FT Emp PS goal?	1= yes, 0= no	Descriptive
Com Emp PS goal?	1= yes, 0= no	Descriptive
Supp Emp PS goal?	1= yes, 0= no	Descriptive
Sheltered Emp PS goal?	1= yes, 0= no	Descriptive
Other Emp PS goal?	1= yes, 0= no	Descriptive
Emp PS measureable?	1= yes, 0= no	Compliance
Is there evidence that the employment PS goal was based on an age-appropriate transition assessment?	1= yes, 0= no	Descriptive
Emp PS: interest inventories?	1= yes, 0= no	Descriptive
Emp PS: formal/informal interview with student/parent?	1= yes, 0= no	Descriptive
Emp PS: other eval. data?	1= yes, 0= no	Descriptive
Emp PS: teacher information?	1= yes, 0= no	Descriptive
Emp PS: IEP documentation?	1= yes, 0= no	Descriptive
Is there evidence that the employment PS goal was based upon at least one age appropriate transition assessment?	1= yes, 0= no	Compliance
Career cluster?	1=NA bc no career indicated 2=agriculture, food, & natural resources  3=architecture & construction	Descriptive

	<p>4=business, management, &amp; administration 5=finance</p> <p>6=health science 7=human services 8=law, public safety, corrections 9=arts, AV tech, &amp; communication 10=education &amp; training 11=government &amp; public administration 12=hospitality &amp; tourism 13=information technology 14=manufacturing 15=marketing, sales, &amp; service 16=science, tech, engineering, math 17=transportation, distribution, &amp; logistics</p>	
Does the IEP document describe student's previous or current work experience?	<p>0=not described 1=indicates student has no experience 2=paid employment 3=unpaid/volunteer 4=unknown</p>	Best Practice
Has the student engaged in previous paid or unpaid work experience or is there any indication that the student will experience any paid or unpaid work experience?	1= yes, 0= no	Best Practice
Is there any indication that the student has participated in any employment preparation program(s)?	1= yes, 0= no	Best Practice
Participated in CTE?	1= yes, 0= no	Descriptive
Participated in CBI?	1= yes, 0= no	Descriptive

Participated in WBL?	1= yes, 0= no	Descriptive
Participated in LIFE skills classes?	1= yes, 0= no	Descriptive
Participated in other employment preparation?	1= yes, 0= no	Descriptive
Has the student participated in any employment preparation programming, or are there plans for the student to participate?	1= yes, 0= no	Descriptive
Is there an independent living PS goal?	1= yes, 0= no	Best Practice
Community living goal?	1= yes, 0= no	Descriptive
Daily living goal?	1= yes, 0= no	Descriptive
Self-care goal?	1= yes, 0= no	Descriptive
Other independent living goal?	1= yes, 0= no	Descriptive
Is the independent living PS goal measureable?	1= yes, 0= no	Compliance
Is there evidence that the independent living goal was based on an age-appropriate transition assessment?	1= yes, 0= no	Descriptive
IL PS: interest inventories?	1= yes, 0= no	Descriptive
IL PS: formal/informal interview with student/parent?	1= yes, 0= no	Descriptive
IL PS: other eval. Data?	1= yes, 0= no	Descriptive
IL PS: teacher information?	1= yes, 0= no	Descriptive
IL PS: IEP documentation?	1= yes, 0= no	Descriptive
Is the independent living PS goal based upon age appropriate transition assessments?	1= yes, 0= no	Compliance
What is the total number of annual	#	Descriptive

goals the student has?		
What percentage of the annual IEP goals is measurable?	#	Descriptive
Are 100% of the annual goals measurable?	1= yes, 0= no	Compliance
How many annual goals reasonably support the child to meet the education /training PS goal?	#	Descriptive
How many annual goals reasonably support the child to meet the employment PS goal?	#	Descriptive
How many annual goals reasonably support the child to meet the independent living PS goal?	#	Descriptive
Is there at least one annual goal that supports the child's education / training PS goal?	1= yes, 0= no	Compliance
Is there at least one annual goal that supports the student's employment PS goal?	1= yes, 0= no	Compliance
Is there at least one annual goal that supports the child's independent living PS goal, if appropriate?	1= yes, 0= no	Compliance
Are there transition services that address social skills?	1= yes, 0= no	Descriptive
Are there annual goals or objectives that address social skills?	1= yes, 0= no	Descriptive
Is there any indication that the student has received/is receiving social skills training OR that the student has appropriate social skills?	1= yes, 0= no	Best Practice
Are there transition services that address self- determination?	1= yes, 0= no	Descriptive

Are there annual goals or objectives that address self- determination?	1= yes, 0= no	Descriptive
Is there any indication that the student has received/is receiving instruction/training on self-determination OR that the student has appropriate self-determination skills?	1= yes, 0= no	Best Practice
Was the student utilizing assistive technology in school?	1= yes, 0= no	Best Practice: College
Has the student received instruction on utilizing assistive technology to help meet their needs in school?	1= yes, 0= no	Best Practice: College
Has the student received instruction on use of assistive technology in postsecondary education settings?	1= yes, 0= no	Best Practice: College
Transition services include instruction?	1= yes, 0= no	Descriptive
Transition services include course of study?	1= yes, 0= no	Descriptive
Transition services include related services?	1= yes, 0= no	Descriptive
Transition services include community experiences?	1= yes, 0= no	Descriptive
Transition services include development of employment & other post-school adult living objectives?	1= yes, 0= no	Descriptive
Transition services include acquisition of daily living skills?	1= yes, 0= no	Descriptive
Transition services include provision of functional vocational evaluation?	1= yes, 0= no	Descriptive
Are 100% of the required transition services addressed?	1= yes, 0= no	Compliance



Are the transition services aligned with the child's education/training PS goal?	1= yes, 0= no	Compliance
Are the transition services aligned with the child's employment PS goal?	1= yes, 0= no	Compliance
Are the transition services aligned with the child's independent living PS goal?	1= yes, 0= no	Compliance
Is there evidence that the transition services were based on the child's needs, strengths, preferences, or interests?	1= yes, 0= no	Compliance
Gender	1=male 2=female	Descriptive

\*Note. The “->” symbolizes the coding transformation used to facilitate scoring of the variables. NA transformed as ‘1’ or ‘0’, depending on item.

## Appendix C

## Transition-Planning Variables and their Corresponding Items in the Instrument

Compliance	
Variable	Items (n = 22)
IEP Team	C7. Did all of the required individuals (i.e., student, parent, general education teacher, special education teacher, administrator, and agency representative- if applicable) attend or contribute to the meeting?
	C6. To the extent appropriate, did the parents or the student who has reached the age of majority consent to the invitation of a representative from an outside agency?
Timelines	C1. If the student is age 15 or older, are transition services in place?
	C2. Is there any indication that the parents have been advised that upon age of majority rights transfer to the student?
	C3. Is a summary of performance included?
	C4. If this is a dismissal meeting, does the summary of performance include both a summary of academic achievement and functional performance?
	C5. If this is a dismissal meeting, does the summary of performance include recommendations on how to assist the child in meeting postsecondary goals?
Postsecondary Goals	C8. Is the education/training PS goal measureable (i.e., occurs after graduation AND is an outcome, not a process)?
	C9. Is there evidence that the education/training PS goal was based upon at least one age appropriate transition assessment?
	C10. Is the employment PS goal measureable (i.e., occurs after graduation AND is an outcome, not a process)?
	C11. Is there evidence that the employment PS goal was based upon at least one age appropriate transition assessment?
	C12. Is the independent living PS goal measureable (i.e., occurs after graduation AND is an outcome, not a process)?
	C13. Is there evidence that the independent living PS goal was based upon at least one age appropriate transition assessment?
Annual Goals	C14. Are 100% of the annual goals measureable?
	C15. Is there at least one annual goal that supports the child's education/training PS goal?
	C16. Is there at least one annual goal that supports the child's employment PS goal?
	C17. Is there at least one annual goal that supports the child's

	independent living PS goal?
Transition Services	C18. Are 100% of the required transition services (i.e., instruction, course of study, related services, community experience, employment, and adult living objectives) addressed?
	C19. Are the transition services aligned with the child's education/training PS goal?
	C20. Are the transition services aligned with the child's employment PS goal?
	C21. Are the transition services aligned with the child's independent living PS goal?
	C22. Is there evidence that the transition services were based on the child's needs, strengths, preferences, or interests?

Best Practices	
Variables	Items (n = 10)
Community/Agency Collaboration	P4. Is there any indication that agency representatives contributed to the development of the transition component?
	P5. Did the school/district provide any community agency information?
Family Involvement	P3. Is there any indication that the parent/guardian contributed to the development of the transition components of the IEP document?
General Education Inclusion	P1. Is the student mainstreamed?
	P2. State standardized testing supportive of general education?
Work Experience	P6. Has the student engaged in previous paid or unpaid work experience OR is there any indication that the student will experience any paid or unpaid work experience?
Employment Preparation	P7. Has the student participated in any employment preparation programming, or are there plans for the student to participate?
Social Skills Training	P8. Is there any indication (annual goals, transition services) that the student has received/is receiving social skills training OR that the student has appropriate social skills?
Daily Living Skills Training	P10. Is there any indication (annual goals, transition services) that the student has received/is receiving daily living skills training OR that the student has appropriate daily living skills?

Self-Determination Training	P9. Is there any indication (annual goals, transition services) that the student has received/is receiving training on self-determination (e.g., how to request services/accommodations) OR that the student has appropriate self-determination skills?
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College Best Practices	
Variables	Items (n = 9)
Documentation	P <sub>2</sub> 1. Did the student receive a full psychoeducational/neuropsychological re-evaluation, which included a formal standardized testing for cognitive functioning and academic achievement during high school?
College Preparation	P <sub>2</sub> 2. Was the student enrolled in courses designed for college preparation, including Advanced Placement courses?
	P <sub>2</sub> 3. Was the student enrolled in any college-level coursework, including online and distance-learning?
Compensatory Strategy Development	P <sub>2</sub> 4. Did the student receive targeted instruction on effective study skills for the postsecondary environment?
	P <sub>2</sub> 5. Did the student receive instruction on effective self-management skills (e.g., time management, organization, stress-management)?
Leadership	P <sub>2</sub> 6. Did the student participate in programming (e.g., Self-Directed IEP' Who's Future Is It Anyway), or receive instruction on leading their IEP meetings?
Assistive Technology	P <sub>2</sub> 7. Was the student utilizing assistive technology in school?
	P <sub>2</sub> 8. Has the student received instruction on utilizing assistive technology to help meet their needs in school?
	P <sub>2</sub> 9. Has the student received instruction on use of assistive technology in postsecondary education settings?

## Appendix D

### Sample Letter of Request for Conducting Research – University

Date

XXXXX  
XXXXX  
XXXXX

Dear XXXXXX,

I am a school psychology doctoral student at Alfred University and I am writing to request your assistance with data collection for my dissertation study. As part of my study, I am examining the extent to which high schools adhere to transition-planning mandates in the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA, 2004), as well as engage in best practices in transition to college, in preparing college-bound students with disabilities for success at the postsecondary level.

The purpose of this letter is to give you some information about my dissertation and what would be entailed in terms of data collection. A few main questions that you may have are addressed below:

1. What do you need from me and the XXXXXX?

I need consent from undergraduate students with documented disabilities who are registered with your disability services office to access their IEPs from the high school in which they graduated. Further, I need to access information on the student's SAT/ACT scores, as well as their end-of-first-year GPA.

I also need information on the level of supports offered to students with disabilities at your institution. If you choose to assist me with this important research, attached to this letter is a very brief questionnaire regarding level of support.

2. How will data be used?

Data will be collected and then analyzed using statistical software. Data will then be presented in an aggregated manner. The purpose of the study is to examine if the quality of transition planning practices, as well as other student and institution variables, predicts achievement in the first year of college among students with disabilities.

3. How will this study benefit professionals at the college level?

First, this study would fill an important research gap in the field of postsecondary transition planning, as there are no current studies that have examined the relationship

between quality of transition planning post-IDEIA 2004 and success in college among students with disabilities. Second, given that the results of this study may have important implications for high schools to begin engaging in quality transition-planning practices for this population, students may begin attending colleges better prepared to meet the increased demands at the postsecondary level.

As you may well know, it is critical to continue to add to the literature on transition planning for postsecondary education. If you are interested in participating in this important research, please contact me at your earliest convenience.

Sincerely,

Amy Fisk, M.A.  
School Psychology Doctoral Student  
Alfred University  
[Af11@alfred.edu](mailto:Af11@alfred.edu)  
(585)-307-8499

## Appendix E

## Sample Letter of Consent

Date

Dear XXXXX,

You are being invited to participate in a dissertation study on the potential relationship between quality of transition planning in high schools and success among college students with disabilities. As part of this study, I am requesting access to your most recent Individual Education Plan (IEP) prior to graduating from high school, as well as SAT/ACT scores, and your GPA at the end of your freshman year.

There are no anticipated risks associated with this research. Several steps will be taken to protect your anonymity and identity. First, all participants and their information will be given a subject number so no names are accessible. Second, all paper copies of your IEP/ITP will conceal any identifying information and will be kept in a locked safe box. Only the primary researcher and a research assistant (sworn to confidentiality) will have access to this information. All information will be destroyed after 5 years times.

Your participation in this research is completely voluntary. If you decide to participate, you will have the opportunity to win a \$50 gift card. However, you may withdraw from the study at any time for any reason. If you do this, all of your information will be removed from the data pool.

The results from this study will be presented orally, and potentially in writing, to help professionals in high schools and college better serve college-bound students with disabilities. At no time, however, will your name be used or any identifying information revealed.

If you require any additional information about this study, please contact Amy Fisk at [af11@alfred.edu](mailto:af11@alfred.edu). If you have any other questions regarding your rights as a participant in this research, you may also contact Dr. Danielle Gagne, chair of Alfred University's Human Subjects Research Committee, [hsrc@alfred.edu](mailto:hsrc@alfred.edu), (607)-871-2213.

Sincerely,

Amy Fisk, M.A.  
School Psychology Doctoral Student  
Alfred University  
[Afl1@alfred.edu](mailto:Af11@alfred.edu)  
(585)-307-8499

I have read (or have been read) the above information regarding this research study, and consent to participate in this study.

\_\_\_\_\_ (Printed Name)

\_\_\_\_\_ (Signature)

\_\_\_\_\_ (Date)

\_\_\_\_\_ I have a copy of my most recent Individual Education Plan (IEP) prior to graduating high school in my possession

OR,

\_\_\_\_\_ I do not have a copy of my most recent IEP, and consent my former school district to provide a copy to the researcher

\_\_\_\_\_  
School District

\_\_\_\_\_  
City/Town

\_\_\_\_\_  
Year of Graduation



## Appendix F

### Transition-Planning Recommendations and Resources

#### **Compliance Recommendations for High Schools**

1. Utilize the U.S. Department of Education Indicator 13 checklist to ensure compliance to IDEIA (2004). This checklist can help transition teams to assess how their current IEP writing methods compare to federal standards. Indicator 13, form B for professional development, can be found at [https://transitionta.org/sites/default/files/transitionplanning/NSTTAC\\_ChecklistFormB.pdf](https://transitionta.org/sites/default/files/transitionplanning/NSTTAC_ChecklistFormB.pdf)
2. Develop specific transition planning policies and procedures for college-bound students with disabilities. Gather your transition planning team to discuss and implement written transition planning practices and procedures that can be implemented short-and-long-term. For example, consider what accommodations the student currently has compared to what accommodations may be considered unreasonable at the college level. If possible, begin to wean students off accommodations toward the end of the student's high school career (e.g., spelling waivers, 1:1 paraprofessionals, behavior management systems). Shaw, Madaus, & Dukes (2010) provides a suggested timeline related to transition planning activities, starting in the eighth grade.
3. Develop measureable postsecondary goals that are written as an outcome, not a process. For example, 'Johnny wants to/plans to attend college' is not a measurable postsecondary goal. A measureable goal provides a specific outcome for after

graduation; ‘Johnny will attend a 2-year college for culinary arts after graduating high school with the recommended high school diploma in June 2019.’

4. Create measurable annual goals that have a clear connection to the measureable postsecondary goals and that include mastery criteria and a timeline for completion. For example, suppose the measurable postsecondary education goal states ‘Mary will attend a 4-year university, majoring in History after graduating with a Regent’s diploma in June 2018.’ An appropriate measureable annual goal would state, ‘Mary will receive a 85% or higher on the U.S. History Regent’s exam in January 2018.’ College-bound students’ independent living goals should include the skills needed to live on a college campus or apartment independently, not just basic self-care/hygiene skills.
5. Utilize evidence-based transition assessments. Students’ goals should be based on the student’s strengths, needs, preferences, and interests. Transition assessments are critical in the transition planning process, as they form the basis for defining goals and services to be included in the IEP. Transition assessments can be formal (e.g., standardized testing/scales/inventories), or informal (e.g., interviews, rating scales, case file reviews). Though a majority of IEPs in the current study indicated that the postsecondary goals were achieved via student interviews, more formal assessments such as pre-vocational scales, interest inventories, and college readiness checklists can provide fruitful information regarding the students’ interests and readiness to transition to the postsecondary environment. The National Technical Assistance Center (2016) published an online brief, *Age Appropriate Transition Assessments*, which includes recommendations on evidence-based transition assessments from 8<sup>th</sup> – 12<sup>th</sup> grade.

Thoma and Tamura's (2013) *Demystifying Transition Assessments* provides resources for structured, and unstructured transition assessments/checklists.

Additionally, Landmark College's *A Guide to Assessing College Readiness* (2009) assesses students' level of college readiness in several difference domains, from academic skills and executive function, to self-advocacy and motivation.

6. Discuss transfer of legal rights with students and parents, specifically, the differences between the Individuals with Disabilities Education Act and American with Disabilities Act.
7. Ensure that all required members of the IEP team (e.g., student, parent, general education teacher, special education teacher, counselor/psychologist, and an administrator) are not only present for team meetings, but contribute to the decision-making process.
8. Ensure that a Summary of Performance is completed by the time the student exits high school. The summary of performance should include a) Summary of academic achievement, b) Summary of functional performance, and c) Recommendations on how to assist the student in meeting their postsecondary goals.

### **Best Practices Recommendations for High Schools**

1. Engage in professional development opportunities by reviewing online and book resources on transition planning for college-bound students with disabilities. There is a wealth of information on evidence-based transition planning practices available for stakeholders at the secondary level. Hamblet's (2001) *7 Steps to College Success* and *Preparing Students with Disabilities for College Success* (Shaw, Madaus, & Dukes, 2010) are two highly recommended resources.

2. Involve the family by scheduling team meetings that take the families' schedule into consideration, and gathering their perspective on the students' needs as they relate to college preparedness. In addition, provide parents/guardians with resources on the transition to college, such as PACER's (2018) guide for parents on the transition from high school to college, found at <https://www.pacer.org/transition/learning-center/postsecondary/>.
3. Help students design a course of study that is appropriate for their level of functioning and will prepare them for college-level reading, writing, and math. Students should be weaned into the mainstream environment. Students should be encouraged to take courses/electives that align with their education/employment interests and goals. Further, college-bound students should consider enrolling in Advanced Placement courses (that may also provide the student with transfer credit in college), or an online college-level course.
4. Encourage students to participate in paid/unpaid (e.g., shadowing) work experience that is related to their employment interests and goals.
5. If the student requires social skills training, teach the student skills that will help them navigate the college setting, such as asking for help from a professor, meeting new people, and resolving roommate conflicts.
6. Teach specific skills related to independent living on a college campus. These include, but are not limited to, doing laundry independently, doing chores, accessing public transportation, reading a campus map, and managing a budget.
7. If possible, conduct a full cognitive and academic re-evaluation during the students' high school career. This gives the college disability services office information on the

student's present levels of functioning, which informs the appropriate accommodations the student may need in college.

8. Help students identify assistive technologies for academic purposes, such as Read & Write Gold, reading and writing software, or applications on their phone or electronic device for time management and organization.
9. Teach specific skills related to time management, organization, and exam preparation.
10. Help the family and student decide what postsecondary setting is appropriate after high school. For example, a student may not be prepared for a 4-year college immediately after high school, and may benefit from a 2-year community college program, or part-time status and later on transition to a 4-year program. It would also be beneficial to help the student and family consider if the student is ready to live in the residential halls on a college campus. If the student has not developed age-appropriate living or social skills, they should consider commuting to college if possible.
11. Promote student involvement and leadership by providing explicit instruction for self-advocacy and helping students identify their strengths and challenges, as well as identify what strategies and accommodations help them compensate for those challenges. Encourage students to not only attend their IEP meetings, but also contribute to the decision-making process and possibly help lead their IEP meetings by 11<sup>th</sup> or 12<sup>th</sup> grade. The Self-Directed IEP (1996) is a curriculum that teaches students to take a leadership role in their IEP/transition meetings.
12. Meet with personnel from local college disability services offices to gain knowledge on what skills and competencies students with disabilities are required to have, how

students' legal rights are different at the college level, how students access accommodations, and what resources are available at that institution. Plan a 'transition night' for students and families, in which local college disability services personnel have an opportunity to discuss important information related to transition to the postsecondary level (e.g., change in legal rights, academic and behavioral expectations). Invite special education teachers, administrators, counselors, and any other important stakeholders. It may also be beneficial to invite these professionals to a student's IEP team meeting.

### **Recommendations for Colleges**

1. Collaborate with stakeholders at the secondary level when given the opportunity
2. Include transition-planning resources/information sheets for parents, students, and transition counselors on your disability services website.
3. Provide professional development opportunities and/or resources for faculty on working with students with disabilities. *Supporting College and University Students with Invisible Disabilities* (Oslund, 2013) is a guide for faculty and staff for working with students with Autism, AD/HD, Anxiety, and other Mental Health diagnoses.

## Appendix G

## Curriculum Vitae

**Professional Summary** 

---

Nationally Certified School Psychologist with experience in the K-12 and higher education settings. Demonstrates expertise in postsecondary transition planning for college-bound students with disabilities.

**Education** 

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- 2018 **Psy.D School Psychology**  
Alfred University – Alfred, NY
- 2015 **Master of Arts: School Psychology**  
Alfred University – Alfred, NY
- 2013 **Bachelor of Arts: Psychology**  
State University of New York at Fredonia – Fredonia, NY

**Higher Education Experience** 

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- 07/2017 to Current **Cornerstone Program Coordinator**  
Purchase College – Purchase, NY
- Organizes and manages the Cornerstone Program, which provides individualized services for Purchase College students with an Autism Spectrum Disorder
  - Provides direct academic, social, and executive functioning interventions for students
  - Supervises undergraduate students for the Cornerstone Peer Mentor Internship as well as the Cornerstone Program Graduate Internship
  - Consults with Purchase College faculty and staff on working with students on the Autism Spectrum
- 07/2016 to 08/2016 **Curriculum Developer**  
Alfred University – Alfred, NY
- Developed curriculum for *Foundations of Learning (UNIV 100)* course for academically at-risk undergraduate students at Alfred University
- 08/2014 to 05/2016 **Academic Consultant**  
Alfred University – Alfred, NY
- Review of documentation in determining appropriate accommodations and services
  - Individual consultation with students with disabilities for academic and self-management skill development

- Presented on a variety of topics to academically at-risk undergraduate students (e.g., effective study skills; time-management; stress-management)

08/2015 to 05/2016

**Advanced Practicum Student Counselor**

**Alfred University Counseling and Wellness Center** – Alfred, NY

- Provided therapeutic services for undergraduate and graduate students

## School Experiences

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09/2016 to 06/2017

**School Psychology Doctoral Intern**

**North Colonie School District** – Latham, NY

- Conducted triennial and initial psychoeducational evaluations and Functional Behavioral Analyses
- Consulted with general and special education teachers for academic and behavior interventions
- Participated in district team meetings (e.g., Committee on Special Education)

## Affiliations

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- National Association of School Psychologists
- New York Association of School Psychologists
- College Autism Network
- American Psychological Association

## Recognitions

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- Lea R. Powell Institute Excellence Award and Fellowship, Alfred University

## Publications and Presentations

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### Publications

Lupton, C. & Fisk, A. (2015). Paws for Intervention: Perceptions about the use of dogs in schools. *Journal of Creativity in Mental Health*, 1-17. doi: 10.1080/15401383.2016.1189371

Gee, N. R., Friedman, E., Coglitore, V., Fisk, A., & Stendahl, M. (2015). Does physical contact with a dog or person affect performance of a working memory task? *Anthrozoos*, 28(3), 483-500. doi: 10.1080/08927936.2015.1052282

### Presentations

Fisk, A. & Rodriguez, L. (2018). Transition from High School to College for Students with Disabilities. Paper presented at the New York Association of School Psychologists Conference, Lake Placid, NY.



Rodriguez, L., Fisk, A., & Schaffer, G. (2018). Uncharted Territory: School Psychologists Supporting Students in Higher Education. Paper presented at the New York Association of School Psychologists Conference, Lake Placid, NY.

Fisk, A. & Burch, A. (2016). Are they really ready? Perceptions of College Readiness of Students with Disabilities. Poster presented at the American Psychological Association Conference, Denver, CO; (2016) Paper presented at the New York Association of School Psychologists, Rochester, NY.

Fisk, A., Cappotelli, M., & Atlas, J. (2016). Promoting Wellness or Promoting Weight-Loss: Obesity Prevention in Schools. Poster presented at the National Association of School Psychologists, New Orleans, LA; (2015) Poster presented at the New York Association of School Psychologists Conference, Syracuse, NY.

Lupton, C. & Fisk, A. (2015). Application of Therapy Dog Services in Schools: A Qualitative Analysis of Positive Psychological and Academic Outcomes for Students. Paper presented at the New York Association of School Psychologists Conference, Albany, NY; (2015) Paper presented at the National Association of School Psychologists Conference, Orlando, FL.