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THE RELATIONSHIPS AMONG ACADEMICS, GPA, AND THE TRANSITION ASSESSMENT AND GOAL GENERATOR (TAGG) IN STUDENTS WITH MILD TO MODERATE DISABILITIES

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A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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To My Husband, Family, Friends, and Students

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ABSTRACT

A nationwide push for students with disabilities to receive instruction in the general education classroom has stemmed, in part, from current legislation and high stakes testing. Student GPA continues to be a major factor in admission standards for postsecondary schools and initial employment opportunities. The focus on receiving instruction in the general education classroom and increasing student GPA may have unintended consequences for students with disabilities. Simply placing students in the general education setting and raising grades may not adequately prepare students with disabilities for life after high school. This study provides discriminate evidence of validity based on relations to other variables for a developing new transition assessment. Test developers used current literature that identified non-academic behaviors known to impact post-school success of students with disabilities to construct the Transition Assessment and Goal Generator (TAGG). The initial version of the TAGG consists of 75 items across ten domains and is offered in three parallel versions, professional, family member, and student. This study sought to determine if relations existed between the percent of time students with disabilities received instruction in the general education classroom and student GPA with TAGG scores provided by educators, family members, and students. Total TAGG scores provided by educators yielded weak statistically significant correlations with both percent of time students received instruction in the general education setting ($r = .136$, $p < .05$) and student GPA ($r = .199$, $p < .05$). Total scores provided by family members and students did not yield statistically significant correlations. This suggests that the TAGG measures behaviors different from those represented by GPA and educational placement. Students with

disabilities who receive instruction in the general education setting and have higher GPAs may not automatically acquire the nonacademic skills and behaviors known to impact success after high school. A need remains for a research-based transition assessment to provide educators with possible annual transition goals to improve the likelihood of post-school success for students with disabilities. Implications for practice and future research needed are also discussed.

CHAPTER 1: INTRODUCTION

The definitions of transition, transition services, and necessary components of transition planning have transformed over the last two decades. Will (1984) and the United States Department of Education's Office of Special Education and Rehabilitative Services (OSERS) created a "bridge from school to working life" model as a response to census data reporting that 50 to 80 percent of individuals with disabilities remained unemployed as adults. This model defined transition as an "outcome-oriented process" and focused on transition planning for post-school employment of students with disabilities. With this model, Will represented the transition from school to work for students with disabilities with three common "bridges" that students with disabilities usually cross into post-school employment: (a) no special services, (b) time-limited services, and (c) ongoing services.

In 1985, Halpern posed additional areas to consider for successful community adjustment that are equally important to employment, such as community living, socialization, and interpersonal networks. Federally funded projects of the 1980s identified further areas such as self-advocacy, community participation, recreation, transportation, personal management, and postsecondary education as crucial to transition planning (Patton, 1995). Halpern (1987) then organized his transition model to include four pillars: (a) academic skills, (b) vocational skills, (c) social skills, and (d) independent living skills. Halpern's four pillars assisted policymakers in shaping the transition requirements for IDEA 1997 (Greene & Kochhar-Bryant, 2003).

Due to poor post-school outcomes of students with disabilities, including lower graduation rates and lack of employment, the Individuals with Disabilities Education

Act (IDEA) 2004 mandated that students with Individualized Education Programs (IEPs) aged 16 and older have transition plans that include postsecondary and annual transition goals based on age-appropriate transition assessment. The law provided no definition of transition assessment, guidance for educators concerning the number or type of transition assessments to administer, or the quality of either formal or informal assessments used for transition planning.

The content of transition assessments varies from measures of self-determination to career interest inventories. No known transition assessment exists that measures non-academic behaviors related to postsecondary success in the areas of education and employment for individuals with disabilities with items based on research identified indicators of post-school success with adequate evidence of reliability and validity.

The American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (AERA, APA, & NCME, 1999) specified standards for reliable and valid educational and psychological testing. After evaluating 142 transition assessments, Dais and Kohler (1995) found 38 of the assessments did not report evidence of either reliability or validity. Reliability is the consistency of measurements when an assessment is repeated with a group of individuals (AERA et al., 1999). Validity is an evolving concept that requires various sources of evidence and theory to support the use and intended interpretations of test scores. Validity includes "evidence of careful test construction; adequate score reliability; appropriate test administration and scoring; accurate score scaling, equating

and standard setting; and careful attention to fairness from all examinees" (AERA et al., 1999, p. 17).

An increased focus on high-stakes testing has led to more students with disabilities being placed in the general education setting and academic achievement has been found predict post-school employment (McDonnall & Crudden, 2009). Other studies have found that low GPAs prohibited students from attending postsecondary education, and that GPA predicted employment (i.e. Horn, Berktold, and Bobbitt, 1999; Leonard et. al., 1999). It is known that receiving instruction in the general education and GPA are predictors of post-school success for students with disabilities, yet it is not known how these variables relate to other factors that indicate student post-school success.

Problem Statement

Academic goals are included in IEPs from the time students begin to receive special education services. Transition goals are not required until the student reaches the state mandated transition age. IDEA 2004 stated that transition goals should derive from appropriate transition assessment. A need exists for a transition assessment that educators can use in a valid and reliable manner to develop annual transition goals that differ from already present academic goals and will allow students to obtain skills known to indicate post-school success. Juan (2008) conducted a review of current literature and transition assessments and found no assessments that used a research-based approach to assess indicators of post-school success. The Transition Assessment and Goal Generator (TAGG) research team conducted a review of literature to identify skills students can learn in high school that seem to predict post-school success in the

areas of further education and employment for students with disabilities. The TAGG team arranged the indicators into 10 constructs and created items to assess the specific behaviors. The TAGG has the potential to provide educators a tool to assess skills known to indicate post-school success for students with disabilities and the TAGG team is currently gathering evidence of reliability and validity for the assessment.

Purpose of the Research Project

This validity study determined the extent that relations exist between (a) TAGG scores and percent of time spent in general education, (b) TAGG scores and student GPA, and (c) each of the 10 TAGG constructs and percent of time spent in general education and student GPA. I used extant data from a larger study concerning the development of the TAGG. This study provided empirical evidence of validity for use of the TAGG and supports a need for a research-based transition assessment to provide possible annual transition goals to improve the likelihood of post-school success for students with disabilities. If the non-academic behaviors measured by the TAGG are not related to student GPA or the percent of time students with disabilities receive instruction in the general education setting, the discriminate validity evidence provided by this study will show that the TAGG assess behaviors different than those represented by GPA and gained from receiving instruction in the general education setting. This demonstrates that the TAGG may assist to build a more complete profile of what students need to learn in high school to be successful after high school that compliment academics and educational setting, yet are not related.

Specific Research Questions

This study will attempt to answer the following research questions:

1. What is the relation between TAGG scores and the percent of time students with disabilities receive instruction in the general education classroom?
2. What is the relation between TAGG scores and academic achievement as measured by student GPA for students with disabilities?

Significance of the Study

Since the 1960s, researchers, parents, and educators have reported dismal post-school outcomes for students with disabilities to policymakers with hopes of finding a solution (Greene & Kochhar-Bryant, 2003; Halpern, 1985; Will, 1984). More current information reported that working-age individuals with disabilities, those who are not living in institutions and aged 16-64, continue to be employed at a much lower rate than non-disabled working-age individuals. In fact, the employment rate for individuals with disabilities declined from 48.3 percent in 2000 to 37.7 percent in 2006 (Butterworth, Smith, Hall, Migliore, & Winsor, 2008). Information released from the Bureau of Labor Statistics (2011) reported a 21.3 percent employment participation rate for individuals over or the age of 16 with a disability compared to a 69.6 percent participation rate for those without a disability in October 2011. In the most recent findings from the National Longitudinal Transition Study-2 (NLTS-2), Sanford et al. (2011) reported six years after high school, students with disabilities are less likely to be financially independent, have a checking or savings account, attend postsecondary education, and are more likely to have children than their non-disabled peers. Even though more students with disabilities are enrolling in postsecondary education, after five years of enrollment, 80% had not yet graduated compared to 56% of their non-disabled peers (Murray, Goldstein, Nourse, & Edgar, 2000).

Researchers have conducted many studies to determine indicators of post-school success for students with disabilities (e.g., Benz, Lindstrom, & Yovanoff, 2000; Fourqurean, Meisgeier, Swank, & Williams, 1991; Halpern, Yovanoff, Doren, & Benz, 1995; Test et al., 2009). The knowledge gained from these studies was used to develop the TAGG, a transition assessment based on known indicators of post-school success for students with disabilities. This study will contribute to a growing body of validity evidence for the TAGG.

The student's vision for the future should drive the entire IEP process (Sitlington, Neubert, & Leconte, 1997). The Individualized Educational Program's academic goals, annual transition goals, and coordinated activities should be relevant to the student and the student's vision, or postsecondary goal, for the future (Miller, Lombard, & Corbey, 2007). Leconte (2006) recommended that educators use transition assessments to identify needs of students to transition into adulthood. The goals of transition assessments are to assist students in making informed choices about their futures, take an active role in the transition process, and understand the skills and training needed for their chosen post-school aspirations (Test, Aspel, & Everson, 2006). Transition assessment can also guide students who are unsure of an occupation, education and training, and future living arrangements through the career development process and teach them to make adjustments as necessary.

The process of participating in transition assessments can serve as an intervention itself. Students often reevaluate their futures simply by critically analyzing assessment questions. Transition assessments, when used effectively, lead students from post-school uncertainty to a well-developed transition plan to accomplish postsecondary

goals (Leconte, 2006). The TAGG may provide a research-based means of identifying annual transition goals for students with disabilities that focus on known behaviors of post-school success. By identifying annual goals using the TAGG, educators can provide more opportunities for students to gain meaningful skills in high school that may result in more positive post-school employment and postsecondary education outcomes.

Assumptions

Assumptions made for all correlational research include linearity between the two continuous variables and restriction of range if the sample is homogeneous (Lomax, 2007). For this study, the following additional assumptions were made (a) all educators watched the training video and followed training video guidelines when administering the TAGG, (b) participating students appropriately received special education services by their home school districts, and (c) all students, educators, and parents responded honestly and accurately to the TAGG. Two assumptions suggested by Green and Salkind (2008) assert that for correlation studies, the cases must represent a random sample from the population, scores for one case must be independent of one another, and variables must be normally distributed.

Organization of the Study

There are five chapters included in this study. Chapter 1 includes an introduction, statement of the problem, purpose of the study, research questions, significance of the study, assumptions, and organization of the study. Chapter 2 presents a current and historical review of legislation and literature to support this study, explains the construction of the TAGG, provides information concerning reliability and

validity of currently available assessments, and the need for a new transition assessment. Chapter 3 describes the methodology used to conduct this study, including the research design, participants and setting, variables, instrumentation, procedures, and plan for data analysis. Chapter 4 contains findings and results for the study. Chapter 5 includes a summary, conclusions, implications for practice, and future research.

CHAPTER 2: REVIEW OF LITERATURE

We experience many transitions throughout our lives; most of us transition from hospital to home, from home to school, from school to adult roles, to retirement. Parents and guardians often dictate the transitions in our young lives until the transition from high school, which can be an overwhelming experience for many students, especially students with disabilities (Halpern, 1992). Halpern (1992) believed this transition period can last several years after a student leaves high school and some students may "flounder" for their entire lives.

Researchers, parents, and educators have reported dismal post-school outcomes for students with disabilities to policymakers with hopes of finding a solution since the 1960s (Greene & Kochhar-Bryant, 2003; Halpern, 1985; Will, 1984). Halpern (1992) outlined the three most influential transition movements of previous decades to give a historical overview of the field: (a) vocational and work-study programs, (b) career education, and (c) transition education. Halpern's (1992) well-referenced article is one example of how leaders in the field of special education have influenced the views of policymakers to ensure students with disabilities leave high school with every opportunity to succeed in their chosen life paths.

Evolution of Transition

Vocational and work study programs of the 1960s. The 1963 Vocational Education Act (P.L. 88-210) served a foundational role in the history of today's transition planning services for students with disabilities. The purpose of this act maintained and improved current vocational programs to support individuals who had disadvantages in the areas of academics or socioeconomic status to obtain a vocational

education. The Vocational Education Act provided federal funding for work-study, training, and demonstration programs.

To form work-study programs, local education agencies teamed with state rehabilitation agencies to create educational opportunities for students with disabilities that incorporated social, vocational, and academic curricula. In a work-study program, a classroom teacher served as the work coordinator and designated a portion of the school day to placing students with disabilities into work settings. Students in this program would earn school credit, gain valuable work experience, and have the opportunity to work with the state rehabilitation agency before leaving high school (Halpern, 1992).

Two problems arose with work-study. First, the local education agency and the state rehabilitation agency split the work coordinators' salaries; school administrators did not heavily support this division in monies due to the requirement of supervision by the state rehabilitation agency over the school system. Second, the passage of two laws, the Rehabilitation Act Amendments of 1973 and the Education for All Handicapped Children Act of 1975, no longer allowed the state rehabilitation agency to pay a portion of teacher salaries and work-study programs fell out of favor with most school systems. The need for employment training and opportunities for students with disabilities remained after the abolishment of most work-study programs (Halpern, 1992).

Career education of the 1970s. In 1969, Hill conducted a study that examined the perceptions of 162 students and found that students had difficulty connecting the "world of school" to the "world of work." The United States Commissioner of Education, Sidney Marland, Jr., (1974) acknowledged career education to be a top priority for general education students in America. The Commissioner blamed high

dropout rates of America's youth on the lack of "relevant" education provided by the public school systems (Marland, 1974). This movement focused on general education and extended to include students with disabilities in 1976 with the Career Education Implementation Incentive Act (P.L. 95-207). This act aimed to infuse career education into the curriculum for students with disabilities. What once was an initiative for general education students had expanded to include *all* students from elementary to high school (Halpern, 1992).

In 1977, the United States Department of Health, Education, and Welfare (HEW) declared schools were responsible for providing transition services, including (a) career education and skill requirements, (b) individualized student skill and aptitude information, (c) job-seeking skills, and (d) "early socialization of young people into occupational roles" (Kochhar-Bryant, Shaw, & Izzo, 2007, p. 12). The idea of providing transition services to students well before graduating from high school was further developed by Brolin and Kokaska in 1979.

Brolin and Kokaska (1979) created a seminal career development model to explain the process students complete for a successful transition into employment, which consists of four phases: (a) awareness, (b) exploration, (c) preparation, and (d) assimilation. Career awareness usually begins at a young age when a child is exposed to new occupations. A child is aware that different occupations exist and a career path must be chosen, however the child does not express clear preferences concerning an occupation choice. Students in this stage may also hold unrealistic goals due to lack of knowledge concerning preparation required for each career. These students often have

limited experiences with career choices or the range of employment options available in different career fields (Brolin & Kokaska, 1979).

Students then move to the career exploration stage. In this stage, students explore several aspects of a career such as salary, type of labor, and whether or not a career matches the interests and skills of the student. Students in this stage will benefit from career research projects and job shadowing experiences. The student is then ready for the career preparation stage (Brolin & Kokaska, 1979).

In the career preparation stage, the student begins planning a high school program and beyond to match career interests and skills. Career preparation planning includes courses that will prepare the student, skills needed for the desired career, exploration of vocational technology programs that offer preparation for the desired career and requirements for admission, college programs for the desired career, requirements for admission, and cost (Brolin & Kokaska, 1979).

In the career assimilation stage, a student considers life beyond high school and college preparation for a career. A student will contemplate advancement in career, retirement and benefits, and transferability of skills to other careers (Sitlington, Neubert, Begun, Lombard, & Leconte, 2007). Brolin and Kokaska's (1979) career development model became widely used in career and transition literature and is referenced today to demonstrate the need for career education in younger grades. Clark (1979) created a career education curriculum for elementary-aged children with disabilities that included career vocabulary, suggested books, and films to be implemented in the already present elementary curriculum. Clark (1979) proposed that educators and counselors could

impact the value students place on education and promote a positive work ethic by connecting curriculum with student post-school aspirations at a young age.

Transition of the 1980s and 1990s. In 1983, states and local education agencies were encouraged to include transition supports for students with disabilities through amendments to the Education of the Handicapped Act (P. L. 98-199). Some school systems responded by implementing some form of school-to-work program. Participation was voluntary with no system for accountability, and few states and local school districts followed through with the suggested transition supports (Kochhar-Bryant, Shaw, & Izzo, 2007).

The reauthorization of the Vocational Education Act of 1984, commonly referred to as the "Perkins Act," focused on accessibility of recruitment, enrollment, and placement into vocational programs for all individuals, including those with disabilities, and provided funding to support the career development of these individuals. Individuals who had disabilities, were incarcerated, disadvantaged, and single parents and homemakers qualified for career planning and services and were specifically mentioned in this act.

Transition Legislation

Vocational Rehabilitation Act of 1973 (P.L. 93-112). Before educators were required to write IEPs for students with disabilities, the Vocational Rehabilitation Act of 1973 (P.L. 93-112) required rehabilitation service providers to write an Individualized Written Rehabilitation Plan (IWRP) for individuals with disabilities. This plan included long-term rehabilitation goals, types of services vocational rehabilitation would provide, and rehabilitation evaluations (Test et al., 2006). The

Vocational Rehabilitation Act of 1973 was not restricted to employment-only mandates; the act also stressed the importance of community life and daily living skills for individuals with disabilities.

IDEA 1990. Policymakers used seminal models and previous rehabilitation legislation for the basis of the first transition amendment to IDEA in 1990, which required educators to address transition services by including coordinating activities for all students with disabilities by the age of 16 (Greene & Kochhar-Bryant, 2003). IDEA 1990 defined transition services as

> A coordinated set of activities for a student, designed within an outcome oriented process which promotes movement from school to post-school activities, including postsecondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation.

Researchers and educators continued to manipulate the definition of transition to reflect all areas of need for a successful transition to life after high school for students with disabilities. The Council for Exceptional Children's (CEC) Division on Career Development and Transition (DCDT) supported a definition of transition in a position paper in 1994 that described transition as

> …a change in status from behaving primarily as a student to assuming emergent adult roles in the community. These roles include employment, participating in postsecondary education, maintaining a home, becoming appropriately involved in the community, and experiencing satisfactory personal participation and

coordination of school programs, adult agency services, and natural supports within the community. (Halpern, 1994, p. 117)

IDEA 1997. The reauthorization of IDEA in 1997 preserved the term "transition services" and included numerous additions to strengthen services provided to students with disabilities to encourage positive post-school outcomes. The following changes to the 1997 reauthorization of IDEA affected transition (a) related services were added as a possible transition service, (b) the definition of special education was expanded to include the preparation of students with disabilities to transition to life after school, (c) course of study was added to transition services, (d) transition planning to begin at age 14, and (e) students must be informed of the transfer of rights at least one year in advance of reaching the age of majority (Test et al., 2006).

IDEA 2004. In 2004, the reauthorization of IDEA once again refined the purpose of special education to provide a free and appropriate public education to prepare students with disabilities for further education, employment, and independent living. IDEA 2004 required transition planning for students with disabilities to begin at age 16 and mandated all IEPs for students with disabilities ages 16 and older must include appropriate measureable postsecondary goals in the areas of education, employment, and when appropriate, independent living based on age-appropriate assessment (Test et al., 2006). IDEA 2004 does not specifically define transition assessment. However, Division of Career Development and Transition (DCDT) explained transition assessment using a definition provided by Sitlington, Neubert and Leconte (1997) as "…ongoing process of collecting data on the individual's needs, preferences, and interests as they relate to the demands of current and future working,

educational, living, and personal and social environments" (p. 70). This definition has appeared in documents funded by the U.S. Department of Education such as the Age-Appropriate Transition Toolkit (Fowler, Walker, & Rowe, 2010) and Indicator 13 training materials (National Secondary Transition Technical Assistance Center, 2009), which suggests approval of this transition assessment definition.

Transition Assessment from Current and Historical Perspectives

Researchers and educators have used assessments to guide student placement in the least restrictive environment, consider students for special education services, identify needed supports and services, and evaluate present levels of performance. IDEA 2004 requires educators to use transition assessments to determine appropriate transition goals for students with disabilities. Transition assessments allow educators to proactively guide students into chosen post-school visions by requiring students to evaluate current skills and interests and question how these skills and interests may be applied to life after high school. Kochhar-Bryant et al. (2007) suggest transition assessment should address several life domains and answer the questions

- What knowledge and skills does the student need to successfully enter employment, postsecondary education, adult services, independent living, or community participation?
- What knowledge and skills does the student currently demonstrate in each of these areas?
- What knowledge and skills does the student still need to acquire over the next few years? (p. 37).

Although IDEA 2004 does not define transition assessment, CEC's Division on

Career Development and Transition (DCDT) defines transition assessment as an "ongoing process of collecting data on the individual's needs, preferences, and interests as they relate to the demands of current and future working, educational, living, and personal and social environments" (Sitlington et al., 1997, p. 70-71).

Transition Assessment in the IEP Process

The student's vision for the future should drive the entire IEP process (Sitlington et al., 1997). The Individualized Educational Plan, academic goals, annual transition goals, and coordinated activities should be relevant to the student and the student's vision, or postsecondary goal, for the future (Miller et al., 2007). This postsecondary goal should include where the student would like to work, learn, and live (Oklahoma State Department of Education, 2011). Leconte (2006) recommended that educators use transition assessments to identify needs of students to transition into adulthood. The goals of transition assessments are to assist students in making informed choices about their futures, take an active role in the transition process, and understand the skills and training needed for their chosen post-school aspirations (Test et al., 2006). Transition assessments can also guide students who are unsure of an occupation, education and training, and future living arrangements through the career development process and teach them to make adjustments as necessary. The process of completing transition assessments can serve as an intervention. Students may reevaluate future plans due to analyzing assessment questions. Transition assessments can lead students from post-school uncertainty to a well-developed transition plan to facilitate successful completion of postsecondary goals (Leconte, 2006).

Transition planning is a process that requires communication among many key players, including the student, parents, support agencies, and educators. It is important that students reevaluate career plans and goals each year and begin career planning as early as possible (Sax & Thoma, 2002). Special education teachers should not be surprised that a student's postsecondary goal may change each year, requiring a new focus for the IEP. When students have opportunities to learn what a career entails or the opportunity to learn about new careers, interests may change. This change is the reason it is imperative to assess interests and skills often using age-appropriate transition assessment (Sax & Thoma, 2002).

Types of Transition Assessments

Transition assessments can be formal or informal, free or commercially available, standardized or nonstandardized. None of these qualities makes one assessment better than another; however, educators and researchers need to be aware of the intended use for each assessment and match the intended with actual use.

Greene and Kochhar-Bryant (2003) discern traditional educational assessment from transition assessment by clarifying that traditional education assessments focus on a student's academic needs and are very educator-driven. In contrast, transition assessments focus on a student's strengths, interests, and preferences and encourage student involvement. There are typically two types of transition assessment, formal and informal, and many experts in the field recommend using a combination of the two for a comprehensive transition planning process (Sax & Thoma, 2002; Sitlington et al., 2007; Test et al., 2006).

Formal transition assessment. Formal transition assessment includes standardized means of collecting information and norm-referenced procedures that ensure valid and reliable data. Formal assessments are commercially available and generally provide a large amount of data in a short period. Educators, in general, should use caution with formal assessments, as the results may not generalize to every individual depending on for whom the test was normed (Rojewski, 2002). An assessment intended for students with more significant disabilities is not appropriate for all students and educators need to be aware of intended populations when purchasing commercially available formal assessments.

Examples of formal transition assessment include (a) vocational skill assessments, (b) aptitude assessments, (c) quality of life scales, (d) adaptive behavior scales, (e) transition knowledge inventories, and (f) social skill inventories (Blalock, Patton, Kholer, & Bassett, 2008). Formal transition assessment enables educators to compare student scores to those of other students or "norms." Normed formal transition assessments provide student data as compared with others at that particular moment. However, not all formal transition assessment results are "normed" (Test et al., 2006). Formal assessments provide reliability and validity information to attribute to evidence-based practices, and some of these have normed results.

Informal transition assessment. Due to the student-centered nature of transition planning, informal assessments are often used and may be utilized in various settings including classrooms, worksites, and home (Test et al., 2006). Informal assessments are often teacher-made and some do not report results as an actual score. Hundreds of informal transition assessments exist, and educators most commonly use

structured interviews with students and families, observations, and checklists to assess interests and preferences (Blalock et al., 2008).

Interviews can provide valuable anecdotal information to determine needs and preferences of students and the desires of students and family members. Educators may use self-created guided questions or those guided questions provided by professional resources such as the "Student Dream Sheet" (Test et al., 2006) or "Relevant Assessment Questions for Career Development" (Sitlington et al., 2007). Student observations valuable for collecting transition-planning data often occur in natural settings, such as a worksite or classroom. Observations may include analysis of a student completing a task, the presence or absence of work behaviors, ability to remain on task, and frustration levels (Test et al., 2006). Educators often use checklists as a quick and easy way to obtain valuable information. Many transition textbooks provide ready-to-use reproducible checklists, which adds to the appeal of using checklists for transition assessment (Miller et al., 2007; Test et al., 2006; Sitlington et al., 2007). Informal assessment allows open communication among students, parents, and transition service providers to develop a transition plan that represents the views, beliefs, and desires of all key members of the transition planning team, most importantly the student.

Areas of Transition Assessment

Just as the definition of "transition services" remains in a constantly evolving progression, the process and areas to address through transition assessment also continue to transform. The Assess, Plan, Instruct, and Evaluate (APIE) model as described by Test et al. (2006) required educators to first assess students to identify

strengths, preferences, and needs as related to the student's transition goals. Educators then plan annual goals based on the assessment results. Next, educators instruct students and provide opportunities to accomplish annual transition goals. Finally, educators evaluate progress toward annual transition goals and determine whether students met the annual goals. The process then repeats itself to assess new areas and plan for new goals. The APIE model provided a "systematic process for transition assessment that meets the needs of all students" (Test et al., 2006, p. 67). The APIE is still utilized today; however, the model does not address which areas of a student's future transition assessment should assess.

In 2002, Rojewski created a transition assessment model that contained three levels and begins three to four years prior to student completion of high school. Rojewski (2002) aimed for his model to be a true individualized assessment process tailored to each student's postsecondary goal. In level 1, educators or career counselors rely heavily on informal assessments to review existing data, conduct student interviews, and collect information such as interest, career, and preference inventories to determine whether students possess career awareness and enough information about a chosen career to develop a transition plan. Level 2 assists students who are not aware of a desired career and assists students to hone interests, strengths, and preferences for the future. Educators or career counselors use a combination of formal and informal assessments to identify and explore careers and career readiness skills needed for professions. Level 3 provides the most support for students who need additional assistance to identify post-school goals and is usually reserved for students with more significant vocational needs. Vocational evaluators or transition assessment specialists

observe the student in work-related settings, assess needs for independent living, and assist students with adult service support agencies. Rojewski (2002) believed

> Information gathered through assessments guided by these three domains (career, environment, and interactions between career and environment) can be used to develop an individual career profile or portfolio that outlines the result of assessment and provides recommendations for career and life goals, as well as corresponding program interventions. (p. 89)

Miller et al. (2007) believed effective transition planning must contain five types of transition assessment, either formal or informal, including assessments of (a) future planning goals and needs, (b) self-determination and self-advocacy skills, (c) academic and behavioral strengths and needs, (d) life skill needs, and (e) vocational interests and aptitudes. This transition model viewed all transition assessments as interrelated where one area often affects the student's outcome in another. The authors posed that academic strengths and needs affect future outcomes of students and self-determination and self-advocacy skills affect student performance in academic settings. Social skills affect the student's ability to request needed accommodations in an academic setting, and to obtain and maintain employment. The field that the student desires to pursue after high school affects the coursework planning while in school. When combined, these assessments allow transition services providers to view a complete picture of the student's post-school goals and assist in identifying needed interventions to enable the student to achieve post-school goals.

Assessment of future planning goals and needs. Ochs and Roessler (2001) conducted a study to determine whether sophomore, junior, and senior students with

disabilities possess the career maturity needed for success in the 21st century. Ninety-five students in special education and 99 students in general education completed a comprehensive career assessment that included a self-efficacy scale, career decision making scale, career exploratory scale, and career identity scale to answer the research question, "Do career maturity levels of students with disabilities compare favorably to those of students without disabilities?" (p.171). Resource room teachers administered career measures orally, while general education teachers provided the instrument in a paper-pencil format to the students without disabilities. Results indicated that students with disabilities scored significantly lower than students without disabilities in terms of self-efficacy, career decision-making skills, career outcome expectations, career exploration intentions, and career identity. Students with disabilities were less confident in their ability to gather career information, less likely to make connections between career-related activities and opportunities for employment, and did not feel ready to make decisions about their futures. Without systematically teaching future planning, students with disabilities may continue to experience frustration and uncertainty in terms of future outcomes.

Future planning is paramount for successful transition from high school in achieving post-school visions for students with disabilities. In this area of transition assessment, students express desires for the future in the areas of vocation, education or training, and living. Some students have a more developed picture of their futures than others and both groups will benefit from assessments of future planning. Future planning is a process and not a one-time event, should be reassessed at least annually,

and future planning alone is not a comprehensive transition assessment (Miller et al., 2007).

Future planning includes perceptions of the student's future from parents, the student, and educators. Each should participate in a future-planning inventory independently to express post-school aspirations of the student in the areas of employment, education, and independent living. Members of the IEP team then discuss common visions with the student (Miller et al., 2007). Miller et al. (2007) suggest future planning directly links with student self-determination skills, and the assessment of both provides the foundation for all other transition assessment.

Assessment of self-determination and self-advocacy skills. Wehmeyer and Schwartz (1997) described the ability to apply self-determination, academic, social, and occupational skills to multiple settings as attributes associated with positive postsecondary outcomes. Self-determination has become a focus of the transition process and has led to considerable studies and literature concerning self-determination and positive postsecondary outcomes. Field, Martin, Miller, Ward, and Wehmeyer (1998) described self-determination as

> A combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior. An understanding of one's strengths and limitations, together with a belief of oneself as capable and effective are essential to self-determination. When acting on the basis of these skills and attitudes, individuals have greater ability to take control of their lives and assume the role of successful adults in our society. (p. 2)

Self-determination skills are crucial for all students with and without disabilities to control their own lives. Students need the empowerment, self-esteem, and self-worth to make decisions for themselves without undue influence or others making decisions for them (Ward, 1996). Wehmeyer and Schwartz (1997) found self-determined students are twice as likely as students who are less self-determined to participate in paid employment one year after graduation and are more likely to obtain benefits such as vacation time and health insurance three years after graduation. Sarver (2000) discovered college students who identified themselves as having learning disabilities and obtained higher self-determination scores received higher grades than students with lower self-determination scores.

According to Trainor, Lindstrom, Simon-Burroughs, Martin, and Sorrells (2008), there is a strong relationship between students with disabilities' self-determination skills and their academic performance and post-school outcomes, which suggests that self-determination skills are imperative to achieve transition goals and should be included in transition assessment. As self-determination skills increase, academic performances also increase in students with disabilities (Martin, Mithaug, Cox, Peterson, Van Dycke, & Cash, 2003). Assessment of self-determination skills combined with needed interventions and opportunities could have positive effects on other areas necessary for post-school success.

There are three main uses for self-determination assessment: (a) instructional planning, (b) evaluation on student achievement, and (c) program evaluation (Field et al., 1998). Self-determination assessment can identify student preparedness to participate in the transition process by identifying current levels of self-empowerment.

Future planning assessment assists students in vocalizing post-school goals, while self-determination assessment measures students' current opportunities and skills to make informed decisions and ability to voice desires and needs (Miller et al., 2007). Rojewski (2002) explained the interrelatedness of self-determination and other transition planning areas by stating

> Not only can career-related information be gathered during assessment, individual involvement in the process and in making subsequent decisions can also be viewed as an intervention in its own right that supports self-determination, self-awareness, self-knowledge, and information about the world of work and adult life. (p. 91-92)

Assessment of academic and behavioral strengths and needs. President Lyndon Johnson signed the Elementary and Secondary Education Act in 1965 to establish high standards for American school-age children and accountability for federally funded school systems. The George W. Bush administration reauthorized the act in 2002 under the name *No Child Left Behind* with goals to improve student achievement for all children, close achievement gaps, and ensure students are taught by highly qualified teachers. *No Child Left Behind* required federally funded schools to achieve Adequate Yearly Progress (AYP), which primarily measures student achievement in reading and math. States collected baseline data in reading and math and were required to increase requirements in gradual increments until the 2013-2014 when all students would achieve proficiency in reading and math. This new focus on high-stakes testing added to the existing importance of academic assessment for student completion of high school. The post-school visions of most students require a high

school diploma. Assessment of academic skills can assist to identify necessary learning strategies or remediation to ensure students with disabilities will meet the new demands of high-stakes testing to obtain a high school diploma (Miller et al., 2007).

According to Wagner, Kutash, Duchnowski, Epstein, and Sumi (2005), students with emotional disabilities have lower graduation rates, social skills, self-control, cooperation, and post-school outcomes than students in any other disability category. Behavior can adversely affect a student's education and post-school opportunities and, therefore, should be included as a part of the transition assessment model (Miller et al., 2007). To assess academic and behavioral strengths, educators may use existing achievement test scores, current grades, informal information gathered from teachers, or commercially available tests usually used in reevaluation such as the *Wechsler Intelligence Scale for Children* (Wechsler, 1991)*, Standard, Third Edition* (WISC-III) or the *Woodcock Johnson Tests of Achievement, Third Edition* (WJ-III ACH) (Woodcock, McGrew, & Mather, 2001) for academic assessment. Miller et al., (2007) recommend adaptive behavior scales such as *Behavior Assessment System for Children* (BASC) (Reynolds & Kamphus, 1992) for behavior assessment.

Assessment of life skill needs. Life skills is a broad term used to describe a vast array of skills all students need for success throughout their adult lives, which are not explicitly taught to students with mild disabilities (Miller et al., 2007). Students with disabilities face two main obstacles upon graduation from high school: financial independence and living independently (Haring, Lovett, & Smith, 1990). In a follow-up study of 64 students with learning disabilities, Haring et al. (1990) found a staggering 79% continued to live with family members one to four years after exiting high school

and only 60% of the sample gained competitive employment. The research team interviewed parents of the students in the sample and found that 57% of parents would prefer their children to live independently. This suggests the need for assessment in the area of functional life skills for transition planning.

Sadly, the consideration of life skills for students with mild disabilities is often overlooked until the student "flounders" in life after high school. Parents often battle two opposing opinions of professionals in the field, with encouragement to "get involved" with the student's education and transition planning, while others uphold ideas of student independence in choice making (Miller et al., 2007). Transition assessment in life skills may assist parents in knowing what aspects of daily life to encourage independence of their children and in what areas assistance is needed.

Brolin (2004) revised the *Life-Centered Career Education (LCCE)* to nine daily living competency areas: (a) managing family finance, (b) selecting, managing, and maintaining a home, (c) caring for personal needs, (d) raising children and living as a family, (e) buying and preparing food, (f) buying and caring for clothes, (g) engaging in civic activities, (h) participating in recreation and leisure, and (i) getting around the community (transportation). Once again, life skills may be affected by other areas of the transition assessment model, which is why assessment of all areas is so crucial for the post-school success of students with disabilities (Miller et al., 2007).

Assessment of vocational interests and aptitudes. Work serves a very important role in the lives of most people. Sax and Thoma (2002) stated, "Employment provides a source of income, enhances self-esteem, provides important social connections, and allows people to fulfill their duties as contributing, tax-paying

citizens" (p. 104). With work playing such an essential part of our lives, it is important that the occupations we choose reflect our interests, strengths, and skills; which is also true for individuals with disabilities.

Vocational rehabilitation assessments. For years, vocational rehabilitation service providers primarily conducted vocational assessment of students with disabilities. The reauthorization of IDEA 2004 required educators to administer transition assessments to students with disabilities for transition planning purposes. Vocational assessment procedures utilized by vocational rehabilitation providers may not serve as appropriate in the school setting due to (a) lack of standardization of the instruments on school-aged children, (b) lack of standardization of the instruments on individuals with disabilities, and (c) amount of time needed to successfully complete rehabilitation assessments that may include simulated job tryouts (Miller et al., 2007).

Isolated vocational assessment without incorporating other components of transition planning is meaningless for students with disabilities. In order to make informed choices regarding future occupations, students must possess the self-determination skills necessary to make choices, develop a plan to attain goals, evaluate progress, and make adjustments as needed. Transition assessment is an on-going process with many interweaving areas and should not be exploited as a one-time attempt to plan a student's future (Miller et al., 2007). When educators implement the transition assessment model recommended by Miller, Lombard, and Coreby correctly, students will be able to apply prior knowledge about themselves, such as strengths, needs, and interests, to suggested occupations.

Interest inventories. Interest inventories often serve as vocational assessments for students with and without disabilities. Sax and Thoma (2002) caution educators to be mindful of using appropriate inventories for individual students for some interest inventories are developed for specific populations, including college-bound students, military personnel, and students with more severe needs. Test developers have created few career interest inventories specifically for use with school-age children with disabilities.

Curriculum-based vocational assessment. Curriculum-based vocational assessment (CBVA) may be the most commonly applied process to determine the career and vocational development and transition needs of students based on their on-going performance in a pre-existing vocational program. The process allows educators to collect occupation-specific data on the students while in high school that will predict supports students need to succeed in employment in that vocation after high school. Curriculum-based vocational assessments may also assist educators to evaluate students in occupational-specific areas of social and behavior skills based on how well students relate to supervisors and co-workers. Educators may collect self-determination and self-advocacy data using CBVA by noting student ability to ask for assistance when needed or pursue meaningful job tasks (Sitlington & Clark, 2006).

Purpose of Transition Assessment

The overall goal of transition assessment is to gather information regarding a student's strengths, interests, preferences, and needs, and assist in matching the information with a career of his or her choice. Educators use assessment results to write

appropriate post-school and annual goals, and provide transition services, activities, and linkages to aide the student to achieve those goals (Sax & Thoma, 2002).

Educators use transition assessments to assist students in career development and identify areas of strengths and needs for each student. Transition plans, goals, and activities will change every year based upon the student's opportunity to experience new careers. By using transition assessment to create student-involved IEPs and transition plans, students feel a sense of empowerment and control over their educational plan and future (Martin, Greene, & Borland, 2004). The transition assessment process takes time and should begin as early as possible (Test et al., 2006). Students need to know their future is important to the transition team and efforts are made to tailor the students' education plans to ensure student access to desired post-school outcomes. Too often, students with disabilities leave high school with diploma in hand and have no idea what the future holds or how to pursue the life they want. Transition assessment combined with transition planning facilitates the transition into adult life for students with disabilities (Blalock et al., 2008).

Quality of Transition Assessments

Dais and Kohler (1995) analyzed 142 transition assessments to "clarify and organize the abundance" of transition planning assessments and found that 38 of the 142 assessments did not report either reliability or validity data. Assessments that are used for invalid and unreliable purposes may result in misleading results and incorrect decisions based on the results (Carmines & Zeller, 1979). There is a need for more reliability and validity information on the use of transition assessments educators use to facilitate the transition from high school for students with disabilities.

Post-School Outcomes

Policymakers now consider the post-school outcomes of our youth as an indicator of the effectiveness of public education (Kochhar-Bryant et al., 2007). Butterworth et al. (2008) reported that employment rates for working-aged individuals with disabilities declined from 48.3 percent in 2000 to 35.7 percent in 2006. In 2005, the average employment rates for working-aged individuals without disabilities ranged from 70.4 percent in West Virginia to 82.7 percent employed in North Dakota. Individuals with disabilities had much lower employment rates, ranging from 24.5 percent employed in West Virginia to 54.2 percent employed in North Dakota.

College and Career Ready

The United States Department of Education released a blueprint (2010) for the revision of the Elementary and Secondary Education Act (ESEA), formerly known as *No Child Left Behind,* on March 13, 2010. The goals of the revision provide incentives for states to adopt common core standards to ensure that all students are prepared to succeed in the workforce and college. While all states previously implemented some type of standards and testing required under *No Child Left Behind*, the skills tested often did not reflect the skills students need for post-school success in postsecondary education, work, or daily living (Wilson, Hoffman, & McLaughlin, 2009). The 2010 United States Department of Education blueprint outlines a new take on assessment that will not focus on one-shot tests of language arts and mathematics, but "individual student growth and school progress over time" (p. 5). With this new take on assessment, a need exists for an instrument to assess known predictors of post-school success for students with disabilities.

Need for a New Transition Assessment

Educators may choose from a wide variety of transition assessments to assist students to plan for the future. I found no assessment that combined the results from studies that identified indicators of post-school success with transition knowledge to create a research-based assessment that educators can use to ascertain current non-academic strengths and needs and that provided appropriate annual transition goals based upon results that differ from the already present academic goals included in the IEP. The TAGG could be this instrument with the growing body of validity and reliability data, and the use of multiple research team data to determine test items and domains.

Development of the TAGG. The development of the TAGG began with Juan's (2008) 41-item, Likert-type assessment named the Transition Success Assessment (TSA). Educators could use this assessment to determine behaviors students with mild to moderate disabilities need for post-school success and incorporate results into individualized student transition plans. One purpose of the assessment was to address the need of a transition tool to identify current levels of student behaviors linked with post-school success. By using the TSA, educators could identify behaviors, skills, and opportunities students with mild to moderate disabilities currently possess and need to obtain to increase the possibility of post-school success. Juan (2008) conducted a review of current literature to identify indicators of post-school success. The literature criteria included studies that (a) reported on at least one post-school outcome domain, (b) yielded data-based results "published in refereed professional journals and included adequate descriptions of participants, procedures, and results" (p.10), (c) included

participants with disabilities, and (d) were published in English. She reported 69 qualitative and quantitative studies met the criteria and included the 2005 National Longitudinal Transition Study-2 (NLTS-2). Of the 69 studies, 41 identified student behaviors associated with post-school success. The 41 studies met inclusion criteria as they identified at least one empirically based student behavior associated with post-school success.

Juan (2008) identified 41 predictors of post-school success. She then grouped the predictors into 12 clusters. Nine of the 12 clusters related to the concept of self-determination, which was the theoretical foundation of the assessment. Once the user completed the assessment, the test administrator graphed the results. The researcher provided no statistical information concerning the development of the distribution of scores. The assessment also included a matrix to allow users to determine transition goals by circling items with low value responses.

Juan (2008) also analyzed the social validity of the TSA. She referred to Kennedy (2005) to describe social validity as "gathering information from people's perceptions of some outcomes of an experiment" and the purpose of validity assessment was to "understand how people perceive the assessment tool and its items" (Juan, 2008, p. 5). Social validity is not a term supported in the *Standards for Educational and Psychological Testing* (AERA et al., 1999) and usually used to evaluate interventions of applied behavior analysis (Kennedy, 2005), but the results could be used as evidence of validity based on test content for the TSA. Juan (2008) did not develop construct definitions nor did she test the factor structure of her assessment.

NSTTAC Predictors

The National Secondary Transition Technical Assistance Center (NSTTAC) identified evidence-based transition practices, then explored the existing literature on the impact these evidence-based transition practices have on post-school success of students with disabilities. Test et al. (2009) evaluated correlational research concerning indicators of post-school success for students with disabilities using a modified version of Thompson, Diamond, McWilliam, Snyder, and Snyder's (2005) quality indicator checklist. Originally, the research team identified 162 articles, then eliminated those that were "(a) expert opinion, (b) literature reviews, (c) program evaluations, (d) experimental, (e) descriptive, or (f) univariate" (p. 162). Inclusion criteria for the 63 remaining articles consisted of "(a) predictor variable related to a secondary transition program or practice and (b) outcome variables related to post-school education, employment, and independent living" (p. 162). The research team then eliminated any articles that did not identify in-school variables that related to transition, post-school outcomes that did not address education, employment, or independent living, or studies that did not include students or adults with disabilities. Twenty-eight articles remained and were evaluated with the quality indicator checklist. The research team eliminated four studies due to the use of stepwise analysis, which can lead to erroneous degrees of freedom and inflated Type I error (Lomax, 2007). Twenty-two studies met the checklist requirements.

The research team then determined whether the studies established a "moderate" or "potential" level of causal inference. Studies included as "moderate" had (a) two planned hypotheses that yielded significant correlations and (b) effect size calculation

or enough data to calculate effect size. Studies identified as having a "potential" level of evidence had (a) one planned hypothesis or (b) two or more exploratory hypotheses that yielded significant correlations. Researchers used the results to create predictor categories and did not consider studies that used methods other than correlation.

Comparison of the TSA and NSTTAC Indicators

Of the 41 studies used for the TSA and the 22 that met the correlational criteria set forth by Test and colleagues, the two research teams only used five common studies (Benz et al., 2000; Fourqurean et al., 1991; Halpern et al., 1995; Rabren, Dunn, & Chambers, 2002; and Wehmeyer & Schwartz, 1997). Juan (2008) organized the student post-school success behaviors in her study into 12 domains: (a) desires, (b) strengths, (c) disability awareness, (d) use of support systems, (e) social skills, (f) making positive choices, (g) goals, (h) limits, (i) persistence, (j) coping skills, (k) proactive involvement, and (l) transition education involvement. Test et al. (2009) identified 16 predictor categories of post-school success: (a) career awareness, (b) community experiences, (c) high school diploma status, (d) inclusion in general education, (e) interagency collaboration, (f) occupational courses, (g) paid employment or work experience, (h) parental involvement, (i) program of study, (j) self-advocacy or self-determination, (k) self-care or independent living, (l) social skills, (m) student support, (n) transition program, (o) vocational education, and (p) work study. Four of the categories were similar (social skills and social skills; use of support systems and interagency collaboration; proactive involvement and self-determination or self-advocacy; and transition education involvement and transition program).

The Test et al. (2009) study identified 16 predictors of post-school success based on correlational research, and Juan (2008) identified 12 clusters of behaviors associated with post-school success using qualitative and quantitative research. Nine of the 12 clusters in Juan's (2008) study are linked to self-determination. By contrast, Test et al. (2009) considered self-advocacy and self-determination as one category. Juan's (2008) assessment was based in self-determination and Test et al. (2009) sought to identify predictors and included behaviors, such as self-determination, experiences, and educational programs.

Construction of the TAGG

To ensure that the TAGG was a sound transition assessment used for a valid and reliable purpose, the TAGG team considered available research concerning test development. The TAGG development team collectively determined a rating scale as the best structure for the new assessment. Clark (2007) described rating scales as instruments "designed for assessing discrete behaviors or characteristics on a predetermined scale" (p. 46). Researchers most often use Likert-type rating scales that may be numerical or verbal (always, seldom, etc.). Ross (2006) reported that self-assessment rating items could produce consistent results across short periods of time. Clark (2007) recommended that test developers link numerical ratings to verbal descriptors for consistency among raters, and the TAGG team took these suggestions into consideration while developing the assessment. Due to the subjective nature of rating the behaviors of oneself and others, reliability of results is often a problem with rating scales.

Factors to consider with rating scales. Many reliability studies gather information regarding the consistency of assessments over time by conducting test-retest reliability studies or internal consistency of the assessment (Clark & Patton, 2006; Harrison & Oakland, 2003; Swisher & Green, 1998; Wolman, Campeau, Dubois, Mithaug, & Stolarski, 1994). However, after a review of 10 commonly used transition assessments, I found that none of the test developers reported information regarding reliability of assessments across raters. In fact, Wolman et al., (1994) reported reliability and validity data for only one version of the AIR self-determination scale. Carter, Trainor, Sun, and Owens (2009) analyzed the Transition Planning Inventory (TPI) rates among teachers, parents, and students and found that students consistently rated themselves higher than parent and teachers. Parents tended to rate students lower than teachers. Ross (2006) conferred student self-reported ratings are often higher than teacher reports and the mean of multiple rater scores report a more accurate result. Educators should discuss these discrepancies for a better understanding of the ratings among parents, students, and educators. Ross (2006) also suggested that student and educator scores result in higher agreement when students are aware that educators will compare scores to others who assessed the student.

Reducing rating error. Swezey (1981) discussed four categories of rating error: (a) error of standards, (b) error of halo, (c) logical error and, (d) error of central tendency. Researchers cannot eliminate these errors, but can avoid them. Error of standards occurs when test developers do not provide raters specific standards to rate behaviors and raters use their own idea of standards. Precise rating standards can lessen the effect of error of standards. Rater's impressions of the student could also bias the

rating of the student. Test developers can reduce the error of halo "by behaviorally anchoring each point on the rating scale" (p. 66). Test takers succumb to logical error by rating two independent behaviors the same when the items actually assess two different behaviors. Test developers should emphasize distinctions between items that may seem related. Researchers can avoid errors of central tendency by eliminating the midpoint from a rating scale, which forces a test-taker to distribute scores across the midpoint.

Review of Indicators of Post-school Success Literature Procedures

The TAGG development team discussed revisions and additions to the TAGG based on the review of literature and decided to revisit current literature to ensure validity evidence based on test content concerning the TAGG. Juan (2008) completed her study before Test et al. identified their predictor categories. For more complete content development, we revisited the literature first proposed by Juan (2008) and Test et al. (2009), then sought additional studies that identified indicators of post-school success for students with mild to moderate disabilities.

Inclusion criteria. Inclusion criteria for the literature included empirical literature that identified post-school indicators of employment and education success for individuals with mild to moderate disabilities and included themes from qualitative studies. We used information provided by the National Post-School Outcomes Center to determine definitions of employment and postsecondary education. Falls and Unruh (2009) defined higher education as "a two-or four-year degreed program provided by a community or technical college (two-year) and/or college/university (four- or more year program)" and competitive employment as "working at least 20 hours a week for 90

cumulative days" (p. 4-6). See tables 1 and 2 for a comparison of NSTTAC and TAGG included studies.

Table 1

TAGG Indicators of Post-School Success

TAGG	
Study	Construct
1. Aune (1991)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness, Goal Setting and Attainment, Self-Advocacy
2. Baer et al. (2003)*	Employment
3. Benz, Lindstrom, & Yovanoff, (2000)*	Goal Setting and Attainment, Employment, Supports
4. Benz, Yovanoff, & Doren (1997)*	Employment
5. Doren & Benz (1998)*	Proactive Involvement, Employment, Supports, Utilization of Resources
6. Dunn & Shumaker (1997)	Employment
7. Fabian (2007)	Employment
8. Fabian, Lent, & Willis (1998)*	Goal Setting and Attainment, Employment
9. Flexer, Daviso, Baer, Queen, & Meindl. (2011)	Employment
10. Fourqurean et al. (1991)*	Employment
11. Gerber, Ginsberg, & Reiff (1992)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness, Persistence, Goal Setting and Attainment, Self-Advocacy, Supports, Utilization of Resources
12. Gerber, Price, Mulligan, & Shessel (2004)	Disability Awareness
13. Goldberg, Higgins, Raskind, & Herman (2003)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness, Persistence, Proactive Involvement, Goal Setting and Attainment, Supports, Utilization of Resources
14. Greenbaum, Graham, & Scales (1995)	Actions Related to Strengths and Limitations, Disability Awareness, Persistence, Supports
15. Halpern et al. (1995)*	Proactive Involvement, Self-Advocacy

16. Hasazi, Gordon, & Roe (1985)	Employment
17. Hasazi, Johnson, Hasazi, Gordon, & Hull (1989)	Employment
18. Heal & Rusch (1995)*	Employment
19. Higgins, Raskind, Goldberg, & Herman (2002)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness
20. Leonard, D'Allura, & Horowitz (1999)*	Employment
21. Liebert, Lutsky, & Gottlieb (1990)	Proactive Involvement, Supports, Utilization of Resources
22. Lindstrom, Doren, & Miesch (2011)	Knowledge of Strengths and Limitations, Employment, Supports
23. Madaus (2006)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Supports, Utilization of Resources
24. McDonnall (2010)	Employment
25. McDonnall & Crudden (2009)	Employment
26. McNulty (2003)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations
27. Portley, Martin, & Hennessey (2012)	Self-Advocacy, Employment
28. Rabren et al. (2002)*	Employment
29. Raskind, Goldberg, Higgins, & Herman (1999)	Knowledge of Strengths and Limitations, Disability Awareness, Goal Setting and Attainment, Persistence, Self-Advocacy, Supports
30. Raskind, Goldberg, Higgins, & Herman (2002)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness, Goal Setting and Attainment, Persistence, Supports, Utilization of Resources
31. Sarver (2000)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Persistence, Self-Advocacy, Supports, Utilization of Resources
32. Shandra & Hogan (2008)*	Employment

33. Sitlington, Frank, & Carson (1993)	Employment
34. Skinner (2004)	Knowledge of Strengths and Limitations, Actions Related to Strengths and Limitations, Disability Awareness, Goal Setting and Attainment, Persistence, Self-Advocacy, Supports, Utilization of Resources
35. Thoma & Getzel (2005)	Actions Related to Strengths and Limitations, Disability Awareness, Goal Setting and Attainment, Self-Advocacy, Supports, Utilization of Resources

Note. *= studies used in both the TAGG and NSTTAC predictors

Table 2

NSTTAC Indicators of Post-school Success

NSTTAC	
Study	Category
1. Baer et al. (2003)*	Inclusion in General Education, Vocational Education, Work Study
2. Benz, Lindstrom, & Yovanoff, (2000)*	Career Awareness, Transition Program, Paid Employment/Work Experience
3. Benz, Yovanoff, & Doren (1997)*	Paid Employment/Work Experience, Social Skills
4. Blackorby, Hancock, & Siegel (1993)	Inclusion in General Education, Self-Care/Independent Living Skills
5. Bullis, Davis, Bull, & Johnson (1995)	Interagency Collaboration, Paid Employment/Work Experience
6. Doren & Benz (1998)*	Paid Employment/Work Experience, Student Support
7. Fabian, Lent, & Willis (1998)*	Work Study
8. Fourqurean et al. (1991)*	Parental Involvement
9. Halpern et al. (1995)*	Inclusion in General Education, Occupational Courses, Transition Program, Vocational Education, Self-Advocacy/Self-Determination, Social Skills, Student Support
10. Harvey (2002)	Vocational Education
11. Heal, Khoju, & Rusch (1997)	Exit Exam Requirement/High School Diploma Status
12. Heal, Khoju, Rusch, & Harnisch (1999)	Inclusion in General Education, Student Support
13. Heal & Rusch (1994)	Exit Exam Requirement/High School Diploma Status, Self-Care/Independent Living Skills
14. Heal & Rusch (1995)*	Exit Exam Requirement/High School Diploma Status, Occupational Courses, Vocational Education
15. Leonard, D'Allura, & Horowitz (1999)*	Exit Exam Requirement/High School Diploma Status, Vocational Education
16. Luecking & Fabian (2000)	Work Study

17. Rabren et al. (2002)*	Paid Employment/Work Experience
18. Repetto, Webb, Garvan, & Washington (2002)	Interagency Collaboration, Transition Program
19. Roessler, Brolin, & Johnson (1990)	Inclusion in General Education, Self-Care/Independent Living Skills, Social Skills, Student Support
20. Shandra & Hogan (2008)*	Program of Study
21. Wehmeyer & Schwartz (1997)	Self-Advocacy/Self-Determination
22. White & Weiner (2004)	Exit Exam Requirement/High School Diploma Status, Community Experiences

Note. *= studies used in both the TAGG and NSTTAC predictors

Appropriate population for the TAGG. The TAGG is intended for students with mild to moderate disabilities; therefore we excluded literature that examined only individuals with severe intellectual disabilities. Individuals with mild to moderate disabilities are those who have school programs with "levels of functioning, goals, objectives, and services in various placements that align with the general education curriculum, regardless of the child's disability category" (Garrett, 2007, p. 178). The TAGG was developed from literature that identified behavior that indicated employment and postsecondary education success for individuals with disabilities. Students will lower functioning skills who may or may not desire post-school employment or education may be better served by completing assessments intended for students with more involved disabilities.

Exclusion of academic-related indicators. Educators must be able to convert indicators found in the included studies into annual transition goals. Studies that only identified academic indicators of post-school success, including grades, passing state mandated tests, and inclusion in general education setting, were excluded for two

reasons. Students already have IEP academic goals, and the extensive focus on academic skills and academic assessment present in schools does not seem to be sufficiently improving the post-school outcomes of students with disabilities (Rusch, Hughes, Agran, Martin, & Johnson, 2009). Thus, studies such as the one completed by Heal and Rusch (1994) that focused on academic skills, GPA, and the receipt of a diploma as predictors of post-school success were excluded.

We originally identified 83 studies that identified behaviors associated with post-school success. Thirty-five studies met our inclusion criteria.

Organization of the TAGG. We reorganized the original 12 TSA domains into ten constructs: (a) knowledge of strengths and limitations, (b) actions related to strengths and limitations, (c) disability awareness, (d) persistence, (e) proactive involvement, (f) goal setting and attainment, (g) employment, (h) self-advocacy, (i) supports, and (j) utilization of resources. The review of literature included 83 articles with 35 articles matching our inclusion criteria. See table 3 for a list of articles related to each construct. The initial version of the TAGG included 75 items across the ten constructs presented in three versions: (a) professional, (b) family, and (c) student.

Table 3

Sources for TAGG Constructs

TAGG Construct	Sources
Knowledge of Strengths and Limitations	Aune, E. (1991). A transition model for postsecondary-bound students with learning disabilities. *Learning Disabilities Research & Practice, 6*, 177-187. Gerber, P., Ginsberg, R., & Reiff, H. (1992). Identifying alterable patterns in employment success for highly successful adults with learning disabilities. *Journal of Learning Disabilities, 25*, 475-487. Goldberg, R., Higgins, E., Raskind, M., & Herman, K. (2003).

Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year longitudinal study. *Learning Disabilities Research Practice, 18*, 222-236.

Higgins, E., Raskind, M., Goldberg, R., & Herman, K. (2002). Stages of acceptance of a learning disability: The impact of labeling. *Learning Disability Quarterly, 25*, 3-18.

Lindstrom, L., Doren, B., & Miesch, J. (2011). Waging a living: Career development and long-term employment outcomes for young adults with disabilities. *Exceptional Children, 77*, 423-434.

Madaus, J. (2006). Improving the transition to career for college students with learning disabilities: Suggestions from graduates. *Journal of Postsecondary Education and Disability, 19*, 85-93.

McNulty, M. (2003). Dyslexia and the life course. *Journal of Learning Disabilities, 36*, 363-381.

Raskind, M. H., Goldberg, R., Higgins, E., & Herman, K. L. (1999). Patterns of change and predictors of success in individuals with learning disabilities: Results from a twenty-year longitudinal study. *Learning Disabilities Research and Practice*, 14, 35-49.

Raskind, M., Goldberg, R., Higgins, E., & Herman, K. (2002). Teaching "life success" to students with LD: Lessons learned from a 20-year study. *Intervention in School and Clinic, 37*, 201-208.

Sarver, M. (2000). *A study of the relationship between personal and environmental factors bearing on self-determination and the academic success of university students with learning disabilities* (Doctoral dissertation). University of Florida, Gainesville, FL. UMI Number: 9984478.

Skinner, M. (2004). College students with learning disabilities speak out: What it takes to be successful in postsecondary education. *Journal of Postsecondary Education and Disability, 17*, 91-104.

Actions Related to Strengths and Limitations

Aune, E. (1991). A transition model for postsecondary-bound students with learning disabilities. *Learning Disabilities Research & Practice, 6*, 177-187.

Gerber, P., Ginsberg, R., & Reiff, H. (1992). Identifying alterable patterns in employment success for highly successful adults with learning disabilities. *Journal of Learning*

Disabilities, 25, 475-487.

Goldberg, R., Higgins, E., Raskind, M., & Herman, K. (2003). Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year longitudinal study. *Learning Disabilities Research Practice, 18*, 222-236.

Greenbaum, B., Graham, S., & Scales, W. (1995). Adults with learning disabilities: Education and social experiences during college. *Exceptional Children, 61*, 460-471.

Higgins, E., Raskind, M., Goldberg, R., & Herman, K. (2002). Stages of acceptance of a learning disability: The impact of labeling. *Learning Disability Quarterly, 25*, 3-18.

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McNulty, M. (2003). Dyslexia and the life course. *Journal of Learning Disabilities, 36*, 363-381.

Raskind, M., Goldberg, R., Higgins, E., & Herman, K. (2002). Teaching "life success" to students with LD: Lessons learned from a 20-year study. *Intervention in School and Clinic, 37*, 201-208.

Sarver, M. (2000). *A study of the relationship between personal and environmental factors bearing on self-determination and the academic success of university students with learning disabilities* (Doctoral dissertation). University of Florida, Gainesville, FL. UMI Number: 9984478.

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Thoma, C., & Getzel, E. (2005). "Self-determination is what it's all about:" What post-secondary students with disabilities tell us are important considerations for success. *Education and Training in Developmental Disabilities, 40*, 234-242.

Disability Awareness

Aune, E. (1991). A transition model for postsecondary-bound students with learning disabilities. *Learning Disabilities Research & Practice, 6*, 177-187.

Gerber, P., Ginsberg, R., & Reiff, H. (1992). Identifying alterable

patterns in employment success for highly successful adults with learning disabilities. *Journal of Learning Disabilities, 25*, 475-487.

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Skinner, M. (2004). College students with learning disabilities speak out: What it takes to be successful in postsecondary education. *Journal of Postsecondary Education and Disability, 17*, 91-104.

Thoma, C., & Getzel, E. (2005). "Self-determination is what it's all about": What post-secondary students with disabilities tell us are important considerations for success. *Education and Training in Developmental Disabilities, 40*, 234-242.

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Proactive Involvement	Doren, B., & Benz, M. (1998). Employment inequality revisited: Predictors of better employment outcomes for young women with disabilities in transition. *The Journal of Special Education, 31*, 425-442. Goldberg, R., Higgins, E., Raskind, M., & Herman, K. (2003). Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year longitudinal study. *Learning Disabilities Research Practice, 18*, 222-236. Halpern, A., Yovanoff, P., Doren, B., & Benz, M. (1995).

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Liebert, D., Lutsky, L., & Gottlieb, A. (1990). Postsecondary experiences of young adults with severe physical disabilities. *Exceptional Children, 57*, 56-63.

Goal Setting and Attainment

Aune, E. (1991). A transition model for postsecondary-bound students with learning disabilities. *Learning Disabilities Research & Practice, 6*, 177-187.

Benz, M., Lindstrom, L., & Yovanoff, P. (2000). Improving graduation and employment outcomes of students with disabilities: Predictive factors and student perspectives. *Exceptional Children, 66*, 509-529.

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Shandra, C., & Hogan, D. (2008). School-to-work program participation and the post-high school employment of young adults with disabilities. *Journal of Vocational*

	Rehabilitation, 29, 117-130.
	Sitlington, P., Frank, A., & Carson R. (1993). Adult adjustment among high school graduates with mild disabilities. *Exceptional Children, 59,* 221-233.
Self-Advocacy	Aune, E. (1991). A transition model for postsecondary-bound students with learning disabilities. *Learning Disabilities Research & Practice, 6*, 177-187.
	Halpern, A., Yovanoff, P., Doren, B., & Benz, M. (1995). Predicting participation in postsecondary education for school leavers with disabilities. *Exceptional Children, 62*, 151-164.
	Portley, J. C., Martin, J. E., & Hennessey, M. N. (2012). *Impact of student involvement in IEP meetings and other transition education factors on transition outcome indicators 13 and 14.* Manuscript submitted for publication.
	Skinner, M. (2004). College students with learning disabilities speak out: What it takes to be successful in postsecondary education. *Journal of Postsecondary Education and Disability, 17*, 91-104.
	Thoma, C., & Getzel, E. (2005). "Self-determination is what it's all about": What post-secondary students with disabilities tell us are important considerations for success. *Education and Training in Developmental Disabilities, 40*, 234-242.
Supports	Benz, M., Lindstrom, L., & Yovanoff, P. (2000). Improving graduation and employment outcomes of students with disabilities: Predictive factors and student perspectives. *Exceptional Children, 66*, 509-529.
	Doren, B., & Benz, M. (1998). Employment inequality revisited: Predictors of better employment outcomes for young women with disabilities in transition. *The Journal of Special Education, 31*, 425-442.
	Gerber, P., Ginsberg, R., & Reiff, H. (1992). Identifying alterable patterns in employment success for highly successful adults with learning disabilities. *Journal of Learning Disabilities, 25*, 475-487.
	Goldberg, R., Higgins, E., Raskind, M., & Herman, K. (2003). Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year

longitudinal study. *Learning Disabilities Research Practice, 18*, 222-236.

Greenbaum, B., Graham, S., & Scales, W. (1995). Adults with learning disabilities: Education and social experiences during college. *Exceptional Children, 61*, 460-471.

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Lindstrom, L., Doren, B., & Miesch, J. (2011). Waging a living: Career development and long-term employment outcomes for young adults with disabilities. *Exceptional Children, 77*, 423-434.

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Thoma, C., & Getzel, E. (2005). "Self-determination is what it's all about": What post-secondary students with disabilities tell us are important considerations for success. *Education and Training in Developmental Disabilities, 40*, 234-242.

Gerber, P., Ginsberg, R., & Reiff, H. (1992). Identifying alterable patterns in employment success for highly successful

adults with learning disabilities. *Journal of Learning Disabilities, 25*, 475-487.

Goldberg, R., Higgins, E., Raskind, M., & Herman, K. (2003). Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year longitudinal study. *Learning Disabilities Research Practice, 18*, 222-236.

Liebert, D., Lutsky, L., & Gottlieb, A. (1990). Postsecondary experiences of young adults with severe physical disabilities. *Exceptional Children, 57*, 56-63.

Raskind, M., Goldberg, R., Higgins, E., & Herman, K. (2002). Teaching "life success" to students with LD: Lessons learned from a 20-year study. *Intervention in School and Clinic, 37*, 201-208.

Skinner, M. (2004). College students with learning disabilities speak out: What it takes to be successful in postsecondary education. *Journal of Postsecondary Education and Disability, 17*, 91-104.

Thoma, C., & Getzel, E. (2005). "Self-determination is what it's all about?": What post-secondary students with disabilities tell us are important considerations for success. *Education and Training in Developmental Disabilities, 40*, 234-242.

TAGG Constructs

Knowledge of strengths and limitations. Numerous studies have found that individuals with disabilities who demonstrate knowledge of their personal strengths and limitations experience more success after high school. Students need to be able to identify what he or she does well and in what situations or tasks assistance may be needed (Aune, 1991; Higgins et al., 2002; Lindstrom et al., 2011; Madaus, 2006; McNulty, 2003; Raskind et al., 2002; Sarver, 2000). Students may not have used correct terminology, yet needed to be aware of their strengths and limitations in academic and nonacademic settings and able to communicate these strengths and limitations to others (Higgins et al., 2002; Gerber et al., 1992; Madaus, 2006; Raskind et al., 2002; Sarver, 2000; Skinner, 2004). Successful individuals predetermine situations and tasks where they most likely will and will not be successful (Gerber et al., 1992).

Actions related to strengths and limitations. Once students are aware of their strengths and limitations, they must act upon this knowledge by seeking situations where strengths are maximized and limitations are minimized (Goldberg et al., 2003; Greenbaum et al., 1995; Madaus, 2006; McNulty, 2003). Students must actively seek situations to use their strengths in school and in the community (Gerber et al., 1992; Goldberg et al., 2003; and McNulty, 2003). For example, if a student has a disability in the area of written expression, he or she may choose to become a club photographer rather than the club secretary. Students need to develop skills and strategies to compensate for limitations such as lip reading, memory aids, and use of technology (Gerber et al., 1992; Higgins et al., 2002; Skinner, 2004; Raskind et al., 2002). Students may create new strategies to accomplish tasks that are difficult (Higgins et al., 2002;

Raskind et al., 2002; Skinner, 2004). Successful individuals consider their limitations when choosing employment options and do not choose careers that highlight limitations (Gerber et al., 1992).

Disability awareness. Individuals who experience success after high school are aware of their disability and do not allow the disability to define them (Goldberg et al., 2003; Raskind et al., 1999; Sarver, 2000). Some successful individuals consider the disability as a positive aspect of life (Higgins et al., 2002). This begins with the student understanding what it means to have a disability (Aune, 1991; Greenbaum et al., 1995). Students need to understand the challenges they will face due to the disability and learn to confront and avoid specific situations based on this knowledge (Gerber et al., 1992; Skinner, 2004). Students need to explain their disability in a variety of ways to ensure others with and without disability-related knowledge will understand accommodations needed for success (Aune, 1991; Gerber et al., 1992; Gerber et al., 2004; Higgins et al., 2002; and Raskind et al., 1999). Students need to practice explaining their disability to postsecondary disability services providers and future employers to request accommodations (Aune, 1991; Gerber et al., 1992; Greenbaum et al., 1995; Higgins et al., 2002; Thoma & Getzel, 2005). Students may obtain disability information from a variety of settings, including the Internet, doctors, teachers, and family (Thoma & Getzel, 2005).

Persistence. Many successful individuals with disabilities express the importance of persistence in all aspects of life (Greenbaum et al., 1995; Goldberg et al., 2003; Raskind et al., 1999; Skinner, 2004). Individuals with disabilities who experienced success in postsecondary educational settings began college knowing they

would spend more hours studying and completing assignments than other students and began this behavior in high school (Skinner, 2004). They did not give up when faced with adversity, but learned to shift goals when necessary to become successful (Gerber et al., 1992; Goldberg et al., 2003; Greenbaum et al., 1995; Skinner, 2004). Successful college students with disabilities learned to use a variety of flexible strategies to continue their college pursuit, including changing professors, classes, majors, colleges and seeking individuals for assistance (Goldberg et al., 2003).

Proactive involvement. Individuals who are successful in the areas of education and employment after high school actively interact with others in a variety of settings (Doren & Benz, 1998; Goldberg et. al., 2003; Halpern et al., 1995; Liebert et al., 1990). Doren and Benz (1998) found that males and females who used the self-family-friend network to obtain employment were 2.33 and 3.77 times, respectively, more likely to be employed after high school. Liebert et al. (1990) reported that family and friends were important to the career plans and methods to find employment for individuals with severe physical disabilities. Goldberg et al. (2003) found proactivity predicts post-school success by stating that successful individuals with disabilities "were engaged in the world around them, politically, economically, and socially. They participated in community activities and took an active role in their families, neighborhoods, and friendship groups" (p. 226).

Goal setting and attainment. Raskind et al. (1999) reported goal setting to be a more powerful predictor of post-school success than IQ, academic achievement, social economic status, and ethnicity. Successful college students set high goals for themselves while considering the desires of their families (Fabian et al., 1998; Gerber et

al., 1992; Raskind et al., 1999; Skinner, 2004). These students learned to break down large goals into smaller manageable pieces and accomplish the small goals in a sequential order (Thoma & Getzel, 2005). Successful individuals with disabilities set realistic goals for themselves that match their career desires and make a plan to achieve the goals (Gerber et al., 1992; Sarver, 2000; Thoma & Getzel, 2005). Goldberg et al. (2003) and Gerber et al (1992) stressed the implementation of the plan to achieve goals as important. Both research teams reported that successful individuals with disabilities were flexible with their plan to achieve goals without straying completely away from the goals. Goldberg et al. (2003) found that the goals of unsuccessful individuals lacked a plan of achievement and were not specific or flexible. It is imperative that individuals set goals that are "concrete, realistic, and attainable" (Goldberg et al., 2003, p. 228).

Employment. To experience successful post-school employment, students must first express a desire to obtain a job, and then actively seek a position (Benz et al., 2000; Fabian, 2007; Fabian et al., 1998). Students with disabilities who obtain employment during high school are more likely to maintain employment after high school (Dunn & Shumaker, 1997; Fourqurean et al., 1991; Lindstrom et al., 2011; McDonnall & Crudden, 2009; Portely et al., 2012). Students who experience employment are more able to find a job that matches their skills and interests, and are more able to seek and find jobs in the community than those who did not experience employment during high school (Fourqurean et al., 1991). McDonnall and Crudden (2009) suggested that employers prefer employees with prior work experience, and students may use the prior work experience as career exploration. Students who completed a career technology or vocational school program also experience better post-school employment (Baer et al.,

2003; Flexer et al., 2011) Fabian, Lent, and Willis (1998) found that completion of an unpaid internship might also teach necessary work-related behaviors, and those students who complete internships are more likely to obtain employment after high school. Students can also demonstrate job-readiness skills by attending school on time, working hard, getting along with others, and managing personal hygiene (Fabian, 2007; Fabian et al., 1998; Heal & Rusch, 1995; Leonard et al., 1999).

Self-advocacy. Skinner (2004) found self-advocacy to be a key element to student success at the postsecondary level. Students must be able to explain their disability rights and responsibilities to those who may not have a working knowledge of disability-related issues. Successful individuals use multiple sources to gather information about their disability including the internet, educators, and support people (Skinner, 2004; Thoma & Getzel, 2005). Students must be able to express which accommodations best enable them to achieve success in various situations (Aune, 1991). Students need to use accommodations responsibly and not take advantage of rights to accommodations. Students need to ask for support when appropriate and necessary and not demonstrate learned helplessness (Aune, 1991; Skinner, 2004). The IEP meeting provides an opportunity for students with disabilities to practice self-advocacy skills, and students take an active role in conducting and leading the meeting. Students may explain post-school goals, present levels of performance, and decisions concerning how a chosen course of study may assist to obtain post-school goals with the IEP team (Aune, 1991; Halpern et al., 1995; Portley et al., 2012).

Supports. Students with disabilities who build a group of positive individuals for support who have realistic expectations for the student are more successful after

high school (Gerber et al., 1992; Goldberg et al., 2003; Greenbaum et al., 1995; Liebert et al., 1990; Lindstrom et al., 2001; Madaus, 2006; Skinner, 2004; Thoma & Getzel, 2005). Students need to identify situations where they need support and the specific support person who can offer the most assistance in the specific situation, and accept help when offered (Benz et al., 2000; Gerber et al., 1992; Goldberg et al. 2003; Greenbaum et al., 1995; McNulty, 2003; Portley et al., 2012). Students should not rely completely on the support group to accomplish goals and tasks and maintain the support group by showing appreciation and reciprocity (Gerber et al., 1992; Raskind et al., 2002).

Utilization of resources. Students may not have positive individuals in their immediate support group who are able to assist in all situations. When this occurs, successful individuals with disabilities actively seek people and resources outside their immediate network to help with a present need (Gerber et al., 1992; Raskind et al., 2002). High school students may begin to practice independently seeking assistance from support individuals at school such as a coach, secretary, or school counselor (Gerber et al., 1992; Skinner, 2004). Successful individuals also use the internet to obtain information and seek assistance from possible support services or community agencies (Gerber et al., 1992; Goldberg et al., 2003; Liebert et al., 1990; Thoma & Getzel, 2005). Table 4 displays the references used to create the orginal TAGG items across all three versions.

Table 4

References for each TAGG Item Across Student, Professional, and Family Versions

Student	Professional	Family	Reference
	Knowledge of Strengths and Limitations		
1. I know my strengths.	The student told someone about his or her strengths.	My child told someone about his or her strengths.	Higgins et al., 2002; Lindstrom, et al., 2011; Madaus, 2006; Raskind et al., 1999
2. I know what I do well.	The student told someone what he or she does well.	My child told someone what he or she does well.	Goldberg et al., 2003; McNulty, 2003; Raskind, et al., 2002
3. I know my limitations.	The student told someone his or her limitations.	My child told someone his or her limitations.	Aune, 1991; Gerber et al., 1992
4. I know what I have trouble doing.	The student told someone what he or she has trouble doing.	My child told someone what he or she has trouble doing.	Gerber et al., 1992
5. I told someone about the things I do well in school.	The student expressed accurate information about his or her academic strengths.	My child told someone about the things he or she does well in school.	Aune, 1991; Higgins et al., 2002; Raskind et al., 2002
6. I told someone about the things I need help doing in school.	The student expressed accurate information about his or her academic limitations.	My child told someone about the things he or she needed help doing in school.	Aune, 1991; Gerber et al., 1992; Higgins et al., 2002; Madaus, 2006; Sarver, 2000; Skinner, 2004
7. I knew the assignments I would have trouble with as soon as the teacher gave them to me.	The student identified academic situations when assistance was needed.	My child knew which assignments he or she would have trouble with as soon as the teacher gave them to the child.	Aune, 1991; Gerber et al., 1992; Higgins et al., 2002

8. I knew which assignments that I could do well when the teacher gave them to me.	The student identified academic situations where he or she would likely experience success.	My child knew which assignments that he or she could do well when the teacher gave them to the child.	Aune, 1991; Gerber et al., 1992; Goldberg, Raskind et al., 2003; McNulty, 2003
	Actions Related to Strengths and Limitations		
9. I look for situations to use my strengths.	The student finds situations to use his or her strengths.	My child finds situations to use his or her strengths.	Gerber et al., 1992; Greenbaum et al., 1995; Goldberg et al., 2003; McNulty, 2003
10. I know what I do well, but chose not to do those things.	The student is aware of his or her strengths, but does *not* seek situations where the strengths are utilized.	My child knows his or her strengths but does not seek situations where the strengths are utilized.	Higgins et al., 2002; Madaus, 2006; Sarver, 2000; Raskind et al., 2002
11. I look for situations where my weaknesses do <u>*not*</u> matter.	The student finds situations where his or her limitations are minimized.	My child finds situations where his or her weaknesses do <u>*not*</u> matter.	Aune, 1991; Gerber, et al. 1992; Goldberg et al., 2003; McNulty, 2003: Thoma and Getzel, 2005
12. I know my weaknesses, but I do not think about them when I make choices.	The student knows his or her weaknesses but does not consider the weaknesses when making choices.	My child knows his or her weaknesses but does not think about them when making choices.	Gerber et al., 1992; Madaus, 2006; Raskind et al., 2002; Sarver, 2000; Skinner, 2004
13. I find new ways to do tasks that are hard for me.	The student creates new strategies to compensate for his or her limitations.	My child finds new ways to do tasks that are hard for him or her.	Aune, 1991; Higgins et al., 2002; Raskind, Goldberg et al., 2002; Skinner, 2004
	Disability Awareness		
14. I know what the word "disability" means.	The student expressed an understanding of the word "disability."	My child told someone what the word "disability" means.	Aune, 1991; Greenbaum et al., 1995

15. I told someone I have a disability.	The student told someone that he or she has a disability.	My child told someone that he or she has a disability.	Aune, 1991; Gerber et al., 1992; Gerber et al., 2004; Higgins et al., 2002; Raskind et al., 1999
16. I told someone facts about my disability.	This student told someone accurate information about his or her disability.	My child told someone facts about his or her disability.	Aune, 1991; Gerber et al., 1992; Greenbaum et al., 1995; Higgins et al., 2002; Thoma & Getzel, 2005
17. I know how to talk about my disability in a way that will get me the most help.	The student uses the least stigmatizing disability label that results in getting most support.	My child talks the disability in a way that he or she will receive most help.	Gerber et al., 2004; Higgins et al., 2002; Sarver, 2000
18. I told someone about the accommodations or support I need because of my disability.	This student expressed the type of accommodations or supports needed for his or her disability.	My child told someone about the accommodations or supports needed because of his or her disability.	Aune, 1991; Gerber et al., 1992; Greenbaum et al., 1995; Higgins et al., 2002; Skinner, 2004
19. I think of my disability as only one part of who I am.	The student views the disability as only one aspect of his or her life.	My child views the disability as only one part of his or her life.	Goldberg et al., 2003; Higgins et al., 2002; Raskind et al., 1999; Raskind et al., 2002
20. I think of my disability as a positive part of my life.	The student views the disability as a positive aspect of his or her life.	My child thinks of the disability as a positive part of his or her life.	Higgins et al., 2002
21. I told my friends that I get help from special education.	This student explained to friends that he or she receives special education services.	My child told friends that he or she receives help from special education.	Higgins et al., 2002
22. I talk to my family about my disability.	The student talks to parents about his or her disability.	My child talks to me or other family members about his or her disability.	Aune, 1991; Higgins et al., 2002

Persistence			
23. Not giving up in school is important to me.	Not giving up in school is important to the student.	Not giving up in school is important to my child.	Goldberg et al., 2003; Raskind, 1999; Sarver, 2000
24. I keep working until I accomplish a goal.	The student keeps working until he or she accomplishes a goal.	My child keeps working until he or she accomplishes a goal.	Gerber et al., 1992; Goldberg et al., 2003; Greenbaum et al., 1995; Skinner, 2004
25. I try different ways to help me keep working on a task until I finished it.	The student utilizes different strategies as needed to continue staying on task.	My child tries different ways to keep working on tasks until they are finished.	Goldberg et al., 2003
26. I keep working to achieve a goal even when it becomes hard.	The student keeps working to achieve a goal, even when it becomes hard.	My child keeps working to attain a goal even when it becomes hard.	Gerber et al., 1992; Goldberg et al., 2003; Raskind et al., 2002
27. I learn from my mistakes, so I can do better next time.	The student learns from mistakes and does better next time.	My child learns from mistakes, so he or she can do better the next time.	Greenbaum et al., 1995; Goldberg et al., 2003

Proactive Involvement			
28. I have at least one good friend.	The student maintains one or more good friendships.	My child has at least one good friend.	Doren & Benz, 1998; Goldberg et al., 2003
29. I work well in small groups to complete projects.	The student successfully participates in small groups to complete projects.	My child works well in small groups to complete projects.	Goldberg et al., 2003; Halpern et al., 1995
30. I participate in community groups, such as sports clubs or	The student participates in community organizations, such	My child participates in community groups, such as sports clubs or	Doren & Benz, 1998; Goldberg et al., 2003

organized social groups.	as sports clubs or organized social groups.	organized social groups.	
31. I participate in school teams, clubs, or other groups.	The student participates in school teams, clubs, or other groups.	My child participates in school teams, clubs, or other groups.	Halpern et al., 1995
32. I get along with teachers, family, and other adults.	The student successfully interacts with teachers, family, and other adults.	My child gets along with teachers, family, and other adults.	Doren & Benz, 1998; Goldberg et al., 2003; Halpern et al., 1995; Liebert, et al., 1990
	Goal Setting and Attainment		
33. I know what the word "goal" means.	The student defined The word "goal."	My child told me or a family member what the word "goal" means.	Raskind et al., 1999
34. I learned how to set a goal and make it happen.	The student learned how to set a goal and make it happen.	My child learned how to set a goal and make it happen.	Benz et al., 2000; Raskind et al., 1999: Sarver, 2000; Skinner, 2004
35. It is important for me to have goals	The student talks about the importance of having goals.	My child talks about the importance of having goals.	Raskind et al., 2002; Raskind et al., 1999
36. It is important to me that my after high school goals match what I like and can do.	The student expressed the importance of having post-school goals that match his or her interests and skills.	My child talked about the importance of having after high school goals that match his or her interests and skills.	Gerber et al., 1992; Raskind et al., 2002; Raskind et al., 1999; Thoma & Getzel, 2005
37. I know what might happen if I do *not* have goals.	The student identified the possible consequences of *not* setting goals.	My child talked about what might happen if he or she does *not* have goals.	Raskind et al., 2002; Raskind et al., 1999

38. When setting goals, I think about my strengths and interests and what my family or community wants me to do.	The student set goals that match his or her strengths and interests while taking into consideration what the family or community wants him or her to do.	My child sets goals that match his or her strengths and interests while taking into consideration what the family or community wants him or her to do.	Fabian et al., 1998; Gerber et al., 1992; Raskind et al., 1999
39. I break big goals into smaller parts.	The student creates short-term goals to attain long-term goals.	My child breaks big goals into smaller parts.	Aune, 1991; Goldberg et al., 2003; Raskind et al., 2002; Raskind et al., 1999; Thoma & Getzel, 2005
40. I develop plans to meet my goals.	The student develops plans to attain his or her goals.	My child develops plans to meet his or her goals.	Benz et al., 2000; Goldberg et al., 2003
41. I use the plans I develop to meet my goals.	The student uses plans he or she develops to attain goals.	My child uses plans he or she develops to meet goals.	Goldberg et al., 2003; Raskind et al., 1999; Thoma & Getzel, 2005
42. I decide if my plans to meet goals work.	The student determines the effectiveness of his or her plans to attain goals.	My child decides if his or her plans to meet goals work.	Raskind et al., 2002
43. I change my plans to meet goals if they do *not* work.	The student adjusts plans to attain goals if they do *not* work.	My child changes his or her plans to meet goals if they do *not* work.	Goldberg et al., 2003; Raskind et al., 2002; Raskind et al., 1999
44. I complete the first step of a goal and then move on to the next step.	After completing the first step of a goal, the student moves on to the next step.	My child completes the first step of a goal and then moves on to the next step.	Thoma & Getzel, 2005
45. After I meet one goal, I move on to my next goal.	After attaining one goal, the student moves on to the next goal.	After my child meets one goal, he or she moves on to the next goal.	Gerber et al., 1992; Thoma & Getzel, 2005
46. I completed at least one of my IEP transition goals.	The student attained at least one transition goal.	My child completed at least one IEP transition goal.	Benz et al., 2000

Employment			
47. I want a job.	The student expresses wanting a job.	My child talks about wanting a job.	Benz et al., 2000; Fabian, 2007; Fabian et al., 1998
48. I want a job that interests me and that I can do.	The student expresses wanting a job that matches his or her career interests and skills.	My child talks about wanting a job that matches his or her career interests and skills.	Fourqurean et al., 1991; McDonnall and Crudden, 2009)
49. I looked for a paid job.	The student actively looked for a paid job.	My child actively looked for a paid job.	Fabian, 2007; Fabian et al., 1998
50. I show I am ready for a job by being on time, doing my work, and getting along with others.	The student demonstrates job readiness skills such as being on time, completing work as assigned, or working cooperatively.	My child showed the skills needed to keep a paid job, such as being on time, working hard, and getting along with others.	Heal & Rusch, 1995; Leonard et al., 1999
51. My self-care habits and clothing choices match my career interests.	The student's self-care habits, such as personal hygiene or clothing choices, match career interests.	My child's personal hygiene habits and clothing choices match career interests.	Heal & Rusch, 1995
52. I participated in a career tech or job-training program and did well.	The student successfully participated in a career technology or job-training program.	My child participated in a career technology or job-training program and did well.	Baer et al., 2003; Benz et al., 2000; Fabian, 2007; Fabian et al., 1998; Flexer, 2011; Harvey, 2002; Hasazi et al., 1989; Rabren, et al., 2002; Shandra & Hogan, 2008
53. I had a job that I did *not* get paid to do, such as working for a family member.	The student had an unpaid job, such as working for a family member.	My child had an unpaid job, such as working for a family member.	Fabian, 1998; Hasazi et al., 1989

54. I worked for someone who taught me how to do a job, but I did *not* get paid.	The student had an unpaid internship or apprenticeship.	My child had an unpaid internship or apprenticeship.	Fabian, 2007; Fabian et al., 1998; Hasazi et al., 1989; Shandra & Hogan, 2008
55. I had a job where I earned money.	The student had a paid job.	My child had a paid job.	Benz et al., 1997; Benz et al., 2000; Doren & Benz, 1998; Dunn & Shumaker, 1997; Fabian, 2007; Fourqurean et al., 1991; Hasazi et al., 1985; Hasazi et al., 1989; Lindstrom et al., 2011; McDonnall, 2010; Rabren et al., 2002; Sitlington et al., 1993
	Self-Advocacy		
56. I use the internet or other sources to understand my disability, rights, and supports.	The student uses the internet or other sources to understand his or her disability, legal rights, supports, or accommodations.	My child uses the internet or other sources to learn about his or her disability, rights, and supports.	Skinner, 2004; Thoma & Getzel, 2005
57. I know which accommodations, such as extra time or class notes, are helpful.	The student identifies accommodations that are effective for him or her.	My child knows which accommodations, such as extra time or class notes, are helpful.	Aune, 1991;
58. I know the accommodations that do *not* help me.	The student identifies accommodations that are *ineffective* for him or her.	My child knows the accommodations that do *not* help him or her.	Thoma & Getzel, 2005
59. I asked for a different accommodation when the first one did *not* help me.	The student requested a new accommodation when the first one was *not* effective.	My child asked for a different accommodation when the first one did *not* work.	Thoma & Getzel, 2005

60. I only ask for support when I really need it.	The student asks for support only when needed.	My child asks for support only when needed.	Aune, 1991; Skinner, 2004
61. I talked during my IEP meeting.	The student talked during his or her IEP meeting.	My child talked during the IEP meeting.	Aune, 1991; Halpern et al., 1995; Portley et al., 2012
62. I told my IEP team my goals for after high school.	The student told the IEP team his or her post-school goals.	My child told the IEP team his or her goals for after high school.	Aune, 1991; Halpern et al., 1995; Portley et al., 2012
63. I talked about how I was doing in school at the IEP meeting.	The student discussed his or her present level of performance at the IEP meeting.	My child talked about how he or she was doing in school at the IEP meeting.	Aune, 1991; Halpern et al., 1995; Portley et al., 2012
64. At the IEP meeting, I talked to about how the classes I plan to take will help me meet my after high school goals.	At the IEP meeting, the student explained how his or her course of study will assist in achieving post-school goals.	At the IEP meeting, my child talked about how future classes will help achieve his or her after high school goals.	Aune, 1991; Portley et al., 2012
65. I led my IEP meeting.	The student led his or her IEP meeting.	My child led his or her IEP meeting.	Aune, 1991; Halpern et al., 1995; Portley et al., 2012
	Supports		
66. I know the difference between people who are a positive influence in my life from those who are *not*.	The student distinguishes between individuals who are a positive source of support from those who are *not*.	My child knows the difference between people who are a positive influence in his or her life from those who are *not*.	Goldberg et al., 2003; Raskind, 1999; Raskind et al., 2002
67. I know when to go to my support people for help.	The student identifies situations when support people are needed.	My child knows when to go to his or her support people for help.	Benz et al., 2000; Goldberg et al., 2003; Greenbaum, et al., 1995; Liebert et al., 1990; Madaus, 2006; Raskind et al., 2002; Thoma &

			Getzel, 2005; Sarver 2000
68. I know which support person can best help me in different situations.	The student identifies the support person needed for a specific situation.	My child knew which support person can best help him or her in different situations.	Benz et al., 2000; Gerber et al., 1992; Goldberg et al., 2003; Greenbaum et al., 1995; Raskind 1999; Raskind et al., 2002; Skinner, 2004
69. I accept help from support people when it is offered.	The student accepts help from support people when offered.	My child accepts help from support people when it is offered.	Doren & Benz, 1998; Gerber et al., 1992; Greenbaum et al., 1995; Lindstrom et al., 2011; Raskind et al., 2002
70. I only use my support people when I really need them, *not* to get out of doing things.	The student only uses support people when needed, *not* to get out of doing things.	My child only uses support people when needed, *not* to get out of doing things.	Gerber et al., 1992; Goldberg et al., 2003
71. I thank those who help me and help them when I can.	The student maintains the support network by showing appreciation or reciprocity.	My child thanks those who help him or her and willingly helps them in return.	Gerber et al., 1992; Raskind et al., 2002
	Utilization of Resources		
72. I find people to help me with a situation when the people I already know *cannot* help me.	The student actively seeks people to help with a situation when the current support people *cannot* help.	My child finds people to help him or her when the people he or she knows *cannot* help.	Gerber et al., 1992; Raskind et al., 2002
73. I use support people at school or work, such as the secretary, coach, school counselor or co-worker.	The student uses available support people at school or work.	My child uses support people at school or work, such as the secretary, coach, school counselor or co-worker.	Gerber et al., 1992; Lindstrom et al., 2011; Skinner, 2004
74. I use the internet to get information	The student uses the internet to access information for	My child uses the internet to get information about	Gerber et al., 1992; Goldberg et al., 2003; Liebert et al.,

about where to go for help outside of school.	possible support services or community agencies.	where to go for help outside of school.	1990; Thoma & Getzel, 2005
75. I ask for help from places outside school, such as the Department of Vocational Rehabilitation, the library, or employment agencies.	The student seeks assistance from community agencies.	My child asks for help from places outside of school, such as Department of Vocational Rehabilitation, the library, or employment agencies.	Gerber et al., 1992; Goldberg et al., 2003; Liebert et al., 1990; Thoma & Getzel, 2005

Elements Not Included in the TAGG

Test et al. (2009) also identified exit exam requirements, inclusion in general education, occupational courses, transition program, vocational education, and work-study as predictors of post-school success. Because these five categories are not behaviors or attributes a student can possess or that educators can teach, these categories are not appropriate for inclusion in the TAGG. However, research does exist to support more positive post-school outcomes for students who have higher GPAs and receive instruction in the general education classroom (Baer et al., 2003; Blackorby et al., 1993; White & Weiner, 2004).

Student GPA. McDonnall and Crudden (2009) and Raskind et al. (1999) reported academic achievement as a predictor of post-school employment for students with disabilities. Fore, Hagan-Burke, Burke, Boon, and Smith (2008) found no significant differences between academic performance in students with disabilities who received instruction in the general education and those who received instruction in the special education classroom, which supports consistent student GPA regardless of placement. Horn, Berktold, and Bobbitt (1999) found that 56% of students with

disabilities were not qualified for postsecondary education due to GPA and college entrance exam scores. No matter the educational placement of the student, GPA may correlate with student score on the TAGG.

Inclusion in the general education classroom. Baer et al. (2003) found participation in general education academics to predict enrollment in postsecondary education for students with disabilities. Leonard et al. (1999) reported inclusion in general education to be a predictor of post-school employment. Williams-Diehm and Benz (2008) found educational setting related to post-school employment for students with disabilities. Other studies emphasize the importance of inclusion in general education to ensure students with disabilities who desire to attend postsecondary education are adequately prepared (Hoffman, 2008). Spencer and Sands (1999) found students who participated in general education classes took more action to achieve transition goals. Participation in general education classes seems to contribute to post-school success in employment, postsecondary education, and community living for students with disabilities (Colley & Jamison, 1998). If students receiving instruction in the general education setting are more likely to take action to achieve transition goals and relates to post-school success, TAGG scores and percent of time students spend in the general education setting may be related.

Validity and Transition Assessments

Literature that describes validity dates back to 1915 (Lissitz & Samuelson, 2007). Literature often contradicts the concept of validity and what is required for assessment results to demonstrate evidence of validity (Lissitz, 2009). Nation (1997) explained that validity refers to the extent an assessment assesses what the author or

authors claim it measures and is usually described in terms of content, criterion-related, and construct validity. Sireci (2009) proclaimed that reducing the definition of validity to "a test measures what it purports to measure" ignores seventy years of valuable research (p. 28). "Validity is not an inherent characteristic of a test, and what we seek to validate are inferences derived from test scores" (Sireci, 2009, p. 19). Test users and administrators cannot simply consider an assessment valid for all purposes. The assessment is only valid for a certain purpose for an intended group of individuals. When the intended population for a test changes, or when a test is revised, the test developers must collect additional evidence of validity.

Standards for education and psychological testing. In 1985, AERA, APA, and NCME collaborated to create standards for educational and psychological tests to ensure the ethical use of tests. *Standards for Educational and Psychological Testing* provided criteria for the evaluation of tests and stressed that the standards should not be considered in seclusion when evaluating an assessment. This was especially important in the area of validity evidence for tests due to conflicting ideas of what is required for inferences derived from assessments to be considered valid (AERA et al., 1999). AERA et al. (1999) advanced the 1985 concept of types of validity to the 1999 view of lines of validity evidence.

AERA et al. (1999) explained the process of gathering validity evidence for an assessment begins with the intended use of the test scores. We intend the TAGG test scores to represent skills that students with mild to moderate disabilities currently possess and skills students with disabilities need that are known to indicate post-school success. Educators may then use the test results to write annual transition goals to be

included in the students' IEPs. AERA et al. (1999) then suggested test developers provide a detailed conceptual framework that describes the "knowledge, skills, abilities, processes, or characteristics to be assessed" (p. 9), which is included in this document under "Development of the TAGG" and "TAGG constructs." Our conceptual framework supports the intended interpretation of TAGG scores.

AERA et al. (1999) stated, "Validation involves careful attention to possible distortions in meaning arising from inadequate representation of the construct" (p. 10). It is important to mention that test users and administrators should not interpret low TAGG scores as evidence that the student will not experience success after high school. Low TAGG scores represent areas and skills that students do not yet possess and provide potential annual transition goals to allow the student more opportunities to obtain these skills before leaving high school.

Sources of validity evidence. In the most current *Standards for Educational and Psychological Testing*, AERA, APA, and NCME (1999) defined validity as "the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests" (p. 9). AERA et al. (1999) identified five sources of validity evidence: (a) content, (b) response processes, (c) internal structure, (d) consequences of testing, and (e) relations to other variables.

Evidence based on test content. Evidence of content validity refers to whether the test adequately reflects the content to be measured by the test. The in-depth literature review conducted to develop the TAGG provides validity evidence based on content.

Evidence based on response processes. Support for response process evidence includes "interviewing test takers about their responses to test questions, systematic observations of test response behavior, evaluation of the criteria used by judges when scoring performance tasks, and analysis of item response time data" (Sireci, 2009, p. 30). The TAGG development team observed ten educators administer the TAGG to 39 students across three states, New Mexico, Colorado, and Arkansas. Comments made by students and educators were documented and considered for revisions of the TAGG.

Evidence based on internal structure. Researchers may use factor analysis to contribute evidence of valid internal structure of an assessment to ensure "consistency between the structure of the construct(s) that are supposed to be represented by the test and the relationships of the test items and scales with each other" (Schafer, Wang, & Wang, 2009, p. 177). The TAGG development team is currently collecting data to conduct a confirmatory factor analysis on all three versions of the TAGG, professional, student, and family.

Evidence based on consequences of testing. Researchers must also consider the intended and unintended consequences of an assessment to ensure the correct use of the assessment; the TAGG is not intended for special education eligibility decisions. The results of this assessment can be used to create annual transition goals to add to the student's IEP to ensure the student has opportunities to learn skills and participate in experiences that research indicates as having an impact on post-school success in the areas of employment and further education.

Evidence based on relations to other variables. This study will examine the assessment's relation to other variables, which in the past, researchers referred to as

"criterion-related validity" (Sireci, 2009, p. 30). AERA et al. (1999) describes evidence of relation to other variables using three categories: (a) convergent and discriminant, (b) validity generalization, and (c) test-criterion relationships. To provide convergent and discriminant evidence, researchers examine "relationships between scores on the test and scores on other tests that assess similar constructs" (Schafer et al., 2009, p. 177). The TAGG development team will compare the TAGG results to results of the AIR Self-Determination Scale for all three versions. To provide evidence of validity generalization, researchers must examine the magnitude of coefficients across several variables such as gender, disability category, grade level, etc. A study to examine the difference between TAGG scores and disability category is currently being conducted.

Researchers may evaluate test-criterion relationships concurrently or collect one score and assess whether the score predicted an outcome at a later time (Schafer et al., 2009). In this study, I will seek to find a relation between scores obtained on the TAGG professional, student, and family versions and, collected at the same time, on GPA and percent of time in general education. If no relation exists, then this will support the notion that the TAGG assesses behaviors different from skills assessed by GPA and provided by including students with disabilities in the general education classroom. This will provide empirical discriminate validity evidence based on relations to other variables to support the use of the TAGG as a means to identify annual transition goals known to indicate post-school success of students with disabilities that differ from academic goals.

AREA et al. (1999) considers validity to be "the most fundamental consideration in developing and evaluating tests" (p. 9). However, many commonly used transition

assessments do not provide sufficient evidence of validity. As stated previously, not all sources of validity evidence are required for an assessment to be considered valid for a specific use. "Validation is the joint responsibility of the test developer and the test user" (AREA et al., 1999, p. 11). When the test developer does not provide adequate validity evidence, the test user may apply the test in a manner in which the assessment was not intended.

Sources of Validity Evidence for Commonly Used Transition Assessments

Adaptive Behavior Assessment System

The Adaptive Behavior Assessment System, Second Edition (ABAS-II) (Harrison & Oakland, 2003), claims to provide a comprehensive norm-based measure of adaptive behavior skills that are both valid and reliable. Multiple forms of the ABAS-II exist; two forms, one for children ages zero to five and one for use with individuals five to 21, and a self-rating adult form for individuals aged 16 to 89. All forms reflect readability at a fifth grade level. Authors used a normative sample to conduct reliability and validity tests for all forms of the assessment. Authors of the ABAS-II recommend training in standardized psychological and educational assessment for administrators of the assessment, conducted field tests, and used item analysis to select items for the final version of the assessment. The ABAS-II provides Likert-type skill scores in 10 areas: (a) communication, (b) community use, (c) functional academics, (d) health and safety, (e) home or school living, (f) leisure, (g) self-care, (h) self-direction, (i) social, and (j) work.

Reliability. Reliability studies of 1,134 parents, 1,043 teachers, and 1,678 other adults yielded a high degree of internal consistency, .98 to .99. Average correlations

among skill areas tested in the moderate range, .40 to .70, which suggest the skills are related, yet separate skills. Test-retest studies two weeks apart reported correlations that averaged .90, which is sufficient to consider the ABAS-II a stable transition assessment.

Validity. Harrison and Oakland (2003) describe validity evidence based on test content by using theory, constructs, and standards from the American Association of Mental Retardation (AAMR) as well as literature and studies based on adaptive behavior. Evidence based on response processes was collected by analyzing comments from test-takers on the ease of completing the different scales and expert ratings concerning items. The test developers collected validity evidence based on internal structure by examining internal consistency, test-retest, cross-form, and interrater consistency. Harrison and Oakland (2003) discuss the proper use of the assessment and consequences of testing through five case studies. These case studies provide a model to develop programs and monitor individual progress. To explore the relations to other variables, Harrison and Oakland (2003) presented correlations between the ABAS-II and the Vineland Adaptive Behavior Scale (Doll, 1953) that ranged from .47 to .93. Harrison and Oakland (2003) provided information for each of the five sources of validity evidence suggested by AREA et al. (1999).

AIR Self-Determination Assessment

The American Institute for Research (AIR) Self-Determination Scale (Wolman et al., 1994) consists of items that measure levels of self-determination and is available in three forms: (a) parent with 18 items, (b) student with 24 items, and (c) educator with 30 items. Test results can be used to develop a profile of a student's level of self-determination, identify areas of strengths and needs, recognize needed education goals

and objectives, and develop strategies to build capacities and opportunities for the student to become more self-determined. The assessment framework, based upon the Self-Determined Learning Theory, includes three capacity sections, (a) ability, (b) knowledge, and (c) perceptions, and two opportunity sections (a) school and (b) home. Participants rate behaviors according to frequency on a 5-point Likert-type scale. Test administrators add each set of two test items, record results on a profile, then add capacity scores to opportunity scores and record on a graph. The number provided indicates a basis for comparison and checkpoint over time for each individual student. Wolman et al. (1994) designed the scale for all school-age children, kindergarten through 12th grade year. Authors conducted a field test on the educator form to assess test items. It is unknown how the researchers selected the items for the final version. Researchers provided no information concerning reliability and validity of the parent or student versions.

Reliability. Reliability testing for the AIR educator form included alternative-item correlation, split-half test, and test-retest. These methods are appropriate for item consistency, internal consistency, and stability of results over time. The alternative-item test yielded a sufficient range from .91-.98. Internal consistency was examined using a split-half test and authors compared the odd-numbered items to even-numbered items. The split-half test yielded a sufficient correlation of .95. Authors used test-retest over a three-month period to test consistency and yielded a correlation of .74, which is appropriate for beginning stages of research. Authors provided no reliability information for the student or family versions.

Validity. Wolman et al. (1994) developed test items using the Self-Determined Learning Theory process of thinking, doing, and adjusting, and the two steps required to accomplish each of these components, which provides validity evidence based on test content. No validity evidence of response processes for any of the assessment versions could be found in the user guide. Wolman et al. (1994) did provide evidence of internal structure for the educator version through a factor analysis that indicated the presence of four factors: (a) capacity, (b) home-school, (c) opportunity, and (d) knowledge ability-perception, which explained 74 percent of the variance in the assessment. Evidence of consequences of testing was explained in the user manual and could be applied to all three versions. The test-developers examined the relations to other variables by comparing "relationships between gender, ethnicity, socioeconomic status, and presence of disability on students' level of self-determination" (p. 43). Students with lower socioeconomic status scored significantly lower than those with higher socioeconomic status. Students who received special education services scored lower than those in general education, and students with mild disabilities scored higher than those with moderate to significant disabilities on the educator version. No implication information was provided for the results of the analysis. No analysis of the variables was provided for the student or family versions.

The internal consistency and the test-retest reliability estimate for the educator version were all within the acceptable ranges; however, from the user guide alone, it cannot be determined whether considerable effort went into the development of the test. The authors identified a normative student sample that is representative of the United States in terms of gender and racial and ethnic breakdown, yet no information is

provided on the educators who actually completed the scales to assess any biases among raters. The authors also failed to provide information on how this scale is similar to or different from other scales that measure self-determination or why they chose to delete some items from the student and parent versions. Authors or other researchers need to provide more research to clarify the validity and reliability of the parent, student, and educator versions of the AIR self-determination scale.

Arc's Self-Determination Scale

The purpose of the Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995) is to enable students to "evaluate their own beliefs about themselves and their self-determination, work collaboratively with educators and others to identify individual areas of strength and limitations related to self-determination goals and objectives, and self-assess progress in self-determination over time" (p. 8). Wehmeyer and Kelchner (1995) viewed self-determination as an educational outcome. The author stressed that this instrument is not a diagnostic tool and teachers and researchers are appropriate administrators of the scale. Participants can use the scores from the scale to determine individual strengths and needs and as a basis for comparison for previous individual scores. Arc's Self-Determination Scale is only available in a student form.

Reliability. The author conducted reliability studies in five states with 500 students with and without disabilities. Demographic information from two of the states could not be released due to consent to release issues and was not included in the sample description, yet the author states the sample was representative. Wehmeyer and Kelchner (1995) calculated internal consistency reliability using Cronbach's alpha for the scale with the exception of the self-regulation sub-scale, which calls for open-ended

answers. Overall, the calculated coefficient was .90. Statistical analyses were provided for each domain and supported internal consistency reliability of the Arc's Self-Determination Scale.

Validity. The author provided a rich description of evidence based on content used to identify items used for the assessment. Wehmeyer and Kelchner (1995) presented validity evidence based on response processes by identifying the characteristics of 312 adults with cognitive disabilities who displayed self-determination through a series of interviews and self-determination self-report measures and identified four essential characteristics: (a) autonomy, (b) self-regulation, (c) psychological empowerment, and (d) self-realization. A factor analysis was completed to ensure evidence based on internal structure. Evidence based on consequences of testing was clearly described in the procedural guidelines. Field-testing of the Arc's Self-Determination Scale (Wehmeyer & Kelchner, 1995) included 500 students with mild intellectual disabilities and learning disabilities and an unknown number of educators. To provide evidence based on relations to other variables, Wehmeyer and Kelchner (1995) analyzed validity by correlating the Arc's Self-Determination Scale scores with scores from the Intellectual Achievement Responsibility Questionnaire (IARQ) (Crandall, Katkovsky, & Crandall, 1965), the adult version of the Nowicki-Strickland Internal-External Scale (ANS-IE) (Nowicki & Duke, 1974), and the Self-Efficacy Scale (SES) (Sherer et al., 1982). Wehmeyer and Kelchner (1995) also examined the impact gender, age, and type of disability had on ARC scores. It appears Wehmeyer used adequate methods to ensure the reliability and validity of Arc's Self-Determination Scale's specified use to evaluate beliefs about oneself.

Brigance Employability Skills Inventory

The *Brigance* Employability Skills Inventory (Brigance, 1995) is one inventory provided in the *Brigance* system to self-assess basic employability skills for a variety of entry-level positions for students with mild cognitive and learning disabilities at the high school level. The inventory provides information concerning each skill for educators to use as an "educational tool," not an overall score. The employability skills inventory is comprised of approximately 1,400 items across six areas: (a) career awareness and understanding, (b) job seeking and knowledge, (c) reading skills, (d) speaking and listening skills, (e) pre-employment writing, and (f) math skills and concepts that Brigance (1995) reported are skills needed to seek employment. Administration of the inventory requires no special training and the inventory is a criterion-referenced assessment to show mastery or non-mastery of skills on an individual basis, not in reference to the norms of others.

Reliability. The *Brigance* Employability Skills Inventory (Brigance, 1995) is a criterion-referenced inventory without published norms due to the individualized nature of the inventory. The author provided no technical data related to reliability in the manual, which is often acceptable for criterion-referenced tests. MacQuarrie, Applegate, and Lacefield (2008) noted that Cronbach's Coefficient Alpha, which researchers often use for analyzing the reliability of norm-referenced assessments, is not useful for criterion-referenced assessments and that test-retest correlation between two inventory participants approximately two weeks apart provides a more meaningful estimate of reliability. Taylor and Lee (1995) suggested calculating reliability for criterion-referenced tests using an alternative to the correlation coefficient, such as two-

by-two tables and agreement coefficients, noting this to be a tedious process, yet necessary for reliability. The *Brigance* Employability Skills Inventory does not provide evidence to consider the inventory reliable.

Validity. The manual does not state how the author chose the specified skills to assess or the development of items, nor did the author provide information to ensure validity evidence based on content or empirical information. No information is provided to ensure validity evidence based on response processes. As with the lack of reliability information, no information is provided to support evidence based on internal structure. In the manual, Brigance (1995) does discuss consequences of testing by describing that the assessment should only be used to determine mastery and nonmastery of skills and not as reference to what is "normal" for a certain age or population. Field tests were not described in the manual and Brigance (1995) provided no evidence based on relations to other variables. A review of the *Brigance* Employability Skills Inventory (Brigance, 1995) by Carlson (2004) suggested the inventory may possess face validity, which does not contribute to the true validity of the inventory (Swezey, 1981).

PAES Talent Assessment

The Practical Assessment Exploration System (PAES) Talent Assessment (Swisher, 1998) is a curriculum-based assessment of basic employment skills, interests, strengths, and work-related behaviors. This assessment is embedded in a work development curriculum where teachers become "bosses" and students become "employees." Students clock in and out to complete hands-on work-related tasks and are paid with simulated money. Swisher (1998) suggested educators use results from the assessment to identify student work-related strengths and areas of need and include

results in transition plans of students with disabilities in high school who do not participate in all general education classes, adults with disabilities, and all middle school students.

Reliability. The technical manual reported Swisher conducted test-retest reliability in 1997 of 77 students 12 to 16 weeks apart to examine stability and consistency of scores. Carmines and Zeller (1979) suggested a time span longer than eight weeks can introduce error into the estimate of reliability. The technical manual provides no other information regarding the sample. The technical manual reported PAES scores to be "reasonably consistent" over time. Scores were most consistent for work rate .88, amount of required assistance .75, and quality of work .71. The manual did not report an overall coefficient. If the author had conducted the test-retest method within the suggested time period, results may have yielded higher correlation coefficients. Item analysis would also have provided better evidence of the reliability for the PAES Talent assessment.

Validity. Swisher (1998) established evidence based on test content by identifying skills needed for entry-level jobs and admission to vocational education classes. Evidence of response processes for the PAES Talent assessment is embedded in the assessment itself, as it is a performance-based assessment that students rank their level of interest with an objective along with a performance score. No evidence of internal structure was reported. Evidence based on consequences of testing was examined through teacher interpretation of PAES results and reviewing planning and placement decisions based on correct use of the summary report. Teachers and researchers found the PAES to be user-friendly and easily interpretable. Swisher (1998)

explored evidence of relations to other variables by studying predictive capability of PAES scores of 103 students with disabilities on future job performance by comparing PAES to two aptitude measures three to five years after completing the PAES curriculum and assessment in the seventh and eighth grades. The author reported strong correlations to job-related outcomes for the PAES and weak correlations of the two other aptitude measures to the outcome measures. Swisher employed adequate methods and support evidence of validity for the intended use of the PAES Talent assessment.

Self-Determination Assessment Battery

The Self-Determination Assessment Battery (Hoffman, Field, & Sawilowksy, 2004) consists of five assessments: (a) Self-Determination Knowledge Scale (SDKS), (b) Self-Determination Parent Perception Scale (PPS), (c) Self-Determination Teacher Perception Scale (TPS), (d) Self-Determination Observation Checklist (SDOC), and (e) the Self-Determination Student Scale (SDSS). This assessment uses the self-determination model (Field & Hoffman, 1994) to measure factors related to self-determination including cognitive, affective, and behavioral factors. The self-determination model (Field & Hoffman, 1994) contains five components: (a) know yourself, (b) value yourself, (c) plan, (d) act, and (e) experience outcomes and learn, that educators can use as a basis for educational intervention. Educators can use the assessment scores to create a profile of all scores using the standardization chart or direct students to participate in an individual assessment based on student need.

The SDKS consists of 37 items written at the fifth grade level to measure cognitive levels of self-determination skills and was designed to be used in conjunction with the Steps to Self-Determination curriculum (Field & Hoffman, 1996). The

curriculum and assessments were designed for adolescents with and without disabilities. The PPS and TPS consist of 30 items to rate the students' self-determined behaviors on a Likert-like scale. The SDOC consists of 38 observation checklist items teachers use to report behaviors linked to self-determination. The SDSS consists of 92 self-reported items that measure application of self-determination behaviors to home, school, and community. The researchers normed the assessments on 416 students with and without disabilities from ages 14-22 and included a chart to convert raw scores to z-scores, then to percentiles in the manual.

Reliability. Due to the limited number of items on each assessment, the researcher provided Cronbach's Alpha as a measure of internal consistency, in addition to the Spearman-Brown Prophecy formula for "statistical correction" in the assessments. Cronbach Alpha for all assessments in the battery ranged from .82-.97, and Spearman-Brown ranged from .88-.97, which reports high levels of internal consistency and is sufficient evidence of reliability.

Validity. Test developers used Field and Hoffman's (1994) self-determination model as the basis for these assessments and as evidence based on test content, however the model is not well described nor is it stated how the assessment items are related to the model. The Self-Determination Assessment Battery's SDOC is an observational checklist that could provide validity evidence based on response processes for three of the behaviors that the developers associate with self-determination, (a) planning, (b) communicating, and (c) behaving independently. It is unclear why other behaviors identified in Field and Hoffman's (1994) self-determination model are not included since the self-determination model was used as the basis for the assessment. The authors

conducted factor analyses and confirmatory factor analyses for the SDSS, which revealed two factors accounted for 81.2% of the variance to show evidence of validity based on internal structure. Validity evidence based on the consequences of testing is well described in the Self-Determination Assessment's user guide. The instruments can be used in a variety of ways to assist with educational planning, including discussions, to identify differences in perceptions of educators, students, and parents and interventions and experiences needed, and as a pre and post test for the Steps to Self Determination curriculum. The authors provide correlation matrices from all five assessments with three other instruments, the teacher questionnaire, the parent questionnaire, and the personal attitude questionnaire to provide validity evidence based on relations to other variables. Hoffman et al. (2004) provided adequate evidence of validity for the purpose of measuring self-determination skills taught through the Steps curriculum.

Self-Directed Search

The Self-Directed Search (SDS) 1994 Edition of Form R (Holland, Fritzsche, & Powell, 1997) is a self-rated vocational assessment based on Holland's (1992) theory of personality types and reported to be a "comprehensive inventory of vocational interests, values, competencies, and avocational interests" (p. 46). The assessment matches a person's personality profile to a list of occupations and has been utilized and updated since 1971. The 1994 version was created for all high school and college students and adults. The goal of the 1994 Edition of Form R was to increase reliability and validity by eliminating weak and outdated assessment items. The researchers normed the SDS

Form R (1997) on 2,602 students and adults aged 17 to 65 from 25 states, correlated demographic variables, and found no substantial differences in the distributions.

Reliability. The authors examined internal consistency coefficients (KR-20) for all scales ranging from .72 to .92 and presented graphs of data in the technical manual that provided evidence to support some shared variance, yet each contributed to unique variance. Authors conducted test-retest reliability 4 to 12 weeks apart on a sample of 73 high school and college students and adults with acceptable correlations ranging from .76 to .89, providing evidence for stability of scores.

Validity. Authors referred to earlier versions of the SDS for most information regarding validity and provided a table of "the percentage of hits equals the percentage of a sample whose high point code and one-letter aspiration or occupational code agree" (Holland et al., 1997, p. 23). Sireci (2009) conveyed that new evidence of validity is needed for revisions of an assessment. Holland, Fritzsche, and Powell's (1997) use of Holland's (1992) theory of personality types to build items for the Self-Directed Search provides validity evidence based on test content, however no information was given concerning how the items were developed. Test developers did not provide evidence validity based on response processes in the technical manual. Not enough information is provided for validity evidence based on internal structure. The authors do provide information on hit rates and the number of individuals who fall in each vocational category, but this information is not adequate evidence. The test developers ordered the usefulness of the assessment from greatest to least as (a) vocational interests, (b) personality, (c) values, (d) competencies, and (e) avocational interests, yet do not adequately describe the consequences of testing. Holland et al. (1997) compared means

and standard scores of the 1994, 1985, and 1977 versions of the Self-Directed Search to provide validity evidence based on relations to other variables. All differences among the Self-Directed Search versions were reported as one-third standard deviation or less. However, comparing an assessment to itself does not provide information on other variables. The SDS Technical Manual reports over 500 studies have been conducted using this assessment, but the manual does not describe the studies. Based on the information provided in the SDS technical manual, Holland et al. (1997) do not provide sufficient evidence of validity for the 1994 edition of the SDS.

Transition Planning Inventory-Updated Version

The Transition Planning Inventory-Updated Version (TPI) (Clark & Patton, 2006) is a formal assessment to assist educators in writing effective transition plans for any student in need of transition planning in the areas of education or training, employment, and independent living. Clark and Patton (2006) claim the assessment focused on major transition areas from emerging literature, yet the resource guide only cites four sources as the basis of the assessment. The TPI consists of four forms: (a) student, (b) home, (c) profile, (d) further assessment recommendations and 46 Likert-like transition-planning statements. A computer version is also available for this assessment. The authors recommend at least three members of the student's transition planning team complete the assessment. The 46 TPI items originated from over 400 items and authors explain each item in the technical manual.

Reliability. Researchers conducted a field-test of 310 students with disabilities to test the internal consistency reliability of the items on the student form using Cronbach's Alpha on all forms for the 1997 version of the Transition Planning

Inventory. The technical manual reported no demographic information for raters other than the students. The coefficient alphas ranged from .70 to .90. However, as stated above, new reliability information is needed when an assessment is revised. Clark and Patton (2006) also reported an examination test-retest consistency over time for the 1997 version of the TPI on 36 students from Kansas seven to 10 days apart, reported large coefficients to support TPI's consistency over time, and deemed the inventory to be reliable. It is important to note that Carmines and Zeller (1979) suggest test-retest conducted too close together could result in larger than expected coefficients and actually assess test-taker memory rather than the consistency of the test. Clark and Patton (2006) did not provide adequate evidence for reliability for the 2006 version of the TPI due to the fact that all evidence reported was based on the 1997 version of the assessment.

Validity. Clark and Patton's (2006) 46-item TPI is organized into transition planning areas based on domains of recommended practice represented in four past articles (Halpern, Herr, Doren, & Wolf, 2000; Patton & Dunn, 1998; Sitlington, Clark & Kolstoe, 2000; Wehman, 2002). These four articles may be able to attribute to the validity evidence based on content for the planning areas, yet it would seem the test developers would use a vaster array of current literature. The test developers did solicit expert opinion concerning the test items. The feedback was used to rewrite and remove some items. Clark and Patton (2006) mention field-testing, yet no actual evidence of validity based on response processes are reported in the resource guide. No validity evidence based on internal structure was provided in the resource guide for the 2006 version. The Transition Planning Inventory resource guide (Clark & Patton, 2006) gave

an in-depth description of validity evidence based on consequences of testing areas, including (a) general assessment options, (b) skills and knowledge needed for administration of assessment, (c) family and cultural factors, (d) strength-based results and interpretation, (e) areas of transition goals, and (f) frequency of administration. Clark and Patton (2006) reported validity evidence based on relations to other variables for the 1997 version of the TPI by comparing scores to the Wechsler Intelligence Scale for Children (Wechsler, 1991), Standard, Third Edition (WISC-III) and the Vineland Adaptive Behavior Scales (Doll, 1953), and reported the comparison did not meet requirements to consider this validity evidence adequate for the 1997 TPI. No information is provided concerning the 2006 version of the TPI. Clark and Patton do not include sufficient validity evidence.

Transition Behavior Scale Second Edition

The Transition Behavior Scale Second Edition (McCarney & Anderson, 2000a; McCarney & Anderson, 2000b) is a standardized Likert-type self-report scale designed to rate student behaviors known to predict post-school success, consisting of 62 items and three subscales: (a) work-related, (b) interpersonal relations, and (c) social and community experiences. The technical manual for the school version reported that this assessment is a "measure of predicted success in employment and independent living based upon school personnel's observations of a student's behavior or skills," (McCarney & Anderson, 2000b, p. 7). The scale provides a student and school version, yet not a parent version and no mention of individuals with disabilities is present in the technical manual. The author developed the scale based on predictors of post-school success recommended by employers and school staff. The author randomly selected 21

schools from 17 states for a total of 2,605 students for the standardization of the self-report version. For the school version, the author provided information on the 2,624 students whom teachers assessed, however no demographic information on the actual teachers. The author provided standard scores, percentile ranks, and standard error of measurement in the technical manual.

Reliability. The author conducted test-retest reliability for the self-report version of the Transition Behavior Scale Second Edition 30 days apart with 93 individuals and reported correlations ranging from .67 to .79. The range is below recommended acceptable correlations for stability. Internal consistency for the three subscales reported the coefficient alpha to total .90 or above, suggesting evidence of reliability. The author also conducted test-retest on the school version with 21 individuals 30 days apart and reported correlations ranging from .85 to .92. It is unclear whether 21 participants can be a representative sample for reliability determinations. Internal consistency for the three subscales on the school version reported the coefficient alpha to total .90 or above, suggesting evidence of reliability.

Validity. McCarney and Anderson (2000a, 2000b) reported validity evidence based on content by describing the item development process. The test developers solicited a list of "indicators which are most commonly found to predict success in employment situations and transition to society/independent living" from 47 guidance counselors, educational personnel, and employers (p. 7). The items began as the opinion of these individuals, then the items were combined and some were eliminated based on the opinions of the test developers. Throughout the technical manual, the items are referred to as "predictors of success in employment and society," yet no prediction

studies or data that support this claim were used to develop the assessment. The process used may attribute to validity evidence based on content, but does not provide adequate evidence based on content to represent the items as predictors of employment and independent living. Test developers do not provide validity evidence based on response processes in the technical manual. The author investigated evidence of validity based on internal structure through factor analysis using the principal factor method for both versions. The first dominant factor explained 38% of the variance and other factors explained no more than 2.7% for the self-report version. This, combined with high correlations between subscales, provided limited evidence to suggest the subscales are separate domains. The first factor explained 60.6% of the variance with other factors explaining no more than 3.2% for the school-version, which may not allow users to treat subscales as separate domains. It is unknown why the test developers chose to use the principal factor method, why they only accounted for 60.6 % of variance, or used three factors, making it difficult to determine the TBS provided evidence of validity based on internal structure. McCarney and Anderson (2000a, 2000b) reported validity evidence based on consequences of testing by stating that the results of this assessment should be used to identify transition goals, objectives, and experiences based on school staff observation. The test developer provided validity evidence based on relations to other variables for the self-report version (McCarney and Anderson, 2000a) by comparing Transition Behavior Scale scores of 180 students to their scores on either the Youth Self-Report (Achenbach, 1991) or the Behavior Assessment System for Children: Adolescent Self-Report of Personality (BASC ASRP) (Reynolds & Kamphaus, 1992). The author found the correlations to be acceptable, ranging from .29 to .65. For the

school scale, the author compared rating of the Transition Behavior Scale to the ABES-R (McCarney, 1995) and the Adaptive Behavior Inventory (ABI) (Leigh, 1986), and the AAMR Adaptive Behavior Scale-School Edition (Lambert, Nihira, & Leland, 1993). Acceptable correlations ranged from .45 to .83. Test developers need to provide more evidence of validity for the Transition Behavior Scale.

Transition Skills Inventory

The Transition Skills Inventory (Halpern et al., 2000) is a 76-item, curriculum-based self-evaluation tool to evaluate skills students need for post-school success. The inventory is used in conjunction with the NEXT S.T.E.P curriculum. The student, teacher, and support person rate how often a student performs a skill and teachers discuss any discrepancies. The students use results to identify strengths and needs, and record the findings on a "Skills Summary Sheet."

Reliability and Validity. Halpern et al., (2000) reported a five-year development process, consulting 250 teachers in five states. The curriculum was field-tested with 1,000 students and their families, yet no information from this field-testing is provided in the teacher manual. The manual states the curriculum is "…more like a structured set of guidelines that good teachers will modify and adapt to meet their unique circumstances and teaching styles" (p. 15). The publisher, Pro-Ed, reported no additional reliability and validity information for the Transition Skills Inventory due to the inventory being "curriculum-based" when contacted by phone. As stated above, test-retest, two-by-two tables, and agreement coefficients can support evidence of reliability for curriculum-based assessments. The test developers do not provide enough

reliability or validity evidence for the TSI. See tables 5 and 6 for a representation of reliability and validity of commonly used assessments, respectively.

Table 5

Reliability Evidence of Commonly Used Transition Assessments

Assessment	Reliability Coefficient			
	Stability Test-Retest	Internal Consistency (Cronbach's Alpha, KR 20, or Correct for Attenuation)	Equivalence Alternate Form	Split-Half
Adaptive Behavior Assessment System 2nd Ed (Harrison & Oakland, 2003)	Avg. .90	.98-.99	.90	
AIR (Wolman, et al., 1994)				
Parent				
Student				
Educator	.74		.91-.98.	.95
ARC (Wehmeyer & Kelchner, 1995)		CA: .90		
Brigance Employability Skills Inventory (Brigance, 1995)				
PAES Talent Assessment (Swisher & Green, 1998)	.88 .75 .71			
Self-Determination Assessment (Hoffman et al., 2004)		CA: .82-.97		SB: .88-.97
Self-Directed Search (Holland et al., 1997)	73 people: .76-89	KR-20: .72-.92 .90-.94 .37-84		
TPI (Clark & Patton, 2006)	Test-retest: Large co-efficient .70-.98	CA: .70-.90		
Transition Behavior Scale 2nd Ed (McCarney & Anderson, 2000a, 2000b)				
Self-Report	.67-.79	3 subscales: > or = .90		
School Version	.85-.92	3 subscales: > or = .90		
Transition Skills Inventory (Halpern et al., 2000)				

Table 6

Validity Evidence of Commonly Used Transition Assessments

Assessment	Validity Evidence Based on				
	Test Content	Response Processes	Internal Structure	Consequences of Testing	Relations to Other Variables
Adaptive Behavior Assessment System 2nd Ed (Harrison & Oakland, 2003)	X	X	X	X	X
AIR (Wolman et al., 1994)					
Parent	NP	NP	NP	NP	NP
Student	NP	NP	NP	NP	NP
Educator	X	NP	X	X	X
ARC (Wehmeyer & Kelchner, 1995)	X	X	X	X	X
Brigance Employability Skills Inventory (Brigance, 1995)	NP	NP	NP	X	NP
PAES Talent Assessment (Swisher & Green, 1998)	X	X	NP	X	X
Self-Determination Assessment (Hoffman et al., 2004)	II	II	X	X	X
Self-Directed Search (Holland et al., 1997)	II	NP	NP	II	NP
TPI (Clark & Patton, 2006)	II	NP	NP	X	II
Transition Behavior Scale 2nd Ed (McCarney & Anderson, 2000a, 2000b)					
Self-Report	II	NP	II	X	X
School Version	II	NP	II	X	X
Transition Skills Inventory (Halpern et al., 2000)	NP	NP	NP	NP	NP

X=Adequate information was provided in the Technical Manual or User's Guide
II=Inadequate information was provided in the Technical Manual or User's Guide
NP=Not Provided in Technical Manual or User's Guide

Summary of Commonly Used Transition Assessments

Of the ten transition assessment reviewed, five provided adequate evidence of reliability: (a) ABAS Second Edition (Harrison & Oakland, 2003), (b) ARC (Wehmeyer & Kelchner, 1995), (c) Self-Determination Assessment (Hoffman et al., 2004), (d) SDS (Holland et al., 1997), (e) TBS Second Edition (McCarney & Anderson, 2000a, 2000b). Only four provided adequate evidence of validity in the testing manual or user guide: (a) ABAS Second Edition (Harrison & Oakland, 2003), (b) ARC (Wehmeyer & Kelchner, 1995), (c) PAES Talent Search (Hoffman et al., 2004), and (d) Self-Determination Assessment (Hoffman et al., 2004),

Transition assessments are often informal and rarely provide adequate evidence of reliability and validity. These assessments may provide useful information for transition planning, but may not provide consistent results or be appropriate for the use employed by the test-user. Transition assessments such as the TAGG demonstrate improvements to previous practices regarding evidence of reliability and validity in the field of special education and may provide greater access to postsecondary employment and education for students with disabilities. AERA et al. (1999) considered evidence of validity "the most fundamental consideration in developing and evaluating tests" (p. 9). This study will assist to provide sound validity evidence to support the intended use of the TAGG as a tool to determine present levels of student skills and behaviors that reportedly predict post-school success and areas that require annual transition goals for development.

CHAPTER 3: METHODOLOGY

The purpose of this study is to determine the extent that relations exist between (a) TAGG scores and percent of time spent in general education, (b) TAGG scores and student GPA in students with disabilities, and (c) each of the 10 TAGG constructs and percent of time spent in general education and student GPA. The data source consisted of student transcripts provided by the special education teachers participating in a larger study for the development of the TAGG, student demographic forms completed by the special education teachers stating how many periods per day each student participates in the general education instruction, and current TAGG scores completed by the educators, parents, and students.

Research Questions

Participation in general education classes and high GPAs appear to predict post-school success for students with disabilities (Adelman, 2006; Baer et al., 2003; Blackorby et al., 1993; DaDeppo, 2009; Heal & Rusch, 1994; Heal & Rusch, 1995; Oakes & Saunders, 2007; White & Weiner, 2004). The TAGG measures student behaviors related to post-school success and excludes non-academic behavior items, such as participation in general education and GPA. Due to these three variables all impacting post-school success, the variables may be related. Thus, this study will attempt to answer the following research questions:

1. What is the relation between TAGG scores and the percent of time students with disabilities receive instruction in the general education classroom?
2. What is the relation between TAGG scores and academic achievement as measured by student GPA for students with disabilities?

Research Methodology

The most appropriate research methodology for this study is quantitative. Mertens and McLaughlin (2004) describe quantitative research as "the systematic collection of data that results in the quantification of characteristics of participants in the study" (p. 52).

Research Design

A correlational research design was used for this study. Correlational research assesses the "degree of relationship between two measured variables" (Jackson, 2006, p. 15). Educator, family, and student scores of each of the 10 TAGG constructs and overall TAGG scores were compared to student GPA and percent of time in the general education setting. Students who have high GPAs and spend a larger percent of the school day receiving instruction in the general education classroom may score higher on the TAGG if these variables are related. I chose student GPA and percent of time in general education as independent or predictor variables and educator, family, and student scores on the TAGG as the dependent or criterion variable for this study. Correlations identify whether two or more variables are related to one other. Data collected for this study was stored on a secure computer and analyzed using Statistical Package for Social Sciences (SPSS).

An a priori estimation of subjects needed for a given power was conducted as a power analysis to determine the needed sample size for the purpose of this analysis. Stevens (2007) suggested using the average of estimated effect sizes from studies similar to this investigation. McDonnall and Crudden (2009) found that academic competence measured by grade-level equivalents in English and math predicted post-

school employment. The alpha level was set as .10 due to a small sample size. Cohen's d values of .003 and .046 were reported for reading and math, respectively. Raskind et al. (1999) reported effect sizes of .03 and .05 for reading and math, respectively.

Baer et al. (2003) found participation in general education was a predictor of postsecondary education for students with learning disabilities with a Cohen's effect size of .332. Leonard et al. (1999) reported integration into a regular school setting as a factor associated with employment with a Cohen's effect size of .19. A power analysis using Faul, Erdfelder, Buchner, and Lang's (2009) G*Power 3.1 test for correlational analysis indicated that I needed a sample size of at least 138 participants to achieve a .30 correlation with an alpha set at .05 for both analyses.

Participants and Setting

For this study, I used an existing data set developed by researchers at OU's Zarrow Center for a larger study concerning the development of the TAGG funded by the Institute of Education Sciences, National Center for Special Education Research. The data set contained TAGG scores and student demographic data for 349 students provided by 39 educators, 271 family members, and 349 students from Arkansas, Colorado, North Carolina, New Mexico, Oklahoma, Rhode Island, and Wisconsin for a total of 659 participants. Educators provided educator and student demographic data, and the family members of the consenting students completed the family demographic information.

After the research team was granted Institutional Review Board (IRB) approval, the team collected transition educator email contact information from the transition workshops in Arkansas, Colorado, North Carolina, New Mexico, Oklahoma, Rhode

Island, Texas, and Wisconsin. The research team sought to recruit 840 participants consisting of 40 educators, 400 students, and 400 family members. The recruitment process began by randomly selecting one hundred and fifty educators to contact from Arkansas, Colorado, and New Mexico with the expectation that each educator would provide approximately ten student and ten family member participants. When the desired number of participants was not reached, the next 40 educators from each state were contacted until email lists were exhausted. The research team then obtained transition workshop email lists from North Carolina, Oklahoma, Rhode Island, Texas, and Wisconsin.

We sent 689 recruitment emails. Of those, 78 emails were rejected and 25 individuals responded that they were not educators. This left 586 working email addresses. After three requests to participate, these 586 contacts yielded 104 educators who replied "Yes," they would like to participate in the study. Twenty-four contacts responded "No," they would not like to participate in the study and the remaining 458 did not respond to the three recruitment emails. The "yes" respondents were sent a web link and instructed to watch a 15-minute video to learn more about this research project, their roles, responsibilities, and the honorarium for participating in the study. Fifty-five percent (n = 57) of those who originally responded, "Yes," emailed their mailing address after viewing the training video, which indicated they wanted to participate in the study. Of the original 586 email addresses, 57, or 10%, committed to participate in the study. Each educator received student, family, and educator consent and assent forms and principal approval letters. The educator participant inclusionary criteria

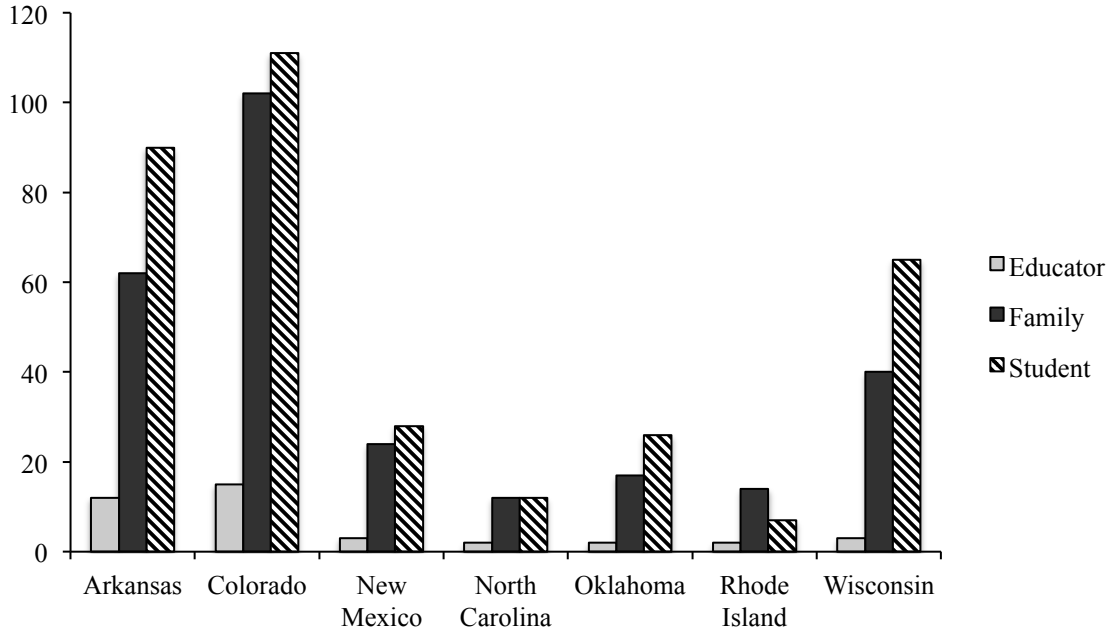
consisted of (a) special education teacher or transition coordinator who is (b) responsible for completing transition plans for students 14 to 21 years of age.

Educators were responsible for obtaining assent and consent for students and consenting students' family members to participate in this study. We requested that each educator gather demographic information for 10 students. Inclusion criteria for students included (a) high school students with IEPs and mild to moderate disability, as identified by the educator, and (b) signed consent and assent forms. Consenting students' family members could include parents or stepparents, grandparents, aunts and uncles, brothers and sisters, or legal guardians.

Of the 57 educators who received a principal agreement form, an educator consent form, 20 student assent forms, 10 student consent forms, and 20 parent consent forms, 68 percent (n = 39) returned principal agreement letters, consent and assent forms, and completed TAGGs. Educators who received the study materials yet did not complete the study indicated reasons such as unable to obtain administrative permission, illness, blizzards, floods, and surgery. The 39 participating educators from 33 school districts across seven states returned consent or assent forms and TAGGs for 349 students and 271 family members for a total of 659 participants. The teachers from Texas who were initially contacted did not participate in the study, which decreased the original eight states to seven.

Figure 1

Participants Per State



In the following demographic charts, percentages were calculated using the total number of responses to the particular demographic items. Participants had the option of not completing or "skipping" any item they chose.

Educator participants. The majority of the educator participants identified themselves as female (94.9%) special education teachers (69.2%) with an average of 16.1 years of teaching experience. Twenty-three percent of the educator participants identified themselves as transition specialists. The educators worked at 33 different high schools in seven different states. See Table 7 for more educator demographic information.

Table 7

Educator Demographics

Characteristic	N	%
Gender		
Male	2	5.1
Female	37	94.9
Race or Ethnicity		
White or Caucasian	30	77
Black or African American	5	13
Hispanic, Latino, or of Spanish Origin	2	5
Caucasian and American Indian	1	3
African American and Mexican	1	3
Highest Level of Education		
Bachelor's degree	5	12.8
Some Master's Courses	8	20.5
Master's Degree	19	48.7
Ed.S.	4	10.3
Some Ph.D. or Ed.D. Courses	1	2.6
Missing Data	2	3.4
Position		
Job Coach	2	5.1
Rehabilitation Counselor	1	2.6
School Psychologist	2	5.1
Special Education Director	1	2.6
Special Education Teacher	27	69.2
Transition Specialist	9	23.1
Other	7	17.9

Note. When totals are less than 39, data are missing. For this sample, $M = 48.2$ ($SD = 10.1$) for age and $M = 16.1$ ($SD = 10.9$) for number of years teaching students with disabilities.

Family member participants. Seventy-nine percent of family member participants (n = 271) identified themselves as mothers or stepmothers, 11.1% as fathers or stepfathers, and 3.7% as grandmothers. Approximately 98% of the family member participants reported that the student participant lived in the home with them. See Table 8 for more family demographic information.

Table 8

Family Member Demographics

Characteristic	N	%
Relationship to Student		
Father or stepfather	30	11.1
Grandfather	2	0.7
Legal male guardian	4	1.5
Mother or stepmother	215	79.3
Grandmother	10	3.7
Legal female guardian	3	1.1
Other	5	1.8
Missing data	2	0.7
Race or Ethnicity		
White or Caucasian	185	68.3
Black or African American	28	10.3
American Indian	8	3.0
Mexican	7	2.6
Cuban	1	.37
Hispanic	16	5.9
Caucasian and Hispanic	2	.74
Caucasian and American Indian	4	1.5
Caucasian and other ethnicity	3	1.1
African American and American Indian	2	.74
African American and other ethnicity	1	.37
Caucasian, American Indian, and Hispanic	2	.74
Caucasian, American Indian, and other ethnicity	1	.37
Other ethnicity	3	1.1
Missing data	8	3.0
Highest Level of Education		
Less than high school diploma	39	14.4
High school diploma or GED	119	44
Vocational or technical certification	21	7.7
Associate's degree	31	11.4
Bachelor's degree	33	12.2
Master's degree	12	4.4
Doctorate or professional degree	5	1.8
Missing data	11	4.1

Note. When totals are less than 271, data are missing. For this sample, $M = 44.6$ ($SD = 8.6$) for age.

Student participants. Educator participants completed demographic information for student participants and reported all of the 349 high school student participants received special education services. The sample contained slightly more males (53.6%) than females and the average age of the students was 17.1 years (*SD* = 1.4). See Table 9 for more student demographic information.

Table 9

Student Demographics

Characteristic	N	%
Gender		
Male	187	54
Female	159	46
Race or Ethnicity		
White or Caucasian	229	65.6
Black or African American	60	17.2
American Indian	11	3.2
Mexican	11	3.2
Hispanic	21	6.0
Caucasian and Mexican	2	0.57
Caucasian and Hispanic	1	0.29
Caucasian and American Indian	1	0.29
Caucasian and other ethnicity	1	0.29
Mexican and Hispanic	2	0.57
American Indian and Mexican	2	0.57
African American and Hispanic	1	0.29
Other Pacific Islander and Other Asian	1	0.29
Other ethnicity	2	0.57
Grade		
9th	42	12
10th	90	25.8
11th	94	26.9
12th	120	34.4
Primary Disability		
Autism	12	3.4
Emotional Disturbance	17	4.9
Hearing Impairment	1	0.3
Intellectual Disability	39	11.2
Multiple Disabilities	9	2.6
Orthopedic Impairments	3	0.9
Other Health Impairment	35	10.0
Specific Learning Disability	213	61.0
Speech or Language Impairment	3	0.9
Traumatic Brain Injury	3	0.9
Visual Impairment	1	0.3
Other	9	2.6
Receives Free or Reduced Lunch		
Yes	194	55.6
No	116	33.2

Note. When totals are less than 349, data are missing. Three participants did not complete demographic forms. For this sample, $M = 17.1$ ($SD = 1.4$) for age.

Independent Variables

Independent or predictor variables for this study included student GPA and percent of time in the general education setting. Researchers at the OU Zarrow Center obtained the GPA for each student from high school transcripts. The percent of time in general education setting was obtained from student demographic information completed by the student's participating educator.

Dependent Variables

The dependent or criterion variable for this study was total score on the TAGG and domain scores on the TAGG for the professional, family, and student versions.

Instrumentation

The TAGG versions used in this study consisted of 75-items across 10 domains that assessed student behaviors and experiences associated with post-school success. The 10 domains were (a) knowledge of strength and limitations, (b) actions related to strengths and limitations, (c) disability awareness, (d) persistence, (e) proactive involvement, (f) goal setting and attainment, (g) employment, (h) self-advocacy, (i) supports, and (j) utilization of resources.

The professional, family, and student versions of this assessment were parallel in form with a few changes for ease of use. All three versions used a Likert-type scoring method for 66 of the 75 items. Nine of the 75 items required a yes or no response. Educators and family members scored the 66 Likert-type items using a 1 to 5 scale, with 1 representing the student rarely engaged in the behavior or experience, and 5 representing the student engaged in the behavior or experience often. Students scored the 66 Likert-type items using a 1 to 3 scale, representing rarely, sometimes, and often,

respectively. Test developers wrote the professional version at a 10.4 Flesch-Kincaid grade level, the family version at a 5.6 Flesch-Kincaid grade level, the student version at a 4.2 Flesch-Kincaid grade level. Test directions indicated that all three versions could be read aloud and questions could be asked for clarification of items. See Appendices B, C, and D for the TAGG versions used in this study.

Procedures

After educators responded to the recruitment email, they participated in a 15-minute online training concerning the overall study, consent and assent procedures, and administration instructions for the TAGG. Educators sent their mailing address to the email provided at the end of the training. The research team then mailed the consent and assent forms to educators to distribute to students and family members and a permission form to be signed by the school administrator. Once the forms were returned, educators received demographic forms and TAGGs for professionals, students, and family members. The educator completed the demographic forms for themselves and the consenting or assenting students. Consenting family members completed their own demographic forms. Educators completed the Professional TAGG, administered the TAGG to the participating students, distributed TAGGs to family members, and returned the TAGGs, demographic forms, and transcripts to the TAGG research team.

Fidelity of TAGG Administration

Participating educators viewed a 15-minute training video that explained the purpose of the TAGG, flexibility of administering the TAGG in a group or individual setting, option of reading the items aloud and providing other accommodations, and offering further explanation of items for student understanding. Educators were asked to

complete a fidelity of administration sheet each time the TAGG was administered to students. The fidelity self-check sheet included time started, time completed, number of students in the testing group, accommodations provided, comments and seven statements that required a yes or no response. The seven questions asked if the educator (a) explained the purpose of completing the assessment, (b) distributed the assessment to students, (c) read the directions to the students, (d) encouraged the student(s) to ask questions before answering items, (e) encouraged the student(s) to think for a moment before responding to each item, (f) told the student(s) to ask questions about items at any time, and (g) checked with student(s) about unanswered items and encouraged student(s) to complete unanswered items.

Eighty-eight educators completed teacher fidelity self-evaluation checklists were returned. Fidelity to administration procedures was calculated using the teachers' responses to the seven yes or no statements. I divided the total number of yes responses by the total number of yes plus the total number of no responses. Educators reported they followed the administration procedures with 98.8% accuracy (range of 86% - 100%).

TAGG team members used random.org to randomly choose 10 participating educators to observe administering the student versions of the TAGG in Arkansas, Colorado, and New Mexico. A total of 39 students completed the TAGG in the presence of a TAGG team member at their home school with the school educator administering the assessment. The observation checklist mirrored the fidelity self-checklist each educator completed during administration of the TAGG. Student responses, time

required to complete the assessment, and questions asked during the assessment were recorded and considered for revisions of the TAGG.

Of the 10 observed administrations of the student version of the TAGG, five educators' self-checklists for the observed assessment administration were not returned, and therefore were excluded from the inter-observer data. Of the remaining five observations, one disagreement occurred concerning whether the directions were read. The test administrator explained how to complete the assessment, but did not read the directions to the students. This resulted in an inter-observer agreement of 97% (range of 86% - 100%).

GPA Protocol

Unfortunately, grade point average (GPA) calculation is not a universal concept. Methods used for calculating GPA, numerical values used to represent letter grades, and courses included in GPA calculation vary by state and local school districts. The TAGG research team obtained transcripts from 333 students across eight states. I chose to use the weighted GPA method to calculate GPA on a 4-point scale where an A earned a value of 4, B earned a value of 3, C earned a value of 2, D earned a value of 1, and F earned a value of zero. Some of the transcripts represented grades in a numerical form and others in an alphabetical form. I assigned a grading scale as follows: (a) A 90-100, (b) B 80-89, (c) C 70-79, (d) D 60-69, and (f) F 0-59. To remain consistent, I dismissed the use of additional qualifiers such as "+" or "-" that split every grade into three sub-grades such as "B+", "B", and "B-" because there was no way to determine if student transcripts that did not include these qualifiers earned a "High B," etc. For schools that reported quarterly grades, I averaged the quarter grades and added the credits attempted

to make semester grades. Because including completed grades per grade level would eliminate all Freshmen from this study, semester grades were used.

To calculate the weighted average GPA, I first assigned the specified value to each earned grade and multiplied the grade by the number of corresponding credit hours attempted. I added all the products from the previous step to get a sum, and then divided the sum by the total number of credits attempted. Due to local school control to determine which classes are considered in determining GPA, and number of credit hours assigned to each class, I did not attempt to make judgments inconsistent with the local school. For example, some schools counted driver's education as an elective course, and students received a letter grade and course credit. Other schools simply assigned a "P" for "passed" as the letter grade from driver's education and did not award graduation credit for the course. Driver's education was entered as an elective for the student from the first school and was not for the student in the second school. Another example is physical education. School A may allow a student to earn .5 credits per semester for physical education, where School B only allowed a student to earn .25 credits per semester for physical education. I entered the number of credits attempted that the school assigned. If the school did not assign credits to a course, the course grades were not entered.

I looked to the National Governors Association Center for Best Practices' Common Core Standards (2011) to determine which courses should be included as core courses. Common Core Standards now exist for English Language Arts, and Mathematics. English Language Arts includes standards for literacy in Social Studies and Science. Thus I determined core courses as English, Math, Social Studies, and

Science to determine core GPA. The same weighted GPA method described above was used to calculate core GPA and GPA by grade level, i.e. Freshman, Sophomore, etc.

To determine which course names should be included as core classes, I first looked for common core course names, such as English I, Algebra I, Biology, U.S. History. If a traditional core course did not exist, I then looked for a course from the corresponding subject matter used in place of a core course, such as basic reading and writing, basic math, fundamentals of math, and applications of science. These less common courses were used only when a common course did not exist. When a common course name and a less common course were present, I listed the common course, for example English 10, and then listed the less common course as an elective (basic writing). When less common courses were presented first, academic reading, this course was entered as the core course. If the student then enrolled in a common course, English 9, in a second semester, then both the common course and the less common course were recorded as core courses.

Grades were entered as shown on the school transcript. If a school included civics under a social studies heading, I entered the grade under social studies. Exceptions to this rule occurred when classes that were generally not viewed as core courses were placed under core headings. For example, acting was included under an English heading on transcripts from one state. Acting is typically not a core English course and was not included under core courses; nor was psychology, sociology, or current events counted as a social studies credit. If the school listed a course under a core course heading that may or may not be considered as core course credit by other schools, the class was entered as a core course in alignment with the school transcript.

For example, criminal law listed under social studies was entered as a social studies course.

For students who completed more than one core course in one school year, English 9 and English 10, the second core English class was entered as a repeated core course in the grade level the class was completed. Summer school courses were entered into the grade level of the student as a continuation of the previous school year. A biology course that was attempted in the 10th grade and repeated during the summer was entered as a 10th grade course.

Inter-Rater Agreement

To assess inter-rater agreement of GPA calculation, the primary researcher entered all de-identified data. Then a second researcher used random.org to randomly select 30 percent of the student sample (n = 105). The transcripts were re-entered into the spreadsheet. The second researcher made the same determinations listed above to calculate a weighted overall GPA, core GPA, and GPA by grade. Student GPAs were considered in agreement if each fell with the same range. The eight ranges used for GPA are as follows (a) 0.0 - 0.49, (b) 0.5 - 0.99, (c) 1.0 - 1.49, (b) 1.5 - 1.9, (c) 2.0 - 2.49, (d) 2.5 - 2.99, (e) 3.0 - 3.49, (f) 3.50 and higher. Allensworth and Easton (2007) suggested these GPA ranges in their study that found freshman GPA was strongly related with high school graduation rate.

I calculated inter-rater agreement by dividing the total number of agreements by the total number of possible agreements (1,282 / 1,365 = .94) to determine an inter-rater agreement of 94%. The range of agreement for each range was 90 – 97.1%. Inter-rater

agreement levels above 90% ensure that the GPA protocol was clear, could be reproduced, and the data is reliable (Cooper, Heron, & Heward, 2007).

Percent of Time In General Education

Educators completed the student demographic forms and indicated the number of periods in each student's school day. The educator then indicated the number of periods in which each student received educational instruction in the general education setting. I calculated percent of time in general education by dividing the number of periods educators indicated the students spent in general education by the number of total periods in the student's school day indicated by the educator, then I multiplied the quotient by 100. See Appendix E for student demographic forms completed by educators.

Data Analysis

Information was entered into SPSS for data analysis. Data collected were analyzed using descriptive, correlational, and inferential statistics. I analyzed the results to determine whether a relation exists between GPA or percent of time spent in general education and the student TAGG scores using a correlational design at a required significance level of .05. Pearson's *r* was used to report coefficient of determination. Jackson (2006) recommended the following guidelines to interpret Pearson's correlation coefficient:

Figure 2

Pearson's Product-Moment Correlation Coefficient Guidelines

Strength	Coefficient, r	
	Positive (+)	Negative (-)
Weak	.00 to .29	.00 to -.29
Moderate	.30 to .69	-.30 to -.69
Strong	.70 to 1.00	-.70 to -1.00

Because I am using GPA and percent of time in general education as predictor variables and TAGG scores as criterion, *r* was analyzed to interpret the strength of the relation found. By squaring the correlation coefficient, I can determine the percentage of variance that is accounted for by the linear relation. This will indicate whether the percent of times students receive instruction in the general education setting or GPA predicts TAGG scores.

Reliability and Validity

The TAGG is in the development phase and reliability data will be collected. Educators participated in a 15-minute training video to ensure proper test administration and minimize method error. To minimize trait error, educators encouraged participants to answer honestly and determined the most appropriate TAGG administration time and setting. The TAGG development team conducted a systematic review of literature to provide evidence of validity based on content for the assessment. The present study will provide evidence for relations to other variables to increase the empirical validity evidence of the TAGG.

Assumptions

Green and Salkind (2008) identified two underlying assumptions for a Pearson's correlation: (a) the cases must represent a random sample from the population and

scores on variables for one case must be independent of scores on these variables for other cases and, (b) the variables must be normally distributed. The variables are independent of other cases; one student's TAGG score does not interfere with another student's TAGG score. To ensure the variables were normally distributed, I conducted a test of normality using SPSS. As shown in figure 3, the significance value for the Kolmogorov-Smirnov test is greater than .05 for the professional and family versions, indicating that the data are normally distributed.

Figure 3

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Professional TAGG Score	.033	346	.200	.991	346	.037
Family TAGG Score	.046	270	.200	.992	270	.156
Student TAGG Score	.081	341	.000	.972	341	.000

Due to the student version not producing a significance value greater than .05, I then checked the kurtosis and skewness of the data. Skewness is the extent to which values deviate from symmetry around the mean. Lomax (2007) suggested that there is a cause for concern of a possible violation on normality if the skewness value is larger than 1.5 to 2.0. Skewness for percent of time in general education and student GPA was .168 and .181, respectively. The skewness for the professional, educator, and student versions was -.057, -.167, and -.647, respectively, and the assumption of normality was met. Kurtosis measures the "peakedness" of the distribution of data (Lomax, 2007, p. 71). Lomax (2007) stated that kurtosis values under 1.0 were considered normal. Kurtosis for percent of time in general education and GPA was -1.69 and .181,

respectively. The kurtosis for the professional, educator, and student versions was -.637, -.283, and .460, respectively, meeting the assumption of normality.

Summary of Methodology

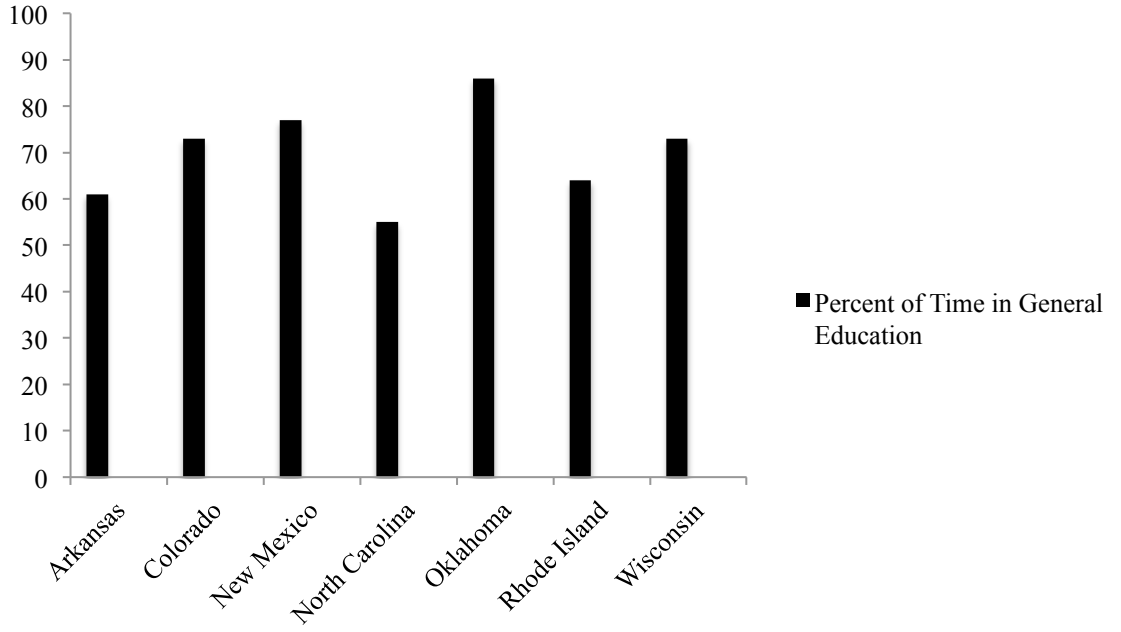
The purpose of this study was to examine the relation between student TAGG scores and student GPA and percent of time in general education classroom. Purposeful random sampling was used to recruit educators and students from Arkansas, Colorado, New Mexico, North Carolina, Oklahoma, Rhode Island, and Wisconsin for this study. Data collected were analyzed using SPSS and a significance level of .05. Pearson's *r* was used to report the correlation coefficient and Jackson's (2006) recommendations were used as guidelines on the strength of each association. The assumption of linearity required for correlational studies, and the assumption of random sample and scores independent of others were met.

CHAPTER 4: RESULTS

This study investigated the relation between GPA and percent of time in general education to the TAGG scores of students with disabilities. Thirty-nine educators, 349 students, and 271 family members completed TAGGs and demographic forms. The sample was derived from 7 states and 33 schools. Of the 349 participating students, educators returned 333 transcripts and reported the percent of time in general education for 337 students. When report sample sizes are different from above, data are missing. The mean GPA range was 2.0-2.49 with a standard deviation of 1.35. The mean percent of time in general education was 69.89% of the student's instructional day (ranging from 0-100%). Figure 4 displays percent of time students received instruction in general education by state.

Figure 4

Percent of Time in General Education



TAGG Scores and Percent of Time in General Education

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 337 students. The total TAGG scores of educators yielded a weak positive correlation, $R^2 = .018$, r (334) = .136, $p = .013$, with percent of time students receive instruction in the general education setting. This correlation was statistically significant with a large sample size. Total TAGG scores obtained from family members did not significantly correlate, $R^2 = .012$, r (261) = .108, $p = .081$, with the percent of time students received instruction in the general education setting. Total TAGG scores provided by students did not significantly correlate, $R^2 = .009$, r (329) = .096, $p = .082$, with the percent of time students received academic instruction in the general education setting. Percentage of time students with disabilities received instruction in the general education setting accounted for 1.3%, 1.2%, and 0.9% of variance in total TAGG scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 337 students. The total TAGG scores provided by educators were not statistically correlated with the percent of time students receive instruction in the general education setting, $R^2 = .001$, r (336) = .023, $p = .669$. Family member TAGG scores in the domain of knowledge of strengths and limitations did not significantly correlate with the percent of time student received instruction in the general education setting, $R^2 = .001$, r (261) = .035, $p = .569$. Student TAGG scores in the domain of knowledge of strengths and limitations yielded a weak positive correlation, $R^2 = .019$, r (329) = .139, $p = .012$. Percentage of time students with

disabilities received instruction in the general education setting accounted for 0.1%, 0.1%, and 1.9% of variance in knowledge of strengths and limitations scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG provided by 39 educators, 270 family members, and 337 students. Results yielded a weak positive correlation, R^2 =.015, r (336) = .124, p = .023, between educator scores in the domain of actions related to strengths and limitations and percent of time students receive instruction in the general education setting. Family member scores in the domain area of actions related to strengths and limitations did not significantly correlate with the percent of time students received instruction in the general education setting, R^2 =.005, r (261) = .069, p = .267. Scores provided by students in the domain of actions related to strengths and limitations did not significantly correlate with percent of time students receive instruction in the general education setting, R^2 =.001, r (329) = .036, p = 514. Percentage of time students with disabilities received instruction in the general education setting accounted for 1.5%, 0.5%, and 0.1% of variance in actions related to strengths and limitations scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 337 students. Educator scores in the domain of disability awareness were not significantly correlated with percent of time students receive instruction in the general education classroom, R^2 = .001, r (336) = -.032, p = .553. TAGG scores obtained from family members in the domain of disability awareness did not significantly correlate with the percent of time students received

instruction in the general education setting, $R^2 = .000$, r (261) = .010, $p = .873$. Student TAGG scores in the domain of disability awareness did not yield a statistically significant correlation, $R^2 = .005$, r (329) = -.072, $p = .195$. Percentage of time students with disabilities received instruction in the general education setting accounted for 0.1%, 0.0%, and 0.5% of variance in disability awareness scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the scores provided by 39 educators, 270 family members, and 337 students. Educator scores in the domain of persistence yielded a weak positive correlation with the percent of time students receive instruction in the general education setting, $R^2 = .034$, r (336) = .190, $p = .000$. Family members' scores in the domain of persistence significantly correlated, $R^2 = .022$, r (261) = .147, $p = .017$, with the percent of time students received instruction in the general education setting. TAGG scores derived from students in the area of persistence were not significantly correlated with percent of time students received instruction in the general education classroom, $R^2 = .003$, r (329) = .056, $p = .312$. Percentage of time students with disabilities received instruction in the general education setting accounted for 3.4%, 2.2%, and 0.3% of variance in persistence scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 337 students. Educator scores in the domain of proactive involvement were positively correlated, $R^2 = .042$, r (335) = .206, $p = .000$, with percent of time students receive instruction in the general education setting. Domain scores for family members in the area of proactive involvement did not

significantly correlate with the percent of time students received instruction in the general education setting, $R^2 = .004$, r (261) = .064, $p = .299$. Domain scores for proactive involvement significantly correlated, $R^2 = .015$, r (329) = .121, $p = .029$, with the percent of time students receive academic instruction in the general education classroom. Percentage of time students with disabilities received instruction in the general education setting accounted for 4.2%, 0.4%, and 1.5% of variance in proactive involvement scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 337 students. There was a weak positive correlation between the educators' scores in the domain of goal setting and goal attainment and the percent of time students with disabilities receive instruction in the general education setting, $R^2 = .027$, r (335) = .165, $p = .002$. Results yielded a weak positive correlation significant, $R^2 = .017$, r (261) = .130, $p = .036$, for percent of time students receive instruction in the general education setting and family domain scores in goal setting and goal attainment. Student scores in the goal setting and attainment domain did not yield significant results, $R^2 = .010$, r (329) = .099, $p = .074$. Percentage of time students with disabilities received instruction in the general education setting accounted for 2.7%, 1.7%, and 1% of variance in disability awareness scores provided by educators, family members, and students, respectively.

The Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 269 family members, and 337 students. Educator TAGG scores in the domain of employment did not significantly correlate with the percent of time students received instruction in the general education classroom, $R^2 = .002$, r (335)

= -.040, p = .470. Scores obtained from family members in the domain of employment did not significantly correlate with the percent of time students received instruction in the general education setting, R^2 = .001, r (260) = .034, p = .584. Student scores for the domain of employment did not significantly correlate with the percent of time students received instruction in the general education setting, R^2 = .000, r (327) = -.015, p = .784. Percentage of time students with disabilities received instruction in the general education setting accounted for 0.2%, 0.1%, and 0% of variance in employment scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 266 family members, and 337 students. A weak positive correlation, R^2 = .034, r (335) = .185, p = .001, between educator TAGG scores in the domain of self-advocacy and the percent of time students receive instruction in the general education setting did exist. Family member scores in the domain of self-advocacy yielded a weak positive correlation, R^2 = .015, r (257) = .015, p = .046 with percent of time students received instruction in the general education setting. Domain scores provided by students did not significantly correlate with percent of time students receive instruction in the general education setting, R^2 = .011, r (329) = .103, p = .061. Percentage of time students with disabilities received instruction in the general education setting accounted for 3.4%, 1.5%, and 1.1% of variance in self-advocacy scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 269 family members, and 337 students. Educator TAGG scores in the domain of supports yielded a weak positive correlation, R^2 = .031, r (335) = .176, p =

.001, with the percent of time students receive instruction in the general education setting. Family scores in the domain of supports statistically correlated with the percent of time students with disabilities receive instruction in the general education setting, R^2 = .018, *r* (260) = .135, *p* = .030. Student scores in the domain of supports yielded a weak positive correlation, R^2 = .017, *r* (329) = .129, *p* = .020, with the percent of time students received instruction in the general education setting. Percentage of time students with disabilities received instruction in the general education setting accounted for 3.1%, 1.8%, and 1.7% of variance in supports scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores of 39 educators, 268 family members, and 337 students. Educator scores on the TAGG domain utilization of resources did not significantly correlate, R^2 = .001, *r* (335) = .029, *p* = .593, with the percent of time students receive instruction in the general education setting. Family member scores in the domain of utilization of resources did not statistically correlate with the percent of time students with disabilities received instruction in the general education setting, R^2 = .007, *r* (259) = .034, *p* = .181. No correlation existed between the percent of time students received instruction in the general education setting and student domain score for utilization of resources, R^2 = .001, *r* (329) = .034, p = .534. Percentage of time students with disabilities received instruction in the general education setting accounted for 0.1%, 0.7%, and 0.1% of variance in utilization of resources scores provided by educators, family members, and students, respectively. See Table 10 for more information on the relations between the percent of time students receive instruction in the general education setting and TAGG

scores. Table 10 provides a representation of the correlations between TAGG scores and percent of time students receive instruction in the general education setting.

Table 10

Statistically Significant Correlations Between TAGG Scores and Percent of Time in General Education Setting

Domain	Educator			Family			Student		
	r	R^2	n	*r*	R^2	n	*r*	R^2	n
Knowledge of Strengths and Limitations	.023	.001	336	.035	.001	261	.139*	.019	329
Actions Related to Strengths and Limitation	.124*	.015	336	.069	.005	261	.036	.001	329
Disability Awareness	-.032	.001	336	.010	.000	261	-.072	.005	329
Persistence	.190**	.036	336	.147*	.022	261	.056	.003	329
Proactive Involvement	.206**	.042	335	.064	.004	261	.121*	.015	329
Goal Setting and Attainment	.165**	.027	335	.130*	.017	261	.099	.010	329
Employment	-.040	.002	335	.034	.001	260	-.015	.000	327
Self-Advocacy	.185**	.034	335	.124*	.015	257	.103	.011	329
Supports	.176**	.031	335	.135*	.018	260	.129*	.017	329
Utilization of Resources	.029	.001	335	.083	.007	259	.034	.001	329
Total TAGG Score	.136*	.018	336	.108	.012	261	.096	.009	329

** Correlation is significant at the .01 level (2-tailed).

* Correlation is significant at the .05 level (2-tailed).

TAGG Scores and GPA

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 270 family members, and 333 students. Results yielded a weak positive correlation between educator total TAGG score and student GPA, $R^2 = .005$, r (332) = .199, $p = .000$. Total scores provided by family members did not significantly correlate with student GPA, $R^2 = .011$, r (256) = -.103, $p = .099$. Student TAGG scores did not significantly correlate with student GPA, $R^2 = .002$, r (335) = .046, $p = .449$. Student GPA accounted for 0.5%, 1.1%, and 0.2% of variance in total TAGG scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores completed by 39 educators, 270 family members, and 333 students. Educator scores on the knowledge of strengths and limitations domain did not significantly correlate with student GPA, $R^2 = .005$, r (332) = .074, $p = .180$. Family member scores in the domain of knowledge of strengths and limitations yielded a weak negative correlation, $R^2 = .016$, r (256) = -.128, $p = .041$, with student GPA. Student scores in the domain of knowledge of strengths and limitations did not significantly correlate with student GPA, $R^2 = .004$, r (325) = -.066, $p = .235$. Student GPA accounted for 0.5%, 1.6%, and 0.4% of variance in knowledge of strengths and limitations scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the scores of 39 educators, 270 family members, and 333 students. Scores educators provided for the domain of actions related to strengths and limitations domain did not significantly correlate with student GPA, $R^2 = .000$, r (332) = .009, $p = .863$. Family scores in the domain of actions

related to strengths and limitations did not significantly correlate with the student GPA, $R^2 = .007$, r (256) = -.081, $p = .197$. Student scores in the domain of actions related to strengths and limitations yielded a weak negative correlation, $R^2 = .014$, r (325) = -.119, $p = .032$ with student GPA. Student GPA accounted for 0.0%, 0.7%, and 1.4% of variance in actions related to strengths and limitations scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 270 family members, and 333 students. Educators' scores in the domain of disability awareness did not significantly correlate with student GPA, $R^2 = .006$, r (332) = .075, $p = .175$. Scores provided by family members in the domain of disability awareness did not significantly correlate with student GPA, $R^2 = .006$, r (256) = -.076, $p = .227$. Student scores in the domain of disability awareness did not significantly correlate, $R^2 = .007$, r (325) = .081, $p = .144$, with student GPA. Student GPA accounted for 0.6%, 0.6%, and 0.7% of variance in disability awareness scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 270 family members, and 333 students. Persistence scores provided by educators yielded a moderate positive correlation, $R^2 = .101$, r (332) = .318, $p = .000$, with GPA. Family member scores in the domain of persistence did not yield a statistical correlation with student GPA, $R^2 = .000$, r (256) = .020, $p = .756$. Scores in the domain of persistence provided by students did not statistically correlate with student GPA, $R^2 = .010$, r (325) = .102, $p = .065$. Student GPA accounted for 10%, 0.0%, and 1% of

variance in persistence scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 270 family members, and 333 students. Educator scores in the domain of proactive involvement significantly positively correlated with student GPA, $R^2 = .044$, r (331) = .209, $p = .000$. Proactive involvement scores provided by family member statistically correlated with the student GPA, $R^2 = .020$, r (256) = .140, $p = .025$. Student proactive involvement score significantly positively correlated with student GPA, $R^2 = .038$, r (325) = .194, $p = .000$. Student GPA accounted for 4.4%, 0.0%, and 3.8% of variance in proactive involvement scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores of 39 educators, 270 family members, and 333 students. Scores provided by educators in the domain of goal setting and attainment significantly positively correlated with student GPA, $R^2 = .037$, r (331) = .193, $p = .000$. Family member scores in the goal setting and attainment domain yielded a weak negative correlation, $R^2 = .010$, r (256) = -.141, p = .024, with student GPA. The Pearson product-moment correlation test did not reveal a significant correlation between student scores reported on goal setting and attainment and student GPA, $R^2 = .001$, r (325) = .038, $p = .491$. Student GPA accounted for 3.7%, 1%, and 0.1% of variance in goal setting and goal attainment scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on the TAGG scores provided by 39 educators, 269 family members, and 333 students. Educator scores for

employment were significantly positively correlated with student GPA, $R^2 = .016$, r (331) = .128, $p = .020$. Family member scores in the domain of employment did not statistically correlate with student GPA, $R^2 = .015$, r (256) = -.121, $p = .054$. Scores in the domain of employment provided by students did not statistically correlate with student GPA, $R^2 = .001$, r (323) = -.023, $p = .680$. Student GPA accounted for 1.6%, 1.5%, and 0.1% of variance in employment scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 266 family members, and 333 students. Educator scores in the domain of self-advocacy yielded a weak positive correlation with student, $R^2 = .021$, r (331) = .146, $p = .008$. Family members' scores in the domain of self-advocacy yielded a weak negative correlation, $R^2 = .019$, r (252) = -.137, $p = .029$, with student GPA. Scores provided by students in the domain of self-advocacy did not statistically correlate with student GPA, $R^2 = .000$, r (325) = -.001, $p = .986$. Student GPA accounted for 2.1%, 1.9%, and 0.0% of variance in total self-advocacy scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 269 family members, and 333 students. Scores provided by educators in the domain of supports provided a positive correlation with student GPA, $R^2 = .045$, r (331) = .213, $p = .000$. Family member scores in the domain of supports did not statistically correlate with student GPA, $R^2 = .000$, r (255) = .017, $p = .785$. Student scores in the domain of supports did not yield a significant correlation with student GPA, $R^2 = .002$, r (325) = .044, $p = .430$. Student GPA accounted for 4.5%, 0.0%, and

0.2% of variance in supports scores provided by educators, family members, and students, respectively.

Pearson's correlation coefficient was calculated on TAGG scores provided by 39 educators, 268 family members, and 333 students. Educator scores in the domain of utilization of resources significantly positively correlated with student GPA, $R^2 = .066$, r (331) = .257, $p = .000$. Scores provided by family members in the domain of utilization of resources did not yield a statistically significant correlation with student GPA, $R^2 = .004$, r (254) = -.060, $p = .344$. Student scores in the domain of utilization of resources did not significantly correlate with student GPA, $R^2 = .002$, r (325) = .042, $p = .453$. Student GPA accounted for 6.6%, 0.4%, and 0.2% of variance in utilization of resources scores provided by educators, family members, and students, respectively. See table 11 for more information on the relations between student GPA and TAGG scores.

Table 11

Statistically Significant Correlations Between TAGG Scores and Student GPA

Domain	Educator			Family			Student		
	r	R^2	n	*r*	R^2	n	*r*	R^2	n
Knowledge of Strengths and Limitations	.074	.005	332	-.128*	.016	256	-.066	.004	325
Actions Related to Strengths and Limitations	.009	.000	332	-.081	.007	256	-.119*	.014	325
Disability Awareness	.075	.006	332	-.076	.006	256	.081	.007	325
Persistence	.318**	.101	332	.020	.000	256	.102	.010	325
Proactive Involvement	.209**	.044	331	.014*	.000	256	.194**	.038	325
Goal Setting and Attainment	.193**	.037	331	-.141*	.010	256	.038	.001	325
Employment	.128*	.016	331	-.121	.015	256	-.023	.001	323
Self-Advocacy	.146**	.021	331	-.137*	.019	252	-.001	.000	325
Supports	.213**	.045	331	.017	.000	255	.044	.002	325
Utilization of Resources	.257**	.066	331	-.060	.004	254	.042	.002	325
Total TAGG Score	.199**	.040	332	-.103	.011	256	.042	.002	325

** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).

Summary of Results

The overall TAGG scores provided by educators were significantly positively correlated with the students' percent of time in general education (*r* = .136). The overall TAGG scores provided by family members and students did not significantly correlate with the percent of time instruction is received in the general education setting. Supports was the only domain that yielded significant correlations with percent of time in general education and scores provided by educators (*r* = .176), family members (*r* = .135), and students (*r* = .129). However, the percent of time students receive instruction in the general education setting only accounted for a small percentage of variance in scores provided by educators (3.1%), family members (1.8%), and students (1.7%).

The educator overall TAGG scores were significantly positively correlated with the students' overall GPA (*r* = .199). The overall TAGG scores provided by family

members and students did not correlate with students' overall GPA. Only the domain of proactive involvement yielded significant correlations with student GPA on scores provided by educators (r = .209), family members (r = .104), and students (r = .194). Student GPA accounted for a small percentage of variance in proactive involvement domain scores provided by educators (4.4%), family members (2%), and students (3.8%).

CHAPTER 5: DISCUSSION

The purpose of this study was to determine the extent that relations exist between (a) TAGG scores and percent of time spent in general education, (b) TAGG scores and student GPA, and (c) each of the 10 TAGG constructs and percent of time spent in general education and student GPA. Specific research questions included (a) What is the relation between TAGG scores and the percent of time students with disabilities receive instruction in the general education classroom? and (b) What is the relation between TAGG scores and academic achievement as measured by student GPA for students with disabilities?

Studies such as McDonnall and Crudden (2009), Raskind et al. (1999), Baer et al. (2003), and Leonard et al. (1999) found that student GPA and the percent of time students received instruction in the general education classroom impact post-school success for individuals with mild to moderate disabilities. The items included in the TAGG were also identified from literature as impacting post-school success. One might assume that because all of the factors are related to success that these factors would also relate to one another.

A correlational analysis of TAGG scores completed on 349 students by 39 educators, 271 family members, and 349 students was conducted and found little to no correlation between TAGG scores, student GPA, and percent of time in general education. In fact, the large sample size in this study may have allowed correlation coefficients with smaller magnitudes to be shown to be significantly different from 0 when no true correlation existed for either GPA or percent of time in general education. This suggests that the TAGG items are assessing skills that are different than those

represented by GPA and gained from receiving instruction in the general education setting. This study provides discriminate validity evidence supporting the notion that students with high GPAs who receive instruction in general education classes do not naturally acquire behaviors included in the TAGG, which are found to be successful indicators of post-school success.

TAGG Correlation with Percent of Time in the General Education Setting

Researchers have reported that students who received instruction in the general education setting were more likely to participate in postsecondary education and employment (Baer et al., 2003; Blackorby et al., 1993). It would seem that students who received more instruction in the general education setting would be more prepared to attend a postsecondary setting or be successfully employed and would also score higher on the TAGG, because the TAGG consists of behaviors also related to post-school success. However, this study found little to no correlation between these TAGG scores and the percent of times students receive instruction in general education and the amount of time in the general education accounted for very little variance in the TAGG scores. This may mean that even students who receive instruction in the general education setting may not possess all the behaviors crucial for postsecondary success, and the amount of time student spend in the general education setting does not predict how well they will score on the TAGG.

Total TAGG scores and percent of time in general education. Through correlational analysis, I examined the relation between percent of time students received instruction in the general education classroom and TAGG scores provided by educators, family members, and students. The percent of time students with disabilities received

instruction in the general education setting was weakly positively correlated with the total TAGG scores of educators, yet not with total scores provided by students or family members. This may be due to educators having more opportunities to observe the assessed behaviors, such as requesting accommodations and interacting with authority figures and peers, than family members in academic settings.

Students may or may not be aware of the current skills they possess. A challenge of self-assessment is that students may not have ever had the opportunity to think about how they would rate themselves in certain situations when there are no "right" or "wrong" answers as there are on tests. It is okay to have low ratings on a self-assessment. A low rating does not equate a failing score, and students need to be honest in the assessment of themselves, and trust those who will see the results (Clark & Patton, 2006). Students may rate themselves higher than their actual skills because they do not want to be judged negatively by those who will see the results. The percent of time student received instruction ranged from 0% to 100% and had very little impact on the total TAGG scores provided by educators, parents, and students. Including students in the general education setting may be important to meet college entry requirements but the curriculum may not include systematic teaching of non-academic skills needed for success.

TAGG domain scores in relation to percent of time in general education. Domain scores provided by educators that provided weak positive correlations with percent of time students with disabilities received instruction in the general education setting included (a) actions related to strengths and limitations, (b) persistence, (c) proactive involvement, (d) goal setting and attainment, (e) self-advocacy, and (f)

support. Family member domain scores that provided weak positive correlations with the percent of time students received instruction in the general education setting included (a) persistence, (b) goal setting and attainment, (c) self-advocacy, and (d) supports. Weak significant correlations between student domain scores and percent of time in general education included (a) knowledge of strength and limitations, (b) proactive involvement, and (c) supports. Once again, the significance of these small correlations may be inflated due to the power of the large sample size.

The only domain that was even weakly correlated with scores provided by all three participant groups, educators, family members, and students, was supports. Students who interact well with others may score slightly higher on the domain of supports. It may be that students who are in the general education setting have had more opportunities to seek support individuals than those who spend more time in the special education setting. In the special education setting, support is often built-in as part of the program, and students may not recognize this as support. Special education teachers are trained to individualize instruction based on the needs of each student, have ready access to student educational files, and a working knowledge of disabilities. Students who spend the majority of their day in the special education setting generally do not have to explain their disability to the teacher or request modifications or accommodations. In the general education setting, students have more opportunities to develop self-advocacy related skills such as seeking support that is not automatically built into instruction. These students must actively seek support when help is needed and not wait for someone to offer assistance.

TAGG Correlation with GPA

A student's high school GPA is often used as a criterion for admittance into postsecondary education and as a determination for scholarships. A low GPA could cause a student to not seek postsecondary education. Job resumes and applications often include an applicant's GPA and could attribute to the employability of an individual. Student GPA and the courses used to calculate GPA vary from school-to-school. A 4.0 on a 4.0 scale is vastly different from a 4.0 on a 5.0 scale, yet most applications require only a numeric value without knowing what the value actually represents. A student who participated in advanced classes may have scored lower than a person who did well in remedial class, and the student in remedial classes may have a higher GPA. Still, GPA is an important determination in admittance into postsecondary education and may be a deciding factor between job applicants. Many times students with high GPAs are thought to possess all needed skills to succeed after high school.

Total TAGG Scores and GPA. The overall TAGG scores provided by educators significantly correlated with student GPA, yet due to inflated power caused by the large size of the sample and the small amount of variance accounted for by student GPA, this small correlation does not mean much. The overall TAGG scores provided by family members and students did not correlate with GPA. A student with a high GPA may gain admittance into a postsecondary education setting or to acquire an employment position, yet may not possess non-academic related skills needed to succeed. The TAGG measures skills and behaviors that are not necessarily related to a student's GPA. This is important because one might assume that because a student has a

high GPA, he or she will do well after high school and does not need transition goals in non-academic areas.

TAGG Domain Scores and GPA. Proactive involvement was the only domain that yielded even weak significant correlations with GPA for all three participant groups, and student GPA accounted for only a small percentage of variance in proactive involvement scores with all three groups of participants, educators, family members, and students. Proactive involvement requires students to successfully interact with others in a variety of settings. Students who can get along with others will be more likely to be successful in group work, requesting assistance from teachers and peers, and spend less time out of the classroom due to disciplinary issues. A teacher may be more likely to give assistance, extra-time, and allowances to a student who is amicable than to a student who is defiant and does not interact with others, and this could be reflected in the student's GPA. A student's GPA is often a reflection of a student's effort put forth in a class (Pilgrim, 2011); therefore, it is not surprising that student GPA and student behaviors related to persistence yielded the highest correlation. Persistence requires students to put forth effort even when tasks become difficult, which is often reflected in a student's grades. Once again grades can be very subjective, and a teacher could assign higher grades on projects and assessments that do not have "right" and "wrong" answers to students who put forth the most effort.

The self-advocacy and goal setting and attainment domains yielded weak significant correlations between student GPA and TAGG scores provided by educators and family members; however, scores provided by educators yielded positive correlations and scores provided by family member yielded negative correlations. This

also supports the notion that educators may have more opportunities to observe students' self-advocacy and goal setting and attainment skills in an educational setting, whereas family members may assume that because the student has a high GPA, self-advocacy skills are not needed, utilized, or believed to be natural behaviors of the student. Teachers witness students using and requesting accommodations, whereas a parent may not be aware of any accommodations utilized by the student. Self-advocacy items in the TAGG also include student involvement in the IEP. Teachers may perceive student involvement in the IEP differently than students and family members. Teachers often feel as if students participate in the IEP if students respond to questions when asked. Students and family members may perceive the educator as the person most involved in the IEP meeting. Students who spend more time in the general education setting may have never been taught about their IEP which may explain why they scored lower in this area on the TAGG.

Domains Not Correlated with Percent of Time in General Education or GPA

Domains that were not significantly correlated with percent of time in the general education setting and scores provided by teachers, family members, or students, even with the large sample size, included (a) disability awareness, (b) employment, and (c) utilization of resources. In fact, employment and disability awareness were slightly negatively correlated with percent of time in general education for scores provided by both educators and students. This could mean students who receive instruction in general education could spend less time receiving vocational training and less time in a special education setting where students have more of an opportunity to learn about their disabilities.

GPA did not statistically correlate with disability awareness scores provided by educators, family members, or students, despite research that supports the importance of disability awareness for post-school success in employment and postsecondary education (Gerber et al., 1992; Gerber et al., 2004; Higgins et al., 2002; Goldberg et al., 2003; Raskind et al., 1999). A student's GPA cannot tell us whether a student understands his or her own disability, yet both are known to have an impact on post-school success. Students who do not have working knowledge of their disabilities need assistance to gain factual knowledge and know how the disability may affect life after high school.

Domain scores for knowledge and actions related to strengths and limitations provided by educators, family members, and students did not correlate with percent of time students received instruction in the general education classroom or GPA. However, Oehrlien (2009) reported the importance for all students to understand and apply the knowledge of their own strengths and limitations and how this impacts postsecondary education and employment decisions. A student who does not understand his or her strengths and limitations may be accepted into a college, then choose a major based on projected salary while ignoring personal strengths and interests. A student could also be interested in many areas, but not understand that he or she may not be successful in those areas due to limitations. This could lead to frustration and prohibit a student from completing a postsecondary education program. The skills needed to apply knowledge of strengths and limitations may not be as important to high school GPA and ability to receive instruction in the general education classroom, yet may be detrimental to post-school success. The TAGG may alleviate these frustrations before they occur by

assessing current behaviors and providing goals to improving self-awareness of strengths and limitations.

Conclusion

Neither student GPA nor the percent of time students receive instruction in the general education setting accounted for a large percentage of variance in TAGG scores and provided discriminate validity evidence based on relations to other variables for the use of the TAGG. This suggests that there are a variety of factors related to student success after high school and not all are traditional academic-related factors. College readiness is a term often "defined primarily in terms of high school courses taken and grades received" (Conley, 2007, p. 5), and for students with disabilities, this is reflected in the percent of time instruction is received in the general education setting and student GPA.

Many states have increased requirements needed for students to receive a high school diploma, including taking more rigorous courses and passing standardized tests, yet these requirements have not resulted in an increase of student performance in postsecondary education or employment outcomes (Conley, 2007). Berzin and Kelly (2009) found that student placement alone did not lead to better post-school outcomes. Special education, remedial, and general education placement all resulted in similar transition outcomes for students with disabilities. This suggests that simply placing students in the general education classroom is not enough to impact the futures of students with disabilities. The TAGG is as tool that can be used to assess and generate annual transition goals to teach students the non-academic related behaviors needed for success that are not naturally acquired in the in the general education setting.

Woodruff and Ziomek (2004) reported inflation in student GPA over a 13-year span did not result in an increase of achievement for American high school students. It seems that a "C" is no longer average. Students are receiving higher GPAs, though the GPAs are not translating into higher achievement or acquisition of skills. Postsecondary education and employment expectations differ from what is expected in high school and students need more than integration into general curriculum and a strong GPA to be successful. Murray and Wren (2003) and Oehrlein (2009) found that variables other than cognitive and academic skills were important to predict college GPA. Academic factors cannot adequately describe the performance of youth with disabilities in postsecondary settings, and "prior academic achievement was not a significant predictor of college GPA" (Murray & Wren, 2003, p. 413). The TAGG measures behaviors not reflected by GPA, and GPA scores do not predict how a student will score on the TAGG.

Importance of this Study

This study demonstrates that even though the percent of time students receive instruction in the general education and student GPA is related to post-success, and the constructs measured by the TAGG are related to success, TAGG scores, GPA, and percent of time in general education, are not related to one another. "College and Career Readiness" is term currently used in education and politics, but the means to measure readiness are often limited. Taking required courses for postsecondary education and receiving high grades are important, but do not give a clear picture of whether a student will be successful in post-school academic or employment settings. The TAGG can

assist to complete this picture of behaviors and skills students with disabilities will need after leaving high school.

This study stressed the need for a transition assessment that addresses behaviors and skills that are not necessarily academically related. Other transition assessments do exist that assess many aspects of development and transition skills, yet were not developed using current research that identified skills and behaviors known to impact post-school success, and many times proper steps are not taken to ensure a valid and reliable use of the assessment. Carmines and Zeller (1979) stressed the importance of using assessments for valid purposes. The consequences of using assessments for an unintended purpose may lead to incorrect decisions or useless results. The review of commonly used assessments showed that not all test-developers include the information necessary to adequately support the use of each test.

With the vast number of transition assessments available, educators need an easy-to-use assessment with results that translate into annual transition goals that are not the same as academic goals. This study showed that GPAs and the percent of time instruction is received in the general education setting cannot predict that a student has all skills needed for post-school success measured by the TAGG. The TAGG is being developed with a team of experts with knowledge and experience in transition planning, assessment development, statistics, and item response theory. With the careful consideration of validity and reliability evidence provided by the TAGG development team, educators will have access to a transition assessment that is research-based, rather than comprised of items deemed important by opinion. Without this careful consideration, students could spend years working toward transition goals that may not

impact their future aspirations or completely on academic goals alone that do not give a full picture of the students current and needed skills for post-school success.

Implications for Practice

Recent special education policies and the increased pressure to pass high-stakes tests have resulted in more students with disabilities placed in general education settings and a greater emphasis on academic skills. Academic skills alone are not enough for students with disabilities to succeed in employment and postsecondary education. There is a need for a researched-based transition assessment that will identify the non-academic skills students need for success after high school. The TAGG test developers compiled non-academic skills, behaviors, and experiences identified by research literature as positively impacting student success after high school. The TAGG is still in the development stage, however, after additional validity and reliability evidence is collected, this assessment will provide educators with a tool to assess students' current level of acquired behaviors and skills known to impact post-school success and generate a prioritized list of possible annual goals to supplement the current focus on academic-related behaviors. This study has shown that the TAGG assesses behaviors and skills that are not related to student GPA or instructional setting. The TAGG could bridge the gap between the focus on academic skills and other skills students need for a successful transition into adulthood to facilitate students to be truly college and career ready.

The TAGG will go beyond assuming all students with disabilities do not possess the skills needed for life after high school and students without disabilities do possess these skills, or students who have high GPAs will instinctively succeed after high school. The TAGG will provide a profile for each student that displays individual

strengths and needs. Other transition assessments may include a student profile, but few assessments generate example annual goals, which assist educators, family members, and students to understand precisely what skills need to be obtained before leaving high school.

Future Research

This study provided evidence of discriminate validity based on relations to other variables for the TAGG. Additional evidence of validity and reliability are needed to support the use of this assessment. Since this study, a Confirmatory Factor Analysis (CFA) was used to examine the fit of the theoretically defined constructs of the initial 75-item TAGG for all three TAGG versions. Then, Exploratory Factor Analysis (EFA) and CFA techniques were used to examine the factor structure of the TAGG versions and resulted in a 34-item assessment with eight constructs for the professional and family versions and seven constructs for the student assessment. This study needs to be repeated on the new version of the TAGG. Test-retest data are needed to assess the stability of the TAGG over time. Then, a follow-up study is needed to determine the strength of TAGG scores associated with student success after high school in the areas of employment and post-school education. The TAGG is currently being developed using these procedures and will most likely change in structure of constructs and number of items throughout this process. When completed, educators will have the option of an on-line transition assessment that generates a profile of current strengths and needs for each student and a list of prioritized annual transition goals that may be included in an IEP. This assessment is unique in that it is based on research that resulted

in identifying non-academic indicators of post-school success that are not related to student GPA or instructional setting for students with disabilities.

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APPENDIX A: IRB APPROVAL

The University of Oklahoma®

OFFICE OF HUMAN RESEARCH PARTICIPANT PROTECTION - IRB

Review Date: February 11, 2011

February 14, 2011

Amber McConnell
Department of Educational Psychology
338 Cate Center Drive, Rm. 190
Norman, OK 73019

RE: Determination of Human Subjects Research Worksheet ***"Academics, GPA and the Transition Success Assessment"***

Dear Ms. McConnell,

I have reviewed your submission and have determined this type of research does not meet the criteria to submit an application to the Institutional Review Board (IRB) for approval. This project involves analysis of a de-identified dataset collected with prior IRB authorization. You may proceed with your project.

If you have any questions, please contact the IRB office at (405) 325-8110 or irb@ou.edu.

Cordially,

Donald Baker, Ph.D.
Vice-Chair, Institutional Review Board

1816 West Lindsey, Suite 150 Norman, Oklahoma 73069 PHONE: (405) 325-8110

APPENDIX B: TAGG PROFESSIONAL VERSION

Transition Success Assessment

Professional Version

General instructions:
For each statement, think about the student's behaviors over the last year. Rate on a scale of 1 to 5 how well you think each statement best describes the student's behavior.

1 = rarely performed the action within the past year
2 = performed the action a few times or did not do well when performing the action
3 = performed the action several times or did a fair job of completing this action
4 = performed the activity many times or did a good job of competing this action
5 = performed this activity often or was successful at completing this action

Knowledge of Strengths and Limitations
Successful students know personal areas of mastery and limited ability. When thinking about the last year, indicate how well the student's behavior reflected knowledge of his or her strengths and limitations. Consider only behaviors that indicate *knowledge* of skills and limited abilities in academic and non-academic situations. The student may not use correct terminology but is able to describe strengths and *non-disability related limitations*. The student knows how the strengths and limitations affect him or her. The student identifies situations in which successes and failures may occur.

	Rarely				Often
1. The student told someone about his or her strengths.	1	2	3	4	5
2. The student told someone what he or she does well.	1	2	3	4	5
3. The student told someone his or her limitations.	1	2	3	4	5
4. The student told someone what he or she has trouble doing.	1	2	3	4	5
5. The student expressed accurate information about his or her academic strengths.	1	2	3	4	5
6. The student expressed accurate information about his or her academic limitations.	1	2	3	4	5
7. The student identified academic situations when assistance was needed.	1	2	3	4	5
8. The student identified academic situations where he or she would like experience success.	1	2	3	4	5

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Scoring 1 = rarely 3 = sometimes 5 = often or well done

Actions Related to Strengths and Limitations
Successful individuals seek situations to use their strengths while minimizing their limitations. Think about the student's behaviors within the last year that reflect his or her ability to act, develop, or build upon personal strengths to compensate for limitations. Consider the times when the student looked for situations, created new strategies in a situation, or changed a situation to use personal strengths and minimize weaknesses or limitations. There may have been situations in which the student made choices without considering weaknesses.

	Rarely				Often
9. The student finds situations to use his or her strengths.	1	2	3	4	5
10. The student is aware of his or her strengths, but does *not* seek situations where the strengths are utilized.	1	2	3	4	5
11. The student finds situations where his or her limitations are minimized.	1	2	3	4	5
12. The student knows his or her weaknesses but does not consider the weaknesses when making choices.	1	2	3	4	5
13. The student creates new strategies to compensate for his or her limitations.	1	2	3	4	5

Disability Awareness
Successful individuals know they have a disability and can express needs to others in a non-stigmatizing manner. Individuals demonstrate knowledge of the disability and can express positive and negative aspects. They express information such as how the disability affects life and what supports are needed and legally allowed to compensate in various situations. The student needs to be able to place the disability within the context of his or her life and is not defined by the disability.

	Rarely				Often
14. The student expressed an understanding of the word "disability."	No				Yes
15. The student told someone that he or she has a disability.	No				Yes
16. The student told someone accurate information about his or her disability.	1	2	3	4	5

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17. The student uses the least stigmatizing disability label that results in getting most support.	1	2	3	4	5
18. This student expressed the type of accommodations or supports needed for his or her disability.	1	2	3	4	5
19. The student views the disability as only one aspect of his or her life.	1	2	3	4	5
20. The student views the disability as a positive aspect of his or her life.	1	2	3	4	5
21. The student explained to friends that he or she receives special education services.	1	2	3	4	5
22. The student talks to parents about his or her disability.	1	2	3	4	5

Persistence
Persistent students have a belief in their own ability to overcome adversity. Indications of persistence may include spending ample time or effort to reach a goal. The student may also modify strategies as needed to stay on a task. The student accepts failure as an opportunity to learn to succeed.

	Rarely				Often
23. Not giving up in school is important to the student.	1	2	3	4	5
24. The student keeps working until he or she accomplishes a goal.	1	2	3	4	5
25. The student utilizes different strategies as needed to continue staying on task.	1	2	3	4	5
26. The student keeps working to achieve a goal, even when it becomes hard.	1	2	3	4	5
27. The student learns from mistakes and does better next time.	1	2	3	4	5

Proactive Involvement
Successful individuals effectively interact with family, friends, classmates, educators, and other adults while participating in school organizations or in community social organizations.

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	Rarely				Often
28. The student maintains one or more good friendships.	No				Yes
29. The student successfully participates in small groups to complete projects.	1	2	3	4	5
30. The student participates in community organizations, such as sports clubs or organized social groups.	1	2	3	4	5
31. The student participates in school teams, clubs, or other groups.	1	2	3	4	5
32. The student successfully interacts with teachers, family, and other adults.	1	2	3	4	5

Goal Setting and Attainment

Goal-oriented students have set and attained goals in the past and can plan to set and attain goals now and in the future. Students who are successful reaching postsecondary goals define realistic goals that match interests and skills. They are able to break long-term goals into manageable steps, continuously monitor their progress, problem-solve by using supports, and adjust goals as needed based upon feedback. Goal-oriented students tend to prioritize and complete smaller goals or steps in a logical order to achieve a larger goal.

	Rarely				Often
33. The student defined the word "goal."	No				Yes
34. The student learned how to set a goal and make it happen.	1	2	3	4	5
35. The student talks about the importance of having goals.	1	2	3	4	5
36. The student expressed the importance of having postschool goals that match his or her interests and skills.	1	2	3	4	5

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Scoring 1 = rarely 3 = sometimes 5 = often or well done

37. The student identified the possible consequences of *not* setting goals.	1 2 3 4 5
38. The student set goals that match his or her strengths and interests while taking into consideration what the family or community wants him or her to do.	1 2 3 4 5
39. The student creates short-term goals to attain long-term goals.	1 2 3 4 5
40. The student develops plans to attain his or her goals.	1 2 3 4 5
41. The student uses plans he or she develops to attain goals.	1 2 3 4 5
42. The student determines the effectiveness of his or her plans to attain goals.	1 2 3 4 5
43. The student adjusts plans to attain goals if they do *not* work.	1 2 3 4 5
44. After completing the first step of a goal, the student moves on to the next step.	1 2 3 4 5
45. After attaining one goal, the student moves on to the next goal.	1 2 3 4 5
46. The student attained at least one transition goal.	No Yes

Employment

There is a relationship between attainment of job readiness skills while in high school and postschool employment outcomes. Beneficial student behaviors include expressing a desire or need for a job, and those related to job readiness skills such as attitudes, participating in a job training program, or working as an intern or apprentice.

	Rarely Often
47. The student expresses wanting a job.	1 2 3 4 5

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Scoring 1 = rarely 3 = sometimes 5 = often or well done

48. The student expresses wanting a job that matches his or her career interests and skills.	1 2 3 4 5
49. The student actively looked for a paid job.	1 2 3 4 5
50. The student demonstrates job readiness skills, such as being on time, completing work as assigned, or working cooperatively.	1 2 3 4 5
51. The student's self-care habits, such as personal hygiene or clothing choices, match career interests.	1 2 3 4 5
52. The student successfully participated in a career technology or job-training program.	No Yes
53. The student had an unpaid job, such as working for a family member.	No Yes
54. The student had an unpaid internship or apprenticeship.	No Yes
55. The student had a paid job.	No Yes

Self-Advocacy
Students who are self-advocates look for and use various resources to learn more about their disabilities, legal rights, and supports or accommodations. They appropriately disclose their disability, actively participate in transition IEP meetings, recall transition goals outside of the IEP meeting, request appropriate supports or accommodations needed to obtain services according to legal rights, and know documentation required.

	Rarely Often
56. The student uses the internet or other sources to understand his or her disability, legal rights, supports, or accommodations.	1 2 3 4 5
57. The student identifies accommodations that are effective for him or her.	1 2 3 4 5
58. The student identifies accommodations that are *ineffective* for him or her.	1 2 3 4 5

Transition Success Assessment
Professional Version

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Scoring 1 = rarely 3 = sometimes 5 = often or well done

59. The student requested a new accommodation when the first one was *not* effective.	1 2 3 4 5
60. The student asks for support only when needed.	1 2 3 4 5
61. The student talked during his or her IEP meeting.	1 2 3 4 5
62. The student told the IEP team his or her postschool goals.	1 2 3 4 5
63. The student discussed his or her present level of performance at the IEP meeting.	1 2 3 4 5
64. At the IEP meeting, the student explained how his or her course of study will assist in achieving postschool goals.	1 2 3 4 5
65. The student led his or her IEP meeting.	1 2 3 4 5

Supports

Students with disabilities who have a support group tend to experience more postschool success. Support individuals consist of persons who have a positive influence on the student by providing realistic expectations, modeling appropriate behaviors and strategies to strengthen skills, and assisting the student in setting and modifying goals. Successful students can identify, in a variety of situations, individuals who are a positive source of support and those who are not positive sources of support. Successful students appropriately create, maintain, and utilize a positive support system by identifying when support is necessary, what type of support needed, and seek individuals both inside and outside their current support system for the needed support.

	Rarely				Often
66. The student distinguishes between individuals who are a positive source of support from those who are *not*.	1	2	3	4	5
67. The student identifies situations when support people are needed.	1	2	3	4	5
68. The student identifies the support person needed for a specific situation.	1	2	3	4	5

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Scoring 1 = rarely 3 = sometimes 5 = often or well done

69. The student accepts help from support people when offered.	1 2 3 4 5
70. The student only uses support people when needed, *not* to get out of doing things.	1 2 3 4 5
71. The student maintains the support network by showing appreciation or reciprocity.	1 2 3 4 5

Utilization of Resources
Successful students with disabilities may look for individuals or agencies outside their immediate network for support in specific situations as well as appropriately use the help available at school. Students may use available resources to learn about possible support services or community agencies. They actively look for assistance from appropriate community agencies.

	Rarely				Often
72. The student actively seeks people to help with a situation when the current support people *cannot* help.	1	2	3	4	5
73. The student uses available support people at school or work.	1	2	3	4	5
74. The student uses the internet to access information for possible support services or community agencies.	1	2	3	4	5
75. The student seeks assistance from community agencies.	1	2	3	4	5

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APPENDIX C: TAGG STUDENT VERSION

Transition Success Assessment

Student Version

Instructions: Please read each item and think about what you have done over the past year. Mark in the box that seems closest to what you know or what you have done **in the past year.**

	Rarely	Some-times	Often
1. I know my strengths.			
2. I know what I do well.			
3. I know my limitations.			
4. I know what I have trouble doing.			
5. I told someone about the things I do well in school.			

6. I told someone about the thing I need help doing in school.			
7. I knew the assignments I would have trouble with as soon as the teacher gave them to me.			
8. I knew which assignments that I could do well when the teacher gave them to me.			
9. I look for situations to use my strengths.			
10. I know what I do well, but choose *not* to do those things.			

11. I look for situations where my weaknesses do *not* matter.			
12. I know my weaknesses, but I do not think about them when I make choices.			
13. I find new ways to do tasks that are hard for me.			
14. I know what the word "disability" means.	NO		YES
15. I told someone I have a disability.	NO		YES

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Instructions: Mark in the box that seems closest to what you know or what you have done **in the past year**.

	Rarely	Some-times	Often
16. I told someone facts about my disability.			
17. I know how to talk about my disability in a way that will get me the most help.			
18. I told someone about the accommodations or support I need because of my disability.			
19. I think of my disability as only one part of who I am.			
20. I think of my disability as a positive part of my life.			

21. I told my friends that I get help from special education.			
22. I talk to my family about my disability.			
23. Not giving up in school is important to me.			
24. I keep working until I accomplish a goal.			
25. I try different ways to help me keep working on a task until I finish it.			

26. I keep working to achieve a goal even when it becomes hard.			
27. I learn from my mistakes, so I can do better next time.			
28. I have at least one good friend.	NO		YES
29. I work well in small groups to complete projects.			
30. I participate in community groups, such as sports clubs or organized social groups.			

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Instructions: Mark in the box that seems closest to what you know or what you have done **in the past year**.

	Rarely	Some-times	Often
31. I participate in school teams, clubs, or other groups.			
32. I get along with teachers, family, and other adults.			
33. I know what the word "goal" means.	NO		YES
34. I learned how to set a goal and make it happen.			
35. It is important for me to have goals.			

36. It is important to me that my after high school goals match what I like and can do.			
37. I know what might happen if I do *not* have goals.			
38. When setting goals, I think about my strengths and interests and what my family or community wants me to do.			
39. I break big goals into smaller parts.			
40. I develop plans to meet my goals.			

41. I use the plans I develop to meet my goals.			
42. I decide if my plans to meet goals work.			
43. I change my plans to meet goals if they do *not* work.			
44. I complete the first step of a goal and then move on to the next step.			
45. After I meet one goal, I move on to my next goal.			

Transition Success Assessment
Student Version

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Instructions: Mark in the box that seems closest to what you know or what you have done **in the past year**.

	Rarely	Some-times	Often
46. I completed at least one of my IEP transition goals.	NO		YES
47. I want a job.			
48. I want a job that interests me and that I can do.			
49. I looked for a paid job.			
50. I show I am ready for a job by being on time, doing my work, and getting along with others.			
51. My self-care habits and clothing choices match my career interests.			
52. I participated in a career tech or job-training program and did well.	NO		YES
53. I had a job that I did *not* get paid to do, such as working for a family member.	NO		YES
54. I worked for someone who taught me how to do a job, but I did *not* get paid.	NO		YES
55. I had a job where I earned money.	NO		YES
56. I use the internet or other sources to understand my disability, rights, and supports.			
57. I know which accommodations, such as extra time or class notes, are helpful.			
58. I know the accommodations that do *not* help me.			
59. I asked for a different accommodation when the first one did *not* help me.			

Transition Success Assessment
Student Version

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Instructions: Mark in the box that seems closest to what you know or what you have done **in the past year**.

	Rarely	Some-times	Often
60. I only ask for support when I really need it.			
61. I talked during my IEP meeting.			
62. I told my IEP team my goals for after high school.			
63. I talked about how I was doing in school at the IEP meeting.			
64. At the IEP meeting, I talked about how the classes I plan to take will help me meet my after high school goals.			
65. I led my IEP meeting.			
66. I know the difference between people who are a positive influence in my life from those who are *not*.			
67. I know when to go to my support people for help.			
68. I know which support person can best help me in different situations.			
69. I accept help from support people when it is offered.			
70. I only use my support people when I really need them, *not* to get out of doing things.			
71. I thank those who help me and help them when I can.			
72. I find people to help me with a situation when the people I already know *cannot* help me.			
73. I use support people at school or work, such as the secretary, coach, school counselor or co-worker.			
74. I use the internet to get information about where to go for			

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Instructions: Mark in the box that seems closest to what you know or what you have done **in the past year**.

	Rarely	Some-times	Often
help outside of school.			
75. I ask for help from places outside school, such as the Department of Vocational Rehabilitation, the library, or employment agencies.			

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APPENDIX D: TAGG FAMILY VERSION

Transition Success Assessment

Family Version

General Instructions: As you read each sentence, think about your child's actions over the past year. Please indicate how well each statement reflects your child's actions. For statements with yes or no, please circle the correct response. For statements rated with numbers, circle the number that best explains how often or how well your child has completed each action described.

1 = rarely performed the action within the past year
2 = performed the action a few times or did not do well when performing the action
3 = performed the action several times or did a fair job of completing this action
4 = performed the activity many times or did a good job of competing this action
5 = performed this activity often or was successful at completing this action

	Rarely				Often
1. My child told someone about his or her strengths.	1	2	3	4	5
2. My child told someone what he or she does well.	1	2	3	4	5
3. My child told someone his or her limitations.	1	2	3	4	5
4. My child told someone what he or she has trouble doing.	1	2	3	4	5
5. My child told someone about the things he or she does well in school.	1	2	3	4	5
6. My child told someone about the things he or she needed help doing in school.	1	2	3	4	5
7. My child knew which assignments he or she would have trouble with as soon as the teacher gave them to the child.	1	2	3	4	5
8. My child knew which assignments that he or she could do well when the teacher gave them to the child.	1	2	3	4	5
9. My child finds situations to use his or her strengths.	1	2	3	4	5
10. My child knows his or her strengths, but does *not* seek situations where the strengths are utilized.	1	2	3	4	5

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Instructions: Circle the response that best reflects your child's actions *over the past year*. (1 = rarely; 3 = sometimes; 5 = often or well done)

	Rarely				Often
11. My child finds situations where his or her weaknesses do *not* matter.	1	2	3	4	5
12. My child knows his or her weaknesses, but does not think about them when making choices.	1	2	3	4	5
13. My child finds new ways to do tasks that are hard for him or her.	1	2	3	4	5
14. My child told someone what the word "disability" means.	No			Yes	
15. My child told someone that he or she has a disability.	No			Yes	
16. My child told someone facts about his or her disability.	1	2	3	4	5
17. My child talks about the disability in a way that he or she will receive most help.	1	2	3	4	5
18. My child told someone about the accommodations or supports needed because of his or her disability.	1	2	3	4	5
19. My child views the disability as only one part of his or her life.	1	2	3	4	5
20. My child thinks of the disability as a positive part of his or her life.	1	2	3	4	5
21. My child told friends that he or she receives help from special education.	1	2	3	4	5
22. My child talks to me or other family members about his or her disability.	1	2	3	4	5
23. Not giving up in school is important to my child.	1	2	3	4	5
24. My child keeps working until he or she accomplishes a goal.	1	2	3	4	5
25. My child tries different ways to keep working on tasks until they are finished.	1	2	3	4	5

Transition Success Assessment
Family Version

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Instructions: Circle the response that best reflects your child's actions *over the past year*. (1 = rarely; 3 = sometimes; 5 = often or well done)

	Rarely				Often
26. My child keeps working to attain a goal even when it becomes hard.	1	2	3	4	5
27. My child learns from mistakes so he or she can do better the next time.	1	2	3	4	5
28. My child has at least one good friend.	No				Yes
29. My child works well in small groups to complete projects.	1	2	3	4	5
30. My child participates in community groups, such as sports clubs or organized social groups.	1	2	3	4	5

31. My child participates in school teams, clubs, or other groups.	1	2	3	4	5
32. My child gets along with teachers, family, and other adults.	1	2	3	4	5
33. My child told a family member or me what the word "goal" means.	No				Yes
34. My child learned how to set a goal and make it happen.	1	2	3	4	5
35. My child talks about the importance of having goals.	1	2	3	4	5

36. My child talks about the importance of having after high school goals that match his or her interests and skills.	1	2	3	4	5
37. My child talks about what might happen if he or she does *not* have goals.	1	2	3	4	5
38. My child sets goals that match his or her strengths and interests while taking into consideration what the family or community wants him or her to do.	1	2	3	4	5
39. My child breaks big goals into smaller parts.	1	2	3	4	5

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Instructions: Circle the response that best reflects your child's actions *over the past year*. (1 = rarely; 3 = sometimes; 5 = often or well done)

	Rarely				Often
40. My child develops plans to meet his or her goals.	1	2	3	4	5
41. My child uses plans he or she develops to meet goals.	1	2	3	4	5
42. My child decides if his or her plans to meet goals work.	1	2	3	4	5
43. My child changes his or her plans to meet goals if they do *not* work.	1	2	3	4	5
44. My child completes the first step of a goal and then moves on to the next step.	1	2	3	4	5
45. After my child meets one goal, he or she moves on to the next goal.	1	2	3	4	5

46. My child completed at least one IEP transition goal.	No				Yes
47. My child talks about wanting a job.	1	2	3	4	5
48. My child talks about wanting a job that matches his or her career interests and skills.	1	2	3	4	5
49. My child actively looked for a paid job.	1	2	3	4	5
50. My child shows the skills needed to keep a paid job, such as being on time, working hard, and getting along with others.	1	2	3	4	5

51. My child's personal hygiene habits and clothing choices match career interests.	1	2	3	4	5
52. My child participated in a career technology or job-training program and did well.	No				Yes
53. My child had an unpaid job, such as working for a family member.	No				Yes
54. My child had an unpaid internship or apprenticeship.	No				Yes

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Instructions: Circle the response that best reflects your child's actions *over the past year*. (1 = rarely; 3 = sometimes; 5 = often or well done)

	Rarely				Often
55. My child had a paid job.	No				Yes
56. My child uses the internet or other sources to learn about his or her disability, rights, and supports.	1	2	3	4	5
57. My child knows which accommodations, such as extra time or class notes, are helpful.	1	2	3	4	5
58. My child knows the accommodations that do *not* help him or her.	1	2	3	4	5
59. My child asked for a different accommodation when the first one did *not* work.	1	2	3	4	5
60. My child asks for support only when needed.	1	2	3	4	5
61. My child talked during the IEP meeting.	1	2	3	4	5
62. My child told the IEP team his or her goals for after high school.	1	2	3	4	5
63. My child talked about how he or she was doing in school at the IEP meeting.	1	2	3	4	5
64. At the IEP meeting, my child talked about how future classes will help achieve his or her after high school goals.	1	2	3	4	5
65. My child led his or her IEP meeting.	1	2	3	4	5
66. My child knows the difference between people who are a positive influence in his or her life from those who are *not*.	1	2	3	4	5
67. My child knows when to go to his or her support people for help.	1	2	3	4	5
68. My child knows which support person can best help him or her in different situations.	1	2	3	4	5
69. My child accepts help from support people when it is offered.	1	2	3	4	5

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Instructions: Circle the response that best reflects your child's actions *over the past year*. (1 = rarely; 3 = sometimes; 5 = often or well done)

	Rarely				Often
70. My child only uses support people when needed, *not* to get out of doing things.	1	2	3	4	5
71. My child thanks those who help him or her and willingly help them in return.	1	2	3	4	5
72. My child finds people to help him or her when the people he or she knows *cannot* help.	1	2	3	4	5
73. My child uses support people at school or work, such as the secretary, coach, school counselor or co-worker.	1	2	3	4	5
74. My child uses the internet to get information about where to go for help outside of school.	1	2	3	4	5
75. My child asks for help from places outside of school, such as Department of Vocational Rehabilitation, the library, or employment agencies.	1	2	3	4	5

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APPENDIX E: STUDENT DEMOGRAPHIC FORM

Student Demographics

To Be Completed by the Teacher

Name of person completing this form: _____ Date:_____

Student's name: _____ School: _____

Please complete all questions on the following FIVE pages.

1. What is this student's gender?
   - ☐ Male
   - ☐ Female

2. What is this student's age?
   Year(s) _____

3. What is this student's grade?
   - ☐ 9th grade
   - ☐ 10th grade
   - ☐ 11th grade
   - ☐ 12th grade

4. How long have you known this student?
   Year(s) _____ Month(s) _____

5. How long has this student been enrolled in this school?
   Year(s) _____ Month(s) _____

6. How long has this student been enrolled in this district?
   Year(s) _____ Month(s) _____

7. Is this student eligible to receive free/reduced lunch at this school?
   - ☐ Yes
   - ☐ No
   - ☐ Don't know

8. Does this student receive free/reduced lunch at this school?
   - ☐ Yes
   - ☐ No

9. Is this student enrolled in an English as a second language class, or is this student receiving support for English as a second language?
   - ☐ Yes
   - ☐ No

Please go to next page.

10. What is this student's ethnicity or race? (Check all that apply)

- ☐ White or Caucasian
- ☐ Black, African American
- ☐ American Indian or Alaska Native
- ☐ Mexican, Mexican American, or Chicano
- ☐ Puerto Rican
- ☐ Cuban
- ☐ Other Hispanic, Latino, or Spanish origin
- ☐ Native Hawaiian
- ☐ Guamanian or Chamorro
- ☐ Samoan
- ☐ Other Pacific Islander
- ☐ Asian Indian
- ☐ Japanese
- ☐ Chinese
- ☐ Korean
- ☐ Filipino
- ☐ Vietnamese
- ☐ Other Asian
- ☐ Other; Please specify _____

11. How many periods are in this student's school day?

_____Periods

12. How many periods per day does this student attend general education classes?

_____Periods

13. Please indicate the academic setting for the student's core courses for this school year.

Core Subject	Name of Class	Special Ed Setting	General Ed Setting
English			
Math			
Social Studies			
Science			

14. Indicate the student's typical monthly school attendance.

- ☐ No more than one day absent per month
- ☐ 2-3 days absent per month
- ☐ 4 or more days absent per month

15. Did this student attend his or her last IEP meeting?

- ☐ Yes
- ☐ No

Please go to next page.

16. Did any of this student's family members attend his or her last IEP meeting?
- ☐ Yes
- ☐ No

17. Did this student ***lead*** his or her last IEP meeting?
- ☐ Yes
- ☐ No
- ☐ Don't know

18. Has this student received instruction on how to actively participate in his or her IEP meetings?
- ☐ Yes
- ☐ No
- ☐ Don't know

19. Has this student received disability awareness instruction?
- ☐ Yes
- ☐ No
- ☐ Don't know

20. What is the student's ***primary*** disability? **(Check only one)**

- ☐ Autism
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Deaf-Blindness
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Emotional Disturbance
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Hearing Impairment (include deafness)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Mental Retardation (Intellectual Disability)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Multiple Disabilities
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Orthopedic Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Other health Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Specific Learning Disability
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Speech or Language Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Traumatic Brain Injury
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Visual Impairment (include blindness)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Other; Please specify: _____

Please go to next page.

21. Does the student have a ***Secondary*** disability?

- ☐ Yes
- ☐ No
- ☐ Don't know

If yes, Please check all that apply.

- ☐ Autism
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Deaf-Blindness
  - ☐ Mild
  - ☐ Moderate
  - ☐ severe
- ☐ Emotional Disturbance
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Hearing Impairment (include deafness)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Mental Retardation (Intellectual Disability)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Multiple Disabilities
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Orthopedic Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Other health Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Specific Learning Disability
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Speech or Language Impairment
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Traumatic Brain Injury
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Visual Impairment (include blindness)
  - ☐ Mild
  - ☐ Moderate
  - ☐ Severe
- ☐ Other; Please specify: _____

Please go to next page.

22. Date of last IQ testing: _____ (month day year)

23. IQ test last given. (Please indicate only the latest one given)

- ☐ CTONI: Comprehensive Test of Nonverbal Intelligence (C-TONI)
- ☐ Reynolds Intelligence Assessment Scale (RIAS)
- ☐ Stanford-Binet Intelligence Scales
- ☐ Test of Nonverbal Intelligence (TONI-3 or TONI-4)
- ☐ Wechsler Adult Intelligence Scale (WAIS-III or WAIS- IV)
- ☐ Wechsler Intelligence Scale for Children (WISC-R or WISC-III)
- ☐ Woodcock Johnson Test of Cognitive Abilities (W-J-III)
- ☐ Universal Nonverbal Intelligence Test (UNIT)
- ☐ Other; Please specify: _____

24. Score: _____

Please attach a copy of student's cumulative high school transcript and the state testing results, if not listed on transcript.

Thank you for completing this form.