

AN INVESTIGATION OF SUPPORT PROGRAMS FOR COLLEGE STUDENTS WITH
HIGH FUNCTIONING AUTISM OR ASPERGER SYNDROME

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WITH HIGH FUNCTIONING AUTISM OR ASPERGER SYNDROME

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ABSTRACT

One group of students now included in the demographic landscape on many college campuses is students with high functioning autism (HFA) or Asperger syndrome (AS). Not only is the number of college students with HFA or AS becoming evident, but also the prevalence rates among younger generations of college hopefuls. Hence, the importance of participation of individuals with HFA or AS in higher education on all levels must be examined by higher education stakeholders. Using the framework of a logic model I sought to examine support programs in higher education for college students with High Functioning Autism or Asperger syndrome (HFA or AS). More specifically, I wanted to describe the characteristics of two selected programs by completing a program logic model for each of the programs being examined, (2) determine how each program related to the Shaw and Dukes' (2005; 2006) AHEAD postsecondary disability program standards and (3) determine to what extent the characteristics of institutional type and funding source made a difference in how the programs were structured and their outcomes. This was a qualitative study using a multiple-case study approach.

Policy and practitioner implications include providing findings around the type of culture and support needed to provide a successful atmosphere for students with HFA or AS, raising questions about college policies regarding disability support and

accommodations systems, and developing programs that bring students with HFA or AS to campus prior to the transition from high school. Implications for research include further research of other program models to determine best practices, researching the perspectives of the students who are receiving these supports and report on their perceived levels of satisfaction and the impacts they perceive they received as a result of participation in the programs.

Chapter 1

OVERVIEW

Introduction

With the assistance of federal mandates, such as Section 504 of the Rehabilitation Act of 1973 (29 U.S.C.A. §794) and Americans with Disabilities Act (1990), as well as institutional changes from 1973-2008, attending higher education has become a viable option for individuals with disabilities in the US. The first legislative effort to acknowledge educational needs of postsecondary students with disabilities happened more than 140 years ago when U.S. President Lincoln signed legislation to provide funding to Gallaudet University, a school for deaf individuals (Hall & Belch, 2000). Unfortunately, another century passed before college access for individuals with disabilities was part of a legal mandate. The passage of the Rehabilitation Act of 1973, Section 504, mandated postsecondary education access for students with disabilities (Brinckerhoff, Shaw, & McGuire, 1992; Hicks-Coolick & Kurtz, 1996; Rath & Royer, 2002). These institutional changes have resulted in a higher education climate that has embraced a change in student demographics to include students with disabilities. As a result, over the past 30 years access for this underserved population has increased and so have the types of students with disabilities attending college.

One group of students now included in the demographic landscape on many college campuses is students with high functioning autism (HFA) or Asperger syndrome (AS). Not only is the number of college students with HFA or AS becoming evident, but also the prevalence rates among younger generations of college hopefuls. Hence, the importance of participation of individuals with HFA or AS in higher education on all

levels must be examined by higher education stakeholders. This involvement begins with the transition process into higher education and continues with college enrollment.

An estimated one in every 500 Americans *lives* with an Autism Spectrum Disorder and approximately one in every 150 children is being diagnosed with HFA or AS (*Directory for Asperger Syndrome*, 2006; Centers for Disease Control, 2007). In addition, in a recent longitudinal study 46% of the over 14, 000 participants with autism reported enrolling in some type of postsecondary education or training (Wagner, Newman, Cometo, Garza, & Levine, 2005). Hence, the number of college students with autism or Asperger Syndrome is becoming more evident, and the needs of these individuals vary vastly from the needs of typical college entrants (Taylor, 2005; Wagner et al., 2005).

While transitioning to college can be a scary time for most young adults, this time is especially stressful for individuals with HFA or AS. Factors such as the unstructured environment in college and other non-academic issues can cause high levels of stress that could potentially interfere with success in college for individuals with HFA or AS (Glennon, 2001). For example, practices that are commonplace for most college-bound students, such as noticing and responding to verbal and non-verbal social cues, present significant challenges for students with HFA or AS. Individuals with HFA or AS who are attending college need to be carefully and strategically proactive about their environment including their living situation and academics in order to make their transition into college more manageable and hence less stressful. However, little information is available on the available support programs for these students in higher education.

With the 2006 publication of The Spellings Commission report, *A Test of*

Leadership: Charting the Future of U.S. Higher Education, an increased focus on higher education accountability has emerged. One recommendation in the report urges higher education institutions “to invest to develop new pedagogies, curriculum and technologies to improve learning” (U.S. Department of Education, 2006, p. 5). In addition, the report calls for postsecondary institutions to build and sustain a system that will include “all qualified students in all life stages...especially those underserved and non-traditional groups that make up an ever-greater proportion of the population” (p. 8). This population includes students with disabilities and especially the surge of students who are entering with an HFA or AS diagnosis.

The Spellings Report (U.S. Department of Education, 2006) claims that too little attention has been paid to “innovations that would increase institutional capacity, effectiveness and productivity” (p. 14). As accountability becomes an institutional responsibility in higher education, administrators and program providers need to be able to document program success. Providers of services for special interest groups are being required more frequently to chronicle specific interventions as well as outcomes that demonstrate program effectiveness (Yampolskaya, Nesman, Hernandez, & Koch, 2004).

While many researchers in the field of higher education address the importance of increasing retention for underserved students or non-traditional students, these studies typically do not include students with disabilities. Furthermore, of the studies about the retention of students with disabilities, most focus on students with learning disabilities and do not capture individuals with an HFA or AS diagnosis (Taylor, 2005). Therefore, investigation of college and university programs designed to support individuals with HFA or AS is needed.

Conceptual Framework

Program Theory

Program theory reveals a set of assumptions or expectations that describe “why a program does what it does and provides the rationale for expecting that doing things that way will achieve the desired results” (Rossi, Freeman & Lipsey, 1999, p. 156). When careful attention to explicit conceptualization is not considered when designing a program’s objectives and how those objectives will be achieved, the result is a program that “does not relate in a reasonable way to the social conditions that the program is intended to improve” (p. 156). Programs that have an interest in making changes in the participants the program targets are inherently theory based. Bickman (1987) stated that program theory makes a logical and reasonable connection with the program’s activities to one or more outcomes for the participants. One source of program theories can be developed by based on the expertise and experience of program staff. One of the most useful models when considering program theory is the theory of action by Bennett (1973). This model outlined the basic theory underlying many of the interventions of a program. According to Bennett, a program uses the available resources (including staff, equipment and materials) in order to offer a set of activities or services. As program participants engage in these activities, they respond to what they experience. As a result of their involvement in these activities, the program participants’ change their knowledge, actions, and skills. As a result of the changes in a participants’ knowledge and actions, a transformation occurs in the program participants’ behavior and practices. As a result of these behavioral changes, the program has an overall impact on the target population and the broader community. Thus, “the assumptions and expectations

embodied in a program's function do not represent a credible approach to bringing about that improvement" which do not allow potential for the program to be effective (p. 156).

One of the earliest attempts to assess program theory came in 1979 when Wholey and a team of evaluators at the Urban Institute coined the term, *evaluability assessment*. This process involved evaluators operating like "program ethnographers...to describe and to understand the program through interview and observations that will reveal its social reality as viewed by program personnel" (Rossi et al., 1999, p. 157). Evaluators should look at the logic that connects the program's inputs and the outputs and determine if there is a reasonable link between the two. When a program already exists, it becomes a matter of describing "the theory that is actually embodied in the program structure and operation" (p. 162). By completing theory-based evaluation of the program theory, "interventions can be fine tuned in order to build upon strengths and overcome weaknesses" (Stinchcomb, 2001).

A logic model design is one way that a program theory can be expressed. Creating a logic model requires a detailed step-wise sequence of events and answers questions regarding the "appropriate clientele, the relevant needs and meaningful interventions that if operationalized properly ... lead to designated intermediate results and long-term outcomes" (Stinchcomb, 2001, p. 49). Logic modeling has been frequently used in program evaluation and planning as well as in program theory building (Julian, 1997; Shern, Trochim, & LaComb, 1995; Stinchcomb, 2001; Yampolskaya et al., 2004). In this study, a logic model was used to research programs that support individuals with HFA or AS in higher education.

Program Standards and Performance Indicators

Shaw and Dukes (2006) contended that disability services were not being driven by federal mandates but rather, by the court cases subsequent to the Rehabilitation Act of 1973 and the American Disability Act in 1990. These court case precedents have made the most immediate impact in the regulation of services. Unfortunately, there is difficulty with reliance on court cases as a guide for disability accommodations as new case precedents continue to occur. Hence, the call for more effective methods to regulate services such as program standards or a best practices method was needed.

Shaw and Dukes (2005, 2006) constructed a list of 28 research-based program standards that higher education institutions should use to evaluate disability services. In addition, they identified 90 performance indicators as essential for best practices in the support of students with disabilities (Shaw & Dukes, 2006). These standards have been approved by the membership of the Association on Higher Education and Disability (AHEAD). The revised list of 28 program standards reflect practitioner expertise in the field and include eight themed areas of programs standards. These standards to include (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustments, (5) Counseling and Self Determination, (6) Policies and Procedures (7) Program Administration and Evaluation, and (8) Training and Professional Development. These program standards have been recognized as being essential regardless of an institution's type, size, location, and admission policy (Shaw & Dukes, 2005).

Review of Literature

Few studies discuss the intersection of autism and higher education enrollment. The following review of literature provides a history on the diagnosis of the disorders, explains how the disorder will be defined for this study, and indicates the prevalence of this population in higher education and some of the needs for college students with HFA or AS.

History of Autism and Asperger Syndrome

Autism and Asperger Syndrome were disorders that were researched as two separate phenomena in the 1940s (Asperger, 1944/1991; Kanner, 1943). Leo Kanner introduced Autistic syndrome to American literature in 1943 with his clinical presentation of 11 children with cognitive delays who exhibited childhood onset of a unique combination of social isolation disturbances in communication, and rigid and repetitive patterns of behavior (Kanner, 1943). The recognition of autism as part of the diagnosis criteria in the *Diagnosis and Statistical Manual of Mental Disorders (DSM-III)* was included in 1980. In contrast, Hans Asperger's work in the 1940s chronicled the presentation of four children who presented the similar social difficulties and rigidity of Kanner's patients but also had average to above average intellectual functioning. Awareness of Asperger's work did not occur in the U.S. until Lorna Wing, a British psychologist, wrote about the Asperger's case (Wing, 1981; Breakey, 2006). As research on Asperger Syndrome has continued, it was differentiated from autism by later onset, absences of language delays, and at least average cognitive functioning (Volkmar & Klin, 2005).

There has been an evolution of the diagnostic criteria for these diagnoses since 1980 to 2000. In 1980, autism was incorporated into the diagnosis system with the publication of the third edition of the DSM (DSM-III, APA, 1980). As research in the field expanded, Asperger Syndrome was added in the 1990s to the Diagnostic and Statistical Manual of Mental Disorders, the standard reference for psychologists and psychiatrists (American Psychiatric Association, 1994). Several researchers have disputed the similarities and differences in these two diagnoses. The awareness of these disorders has increased, as well as the early diagnosis and the prevalence. However, the increase in prevalence is not thought to be due to an increase in diagnosis alone. Although exact reasons for the increases in prevalence are still being examined, it is estimated that one in every 500 Americans live with this disorder and that one in every 150 children are being diagnosed (*Directory for Asperger Syndrome*, 2006; Centers for Disease Control, 2007).

The increased knowledge about, awareness of, and diagnosis of the two syndromes will inevitably impact American public colleges and universities. As the many newly diagnosed students reach college age, there are implications for university administrators and the type and scope of student support programs traditionally offered by institutions of higher education. The following sections will provide an overview of the evolution of autism and Asperger syndrome, the prevalence of this population in higher education as well as what is known about the support needed at the college level.

Evolution of Definition of Autism and Asperger Syndrome

The evolution of autism and Asperger syndrome as disorders has caused much confusion and controversy since the early 1980s. Shifts in definitions as well as

diagnostic categories and criteria have made it difficult for researchers to compare studies over time (Huber, 2007). Autistic Disorder (299.00) and Asperger Disorder (299.80) are two of five diagnoses that lie on the spectrum of pervasive developmental disorders (American Psychiatric Association, 2000). Since Kanner's original work focused on individuals with exhibited cognitive delays, autism has been linked with mental retardation (Huber, 2007). As clinicians and researchers began to notice a higher cognitive functioning population that meet the autism definition, literature began to emerge regarding high functioning autism (HFA). Individuals with *Asperger Disorder* will usually receive the diagnosis later in life and according to the *DSM-IV*, an individual must portray four or five of the listed criteria from the autism diagnosis (American Psychiatric Association, 2000). In addition, individuals diagnosed with Asperger Syndrome show "no clinically significant general delay in language [or] cognitive development or in the development of age-appropriate self-help skills, adaptive behavior and curiosity about the environment in childhood" (American Psychiatric Association, 2000). Researchers note when Asperger Syndrome, Pervasive Developmental Disorder (PDD), was added to the DSM-IV it caused confusion and controversy (Howlin, 2003; Volkmar & Klin, 2005).

Howlin (2003) claimed that research studies that compared individuals with Asperger Syndrome to those with high-functioning autism created "a lack of agreement on diagnostic criteria" that has "made it almost impossible to reach definite conclusions about the similarities or differences between the two conditions" (p. 3). Thus, "any reported differences between the groups could be due to cognitive disparities rather than a true diagnostic differentiation" (p. 7). Therefore, for the purposes of this study, the two

diagnoses, high-functioning autism (HFA) and Asperger Syndrome (AS), will be studied as *one phenomenon*. Individuals with either diagnosis will hereafter be referred to as individuals with high functioning autism or Asperger syndrome (HFA) or (AS).

Prevalence in Higher Education

As the diagnosis of high functioning autism and Asperger syndrome has increased in our society, so too have the numbers of these individuals involved in postsecondary education. The purpose of this section is to provide further rationale for the importance of the current study based on previous studies. Two recent quantitative studies have examined the extent of individuals with HFA or AS in higher education. In 2005, Wagner, Newman, Cometo, Garza, and Levine completed a report looking at the post high school experiences of youth with disabilities and reported trends and current statistics of college students with disabilities. Their results indicated that of the 14,000 individuals included in their study, 15% were enrolled solely in some sort of postsecondary education. More importantly, Wagner et al. provided critical data to show evidence of the enrollment of individuals with HFA or AS in college by disaggregating the sample by disability type and noted that of the 14,637 individuals with autism in the survey, 46% were involved in post secondary education on some level. In another study (Thierfeld Brown, 2007), it was noted that of the 90 post secondary institutions that participated in the study, each one had an average of six students with HFA or AS enrolled. These schools represented varying institutional types and sizes, including 71 four-year public or private institutions and 19 public or private two-year institutions. Brown noted that the reported numbers were a decline for two-year institutions which in

the previous year had an average of 10 students while four-year institutions saw an increase in their numbers from the previous year's average of four.

Supports for Individuals with High functioning Autism or Asperger Syndrome

There has been research on the supports needed for individuals with HFA or AS to transition to higher education to improve their academic, social, and environmental success. The transition to college for individuals with HFA or AS can potentially include “difficulty with academic content, organization, time management and study skills” (Adreon & Durocher, 2007, p. 274). Williams and Palmer (2004) identified key elements that are particularly important for students on the autism spectrum: a clearly structured academic program, a good disabilities services program, an institution's willingness to provide modifications and support for learning needs, and a counseling center with support services. In addition, students with HFA/AS will have reduced stress by increasing their familiarity with the campus prior to the start of the semester and by meeting with key personnel in residential life and disability support services (Glennon, 2001). Other researchers have noted the positive impact of a smaller campus and class size at community colleges in assisting this population's transition to college (Adreon & Durocher, 2007; Harper, Lawlor, & Fitzgerald, 2004).

One of the most daunting tasks for individuals with HFA or AS is adjusting to the social culture of a college campus (Welkowitz & Baker, 2005). Most college campuses have distinct cultures that include many social norms and unspoken nuances. These nuances can cause non-academic challenges for individuals with HFA or AS that could limit success at the postsecondary level. Individuals with HFA or AS have difficulty making and keeping friends, which is an important part of college culture (Adreon &

Durocher, 2007). Many supports have been suggested and one such positive strategy has been the use of a peer mentor or key worker to whom the individual can go for support or advice as s/he navigates the social scenes of a college campus (Glennon, 2001; Moreno, 2005; Moxon, 2007).

Glennon (2001) determined that individuals with Asperger Syndrome have difficulties with the college environment's lack of structure, such as changing classes and continuous non-verbal cues that are commonplace within the culture. Colleges and universities are beginning to take note of these difficulties. Some attention has been given to schools or programs that are making an effort to accommodate to this population (Farrell, 2004). Farrell notes that many college administrators and faculty are confused about the best ways to support individuals with HFA or AS but are making some attempts to offer specific accommodations. While these attempts have been a noteworthy step, there are no empirically based studies of the programs that support individuals with HFA or AS.

As we explore the academic success of students with HFA or AS, there needs to be more emphasis on what those support look like. Although individuals with HFA or AS typically have average to high academic aptitude, there is still a need for specific academic accommodations to ensure their success at the college level (Adreon & Durocher, 2007; Dillon, 2007; Glennon, 2001; Perner, 2003; Breakey, 2006). Due to limitations in executive functioning or cognitive control, areas that are responsible for thought and behavior, it is important for individuals with HFA or AS to have some specific organizational strategies, such as guidance in developing a plan for study skills, long-term projects, and homework assignment due dates, as well as tutoring and personal

support services (Adreon & Durocher, 2007; Lockett & Powell, 2003; Myles, 2005). These accommodations and other HFA or AS-specific accommodations are not typically provided on college campuses (Adreon & Durocher, 2007; Taylor, 2005; Breakey, 2006). Many students with HFA or AS are utilizing supports designed for students with other types of learning disabilities. These more general provisions include preferential seating, note taking, tape-recorded lectures, and extra time on exams if necessary. Such supports may not meet the needs of individuals with HFA or AS.

Purpose of Study

The purpose of the multiple case study was to examine support programs in higher education for college students with High Functioning Autism or Asperger syndrome (HFA or AS). As some support programs have been attempted, there are no empirical data to shed light on these efforts. After determining what programs were available to support college students with HFA or AS, this study (1) described the characteristics of two selected programs by completing a program logic model for each of the programs being examined, (2) determined how each program relates to the Shaw and Dukes' (2005; 2006) AHEAD postsecondary disability program standards and (3) determined to what extent the characteristics of institutional type and funding source made a difference in how the programs were structured and their outcomes.

Research Questions

Question 1: What are the characteristics of selected support programs for college students with HFA or AS?

Question 2: To what extent do these programs relate to Shaw and Dukes' (2005) program standards for disability support?

Question 3: To what extent do the characteristics of institutional type and funding source make a difference in how the programs are structured and their intended outcomes?

Research Design

This study utilized a multiple-case study design to investigate programs that support individuals with HFA or AS in higher education who want to obtain a college degree. Data was collected using the case study method (Merriam, 1998; Stake, 1995) A case study involves multiple techniques in order to gather data from a research site. These strategies include interviewing, observing, and analyzing documents (Merriam, 1998). Case study research is appropriate to investigate a particular phenomenon and the context in which the phenomenon is occurring (Yin, 1993). Most unique cases of interest in the educational and social fields are people and programs (Stake, 1995; Yin, 1993). As a researcher I have a sincere interest in “learning how [the program] functions in their ordinary pursuits and milieus” (Stake, 1995, p. 1).

Using a multiple-case study method is most appropriate because it allows for an in-depth individual analysis as well cross-case comparisons for similarities and differences which strengthen the findings about the issues under study (Yin, 2003; Stake, 2006). While this study was a multiple-case study, each case was studied individually without considering other cases. To that end, I used the same data collection and analysis procedures for each of the programs studied. These descriptive case studies provided a complete description of the phenomenon in its context with the production of a logic model. While I believe there may be some commonalities between these cases, although I was very interested in each program’s uniqueness and how it serves college students with HFA or AS. The selection of the participants of this study was dependent on a specific

criteria: programs must include college students with HFA or AS in their population and those programs must include students with HFA or AS who are enrolled in higher education are working on earning a degree.

Definitions

The following definitions are used in this study:

- 1) *Asperger Disorder*(referred to as *Asperger Syndrome* in the present study) is a disorder that can cause qualitative impairments in social interactions, restricted and stereotyped interests that cause limitations in social and other areas of functioning, but with no significant language or cognitive development delay, nor lack of age-appropriate self-help skills (Asperger, 1944).
- 2) *Autism Spectrum Disorders* is a range of disorders that include both Autism, including high functioning autism, as well as Asperger Syndrome disorder. This study will exclude Rett syndrome and Childhood Disintegrative Disorder, given the cognitive impairments that occur in these disorders.
- 3) *High Functioning Autism (HFA)* is typically a diagnosis individuals along the autism spectrum have and can include “developed language and function with average to above average intelligence” or cognitive abilities (Gutstein & Whitney, 2002, p. 162).
- 4) *Logic Modeling* is a detailed step-wise sequence of events and provides answers to the questions regarding the “appropriate clientele, the relevant needs and meaningful interventions that if operationalized properly ... lead to designated intermediate results and long-term outcomes” (Stinchcomb, 2001, p. 49).

Limitations

One major limitation was the source of the data for the study. Interviews and data were gathered from program staff of the programs included in the study. While these data offered insight from the perspective of the program personnel, they did not offer the perspectives of the students who are currently being served by these programs. The absence of students' perspectives will limit the researcher's ability to evaluate program outcomes and effectiveness.

An additional limitation of this study was the possibility of programs not being discovered that could have been in the potential site of programs to be examined. As I completed this study, I became aware of two additional programs that were operating but were not discussed anywhere in the literature and did not appear in the three searches I performed. The selection of the participants for this study is dependent on specific criteria: 1) programs must support individuals with HFA or AS in higher education and 2) this must include individuals who are working towards earning a degree. There is currently no clearinghouse or database of programs that offer these services. There have been two attempts to identify programs with specific programming but those attempts have not yielded a clear picture of what is available to college students with HFA or AS (Perner, 2002; Thinkcollege, n.d.). To determine programs that meet the selection criterion for the study, I conducted three electronic searches, including two target database searches offered by Perner (2002) and Thinkcollege (n.d.) and a Google search. While these searches were comprehensive, it is always possible that appropriate programs to examine may have been overlooked.

The final limitation was of the usage of the Shaw & Dukes survey at each site. The responses to the Shaw & Dukes (2006) were diluted by the breath of conditions each program was trying to meet and the institutional type of each program. Since many of the survey statements addressed several issues that are germane to the higher education setting, the for-profit survey responses seemed to irrelevant given this difference. This limitation was not originally discovered but became clear as the data was being collected. This final limitation raised the question about the feasibility of adopting these standards for use with for-profit institutions.

Significance of the Study

The significance of this study is twofold. It identified programs that are currently available to support college students with HFA or AS who want to obtain a college degree. It also provides the first empirical investigation into the types of support programs that are available to support individuals with HFA or AS. In addition, this study will address a serious gap in the body of literature and add to an under-examined area of research on the outcomes and supports of adults with autism.

Conclusion

One message that resonates from the Spellings Commission report and the advances in legislation of Section 504 is the inclusion of all students in higher education regardless of disability or other nontraditional features. While the economic stability of the United States depends upon increasing college enrollment and graduation, it is more imperative for positive adult outcomes of individuals with disabilities (U.S. Department of Education, 2006). Institutional innovations that can increase capacity and effectiveness is an understudied area especially in regard to college students with HFA or AS. There is

knowledge about the types of needs for this population in higher education but how the needs are being served in postsecondary institution is a question that has gone unanswered. The purpose of this multiple-case study was to investigate support programs for college students with high functioning autism or Asperger syndrome Disorders (HFA or AS). In preparation of this investigation, a three step process was completed in order to determine which programs were currently available to support this population. This process yielded a list of seven programs offering services that included this population with a range in institutional type and funding sources.

Chapter 2

LITERATURE REVIEW

Introduction

Support programs offered at the college level are critical to academic and social success of students with high functioning autism or Asperger syndrome (HFA or AS). This chapter examines relevant empirical literature to set the context for investigating postsecondary level support programs for individuals with HFA or AS. The chapter begins with a more comprehensive view of program theory, the conceptual framework guiding this study. Then the literature reviewed in this chapter will focus on three components: (a) disability support services offered in higher education, (b) a review of autism including history of diagnosis, prevalence and longitudinal studies, and (c) current needs of HFA or AS students in higher education. First, this chapter will provide an overview of the historical and legal components that created disability support for students in higher education. This first component will also include discussion on the types of student services offered at the postsecondary level as well as evaluation measures that have been created to improve these services. In the second component, a review of autism will provide a historical overview of HFA or AS, a snapshot of its prevalence, and a review of outcome studies on adults with autism. Finally, the third component of this chapter will conclude with what is currently known about the needs of HFA or AS students enrolled in higher education including needs for transition to college, academic needs, and social support needs.

Conceptual Framework: Program Theory

One of the earliest attempts to conduct a program theory study was in 1979 when Wholey and a team of evaluators at the Urban Institute coined the term, *evaluability assessment*. This process involved evaluators operating like “program ethnographers...to describe and to understand the program through interview and observations that will reveal its social reality as viewed by program personnel” (Rossi et al., 1999, p. 157). Program theories reveal a set of assumptions and expectations about why a program operates in the way it does and why doing things in that manner is expected to achieve desired results.

Program theories are middle-range theories because they bridge the disparities between theory and empirical evidence (Merton, 1968). Theories of the middle range are situated between “the minor but necessary working hypotheses that evolve in the abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behavior, social organization and social change” (p. 39). Middle range theory consists of a limited set of assumptions from which specific hypotheses are logically derived and confirmed by empirical investigation.

Program theory is based on the idea of theory-based evaluations. Theory-based evaluation is the idea “that the beliefs and assumptions underlying an intervention can be expressed in terms of a phased sequence of causes and effects (i.e., a program theory)” (Weiss, 1997, p. 501). Most programs are based on a theory, although those theories are rarely explicit. The buttress of a program is usually based on experiences as well as practice knowledge and intuition, and many practitioners continue in their milieu without

much thought about the conceptual foundation of what they do (Weiss, 1997). Argyris and Schon's (1974) assert that people hold maps in their heads about how to plan, implement and review their actions. Argyris and Schon (1974) also believe that many people are unaware that the maps they use to take action are not the theories they explicitly espouse. Espoused theories are the world view and values people believe their behavior is based upon while the theory in use is the world view and values implied by their behavior, or the maps they use to take action. There can be a conflict between these espoused theories and theories in action. The evaluation involves collecting data of each step of the program to see how each step is articulated. The purpose of theory-based evaluations is "see whether the posited events do in fact take place and whether the expected outcomes appear" (p. 506). Theory-based evaluation is an appropriate step when evaluators want to know how a program and why the program works or fails to work.

One of several tools used to illustrate an underlying program theory is a logic model. Creating a logic model requires a detailed step-wise sequence of events and answers questions regarding the "appropriate clientele, the relevant needs and meaningful interventions that if operationalized properly ... lead to designated intermediate results and long-term outcomes" (Stinchcomb, 2001, p. 49). Logic modeling has been frequently used in program evaluation and planning as well as in program theory building (Julian, 1997; Shern et al., 1995; Stinchcomb, 2001; Yampolskaya et al., 2004). A logic model design is used as the template to determine what information to gather in this research about programs that support individuals with HFA or AS in higher education. This qualitative study will utilize a logic model in order to better understand the relationships

among a program's inputs and outcomes (Yampolskaya et al., 2004). According to Leeuw (2003), the program logic model "often specifies the inputs and components of a program, as well as short-term and long-term outcomes, along with the assumed linkages among these" (p. 6).

Student Disability Support Services in Higher Education

Graham-Smith and Lafayette (2004) proclaimed the importance of institutional responsibility to provide services that address the needs and accommodations of students with physical, psychological, learning, and attention disabilities. The authors espoused that in return for providing services, universities are repaid by individuals successfully completing a degree program and providing returns to the institution as alums. The following section will provide a historical perspective on disability support in higher education, a review of the types of services and accommodations offered, and finally, a background on the evaluation guidelines established to review disability support programs in postsecondary institutions.

Historical and Legal Overview of Disability Services in Higher Education

Over the last two centuries, a series of legal mandates and postsecondary institutional changes have made American higher education a viable option for students with disabilities. The first legislative effort to acknowledge educational needs of postsecondary students with disabilities happened more than 140 years ago when U.S. President Lincoln signed legislation to provide funding to Gallaudet University, a school for deaf individuals (Hall & Belch, 2000). Unfortunately, another century passed before college access for individuals with disabilities was part of a legal mandate. The passage of the Rehabilitation Act of 1973, Section 504, mandated postsecondary education access

for students with disabilities (Brinckerhoff, Shaw, & McGuire, 1992; Hicks-Coolick & Kurtz, 1996; Rath & Royer, 2002).

Section 504 of the Rehabilitation Act of 1973 (29 U.S.C.A. §794) was especially groundbreaking in that it prohibited discrimination against individuals with disabilities and provided protection from discrimination in federally funded programs and activities. Section 504 mandated that “no otherwise qualified handicapped individual ... shall, solely by reason of his/her handicap, be denied the benefits of, or be subjected to discrimination, under any program or activity receiving federal financial assistance” (Rehabilitation Act of 1973; U.S. Department of Education, 2006, p 1-3). Schools that received any federal education support were required not to discriminate against students with handicaps and to provide reasonable accommodations for those students (Madaus & Shaw, 2004). Failure to provide such accommodations could result in a loss of federal funding.

As a result, Section 504 of the Rehabilitation Act of 1973 (29 U.S.C.A. §794) was a guide for the types of accommodation offered in higher education institutions for students with disabilities (Hall & Belch, 2000). Subpart E of Section 504 required postsecondary institutions to modify discriminatory academic requirements and methods of evaluation. In addition, colleges and universities were required to provide students with *appropriate* academic adjustments and auxiliary aids/services necessary to afford an individual with a disability an equal opportunity to participate in the school's program. Section 504 did not require higher education institutions to supply students with individually prescribed devices or different admission requirements, but it did enforce provision of appropriate accommodations.

The next major piece of legislation that affected the climate of college campuses for individuals with disabilities was the Americans with Disability Act of 1990 (ADA). The ADA of 1990 and its 1997 reauthorization increased awareness of post-high school outcomes, including postsecondary education, and strengthened policies that prohibited discrimination against students with disabilities (Harris & Robertson, 2001; Harrison, 2003; Mull, Stilington, & Alper, 2001). ADA also branched out into the private higher education sector and sought to eliminate barriers surrounding access to buildings, transportation, and communication. In addition to increased access, ADA impacted career and vocational opportunities, which in turn expanded the transition services provision to individuals with disabilities. Most importantly, ADA (1990) included a broader range of disabilities than had previously been legislated, thus requiring campuses to recognize a wider variety of disabilities and broaden available supports for students with disabilities (Hall & Belch, 2000).

The last piece of legislation occurred in September of 2008, when an amendment was signed into law. The Americans with Disabilities Act Amendments Act of 2008 (ADA 2008) will take effect in 2009, and will make changes in several key areas. The legislation, known as the ADA Amendments Act of 2008 (ADAAA), will address changes in the term disability to include emphasizes that the definition of "disability" should be interpreted broadly to include individuals who experience major limitations in life activity. Due to this clarification in language this amendment has implications to include more individuals under the disability criteria than previously allowed due to Supreme Court rulings. In addition, the focus of ADAAA 2008 is directed to determine whether covered entities have complied with their obligations to reasonably

accommodate disabled applicants and employees. As a result, it also means colleges and universities will have to provide reasonable accommodations to more students and employees.

Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and ADA (1990, 1997, 2008) are non-discrimination statutes that do not legislate or mandate entitlement-based accommodations; however, they do protect individuals from discrimination on the basis of their disability status. Although these statutes symbolized a great advancement for people with disabilities, they also produced new challenges for postsecondary institutions as they tried to implement mandated guidelines into everyday practices . Ambiguity of accommodation policy guidelines is a significant problem for students with different disabilities at various institutions (Vogel, 1993). Such ambiguity results not only in variations in the types of accommodations from one institution to the next, but also the benefits provided to individuals with different types of disabilities. Welkowitz & Baker (2005) posited that individuals with autism are provided with the general accommodations offered to individuals with a variety of learning challenges. As a result, the required structural supports are overlooked by most higher education institutions and there is a lack of adequate support for students with HFA or AS. Structural supports, such as a prosthetic environment for a college student with HFA or AS, are accommodations or assistive techniques not unlike a wheelchair for those with physical disabilities (Holmes, 1998). For example, having a circumscribed visual schedule for the person to follow throughout the day will help to take the guesswork out of what is next. A schedule will reduce anxiety and enable greater degrees of independence and productivity for the adult with HFA or AS.

Types of Disability Services in Higher Education

College-based programs and supports for students with disabilities formally evolved during the 1970s. Since their inception, the scope and complexities of these programs has increased (Schuck & Kroeger, 1993). The legislative mandates of Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and ADA (1990) not only called for greater access to postsecondary education but also provided a list of mandatory accommodations that an institution must address. The list of accommodations included: (a) course substitutions; (b) extensions on time limits for degree completion; (c) modification of the manner in which courses are conducted; (d) modifications to course examinations; (e) provision of taped texts, sign language interpreters, and readers in libraries; and (f) adaptation of classroom and laboratory equipment (29 U.S.C. 794). Eichhorn (1997) noted that “the determination of whether a student or prospective student is qualified to pursue a given educational program must rest in part on an assessment of reasonable accommodations that the school could theoretically offer a student” (p. 41).

It is often hard to assess appropriate accommodations for individuals for several reasons. First, the terminology of Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) is obscure and thus, the types of services that are provided are open to a broad range of interpretation, particularly in terms of key constructs such as “substantially limits”, “otherwise qualified,” and “reasonable accommodations” (Eichhorn, 1997, p. 34). In addition, given an individual’s unique needs, it is hard to assess appropriate accommodations based on stereotypical features of a specific disability. Consequently, this variance with interpretation and varying student needs

create an insufficient concrete framework of accommodations for colleges to follow (Gerber & Reiff, 1994). As a result, the types of services vary greatly from institution to institution depending on institutional size and budget. Since institutional funding is the greatest factor in the services offered, the variables of institutional type and size as well as student demographics are important (Rund & Scharf, 2000).

Vogel (1993) noted that there is a continuum of disability services provided by institutions. At one end of the spectrum are higher education institutions that are minimally compliant, while at the other end are institutions going above and beyond what is legally required to accommodate students. As a result, there is a wide range in the quality and consistency of the services being provided (Schuck & Kroeger, 1993). Vague guidelines present continuous quandaries to institutions as they try to determine where their legal responsibility begins and ends. The only resolutions to these issues have occurred through legal case precedent and the shift to universal program standards.

Dillon (2007) argued that while colleges are responsive to the growing numbers of students with disabilities, there are large numbers of intelligent students with HFA or AS who are unable to navigate the college environment with the accommodations typically provided. Generally, these accommodations are average and do not meet the needs of students who have deficits in areas other than academic achievement. Weir (2004) explained that no matter the capacity of the individual attending postsecondary education, some key elements need to be addressed: interagency collaborations for supporting success, innovative use of funding resources, pre-planning (transition planning) focusing on the individual's life goals, and a willingness by all responsible parties to expect that the individual will learn and succeed.

Evolution of Universal Standards for Disability Support Services

Several attempts have been made to quantify the essential elements of effective disability services in higher education. The first attempt was in 1988 when the Council for the Advancement of Standards for Student Services (CAS) created guidelines for student services and developmental programs. The guidelines were based on the “premise that student support practitioners needed access to a comprehensive and valid set of criteria to judge support program quality and effectiveness” (CAS, 2008). Its initial 1988 publication included standards and guidelines specific to disability services (Schuck & Kroger, 1993). As a result of this initial call for standards in the field of disability services, in 1993 Schuck and Kroeger determined a list of 11 essential program elements that must be in place, regardless of the size or type of the institution, to achieve effectiveness before a program can achieve the CAS goals for disability services. The authors stated that 11 program elements supersede program goals and must be the first step. The elements included: (1) Outreach, (2) Verification and Certification of disability, (3) Assessment, (4) Information and Referral, (5) Case Management, (6) Accommodations, (7) Individual and Group Support, (8) Advocacy, (9) Training, (10) Consultation, and (11) Reporting and Evaluation (CAS, 2008). Schuck and Kroeger asserted that these elements must be coordinated by key personnel with disability support competency and clear authority. Additionally, support from senior-level administrators at the institution is critical to program delivery.

As other scholars began to ask more about the effectiveness in disability services in higher education, Shaw and Dukes (2001) outlined 27 essential program standards for

postsecondary disability services regardless of institutional size, location, type, or funding source. The program standards were created based on a large sample of post secondary disability practitioners across North America. These standards have been approved by the membership of the Association on Higher Education and Disability (AHEAD) and are categorized into nine themed areas. Shaw and Dukes list these areas as: (1) Consultation, Collaboration/Awareness, (2) Information dissemination, (3) Faculty/Staff awareness, (4) Academic Adjustments, (5) Instructional Interventions, (6) Counseling and Advocacy, (7) Policies and Procedures, (8) Program Development and Evaluation, and (9) Training and Professional Development.

In 2005, Shaw and Dukes revised these program standards for disability offices and determined there were 90 performance indicators that were essential for best practices in the support of students with disabilities. Their revision added a new dimension with the inclusion of performance indicators that provide a guideline for meeting each program standard. The revised list of 28 program standards reflects practitioner expertise in the field and was reduced from nine to eight themed areas of programs standards that include: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustments, (5) Counseling and Self-Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development. These new standards and performance indicators also addressed the evolving needs of the field such as the shift in focus to include self-determination and an increase in the usage of technology (Shaw & Dukes, 2005, 2006). The Shaw and Dukes (2006) standards are organized into eight

themed areas that focus on themes of effective practice in regard to providing services to students with disabilities in higher education institutions.

The first area, Consultation and Collaboration, is of increased importance as “students with disabilities in postsecondary institutions have more complex (e.g., multiple chemical sensitivity, Asperger Syndrome) and hidden disabilities” (Shaw & Dukes, 2006, p. 23). The standards under this area involve advocating for issues related to students with disabilities and providing disability representation on appropriate campus committees as an essential element of services for students with disabilities.

The second themed area, Information Dissemination, is focused on communication across the institution regarding disability access. The standards under this themed area focus on three elements to disseminate information: (a) institutional publications both electronic and printed, (b) access to communication devices for individuals with disabilities, and (c) providing information about available resources to students with disabilities. There is also a focus on electronic communication and assistive technology as the field has changed to include universal design, a new barrier free paradigm.

The third themed area, Faculty/Staff Awareness, is focused on providing faculty and staff with awareness about the needs of students and the services available. The standards under this area reflect a sense of ownership around providing faculty or staff with training on the students’ needs as well as to provide an awareness of services available to the student. In addition, the area has a focus on consultation with all constituents as it relates to classroom modifications and modifications in other areas on campus if necessary (e.g. residential halls).

The fourth themed area, Academic Adjustments, is focused on the determination and provision of appropriate academic adjustments in order to provide equal access for college students with disabilities. The standards addressed in this fourth area include a student plan for the provision of selected accommodations, aiding students to determine appropriate academic accommodations and consultation with faculty to ensure that the reasonable accommodations do not fundamentally alter the program of study.

The fifth themed area, Counseling and Self Determination, is centered on service delivery that encourages independence for the students with disabilities. Self determination is also an essential component of this area. Self determination is defined as connection between skills and beliefs that enable a person to be engaged in autonomous, self-directed, and goal oriented behavior (Shaw & Dukes, 2006, p. 24). This philosophy assumes that when one acts under these assumptions, there is a better opportunity for an individual to take control of his/her life and assume a role of a successful adult in the society.

The sixth themed area, Policies and Procedures, is directed at written policies and guidelines regarding reasonable accommodations. The standards covered in this area address disability documentation, course substitution, student and institutional rights and responsibilities as well as a process for appeals.

The seventh themed area, Program Administration and Evaluation, is focused on providing services that are congruent with the institution's mission and monitoring the effectiveness of the disability services and supports. The standards outlined under this area focus on several different issues. In addition to the focus of alignment of services with the institution's mission, there is a focus on budget management related issue

including a full time professional staff as well as collaboration on the creation of procedures for purchasing adaptive equipment. The additional standards geared toward effectiveness all relate to data collection and evaluation.

The eighth themed area, Training and Professional Development, is focused on the training and professional development of staff facilitating the services for students with disabilities. The standards in this area concentrate on opportunities for continued professional development for staff and the need for staff to be well trained and qualified to work with students with disabilities.

These standards provide clear benchmarks for institutional personnel to assess effectiveness of the services being offered to college students with disabilities (Shaw & Dukes, 2006). Moreover the standards represent “clear benchmarks for postsecondary disability personnel and their institutions to assess the efficacy of their programs, identify policies and procedures to develop or revise, and specify the resources and training to allow personnel to provide equal access for student with disabilities in higher education” (p. 17).

Review of Autism Literature

The following section will provide an overview on autism including the history of the diagnosis as well as the prevalence of this disorder in the U.S. and at American higher education institutions. The section will conclude with a glimpse of several longitudinal studies that have chronicled the lives and outcomes of individuals with higher functioning autism or Asperger Syndrome.

History of Diagnoses: Autism and Asperger Syndrome

The phenomena of autism and Asperger Syndrome were researched and published

during a similar time, around World War II. In 1943, Leo Kanner described a study of 11 children whose histories he chronicled and who provided case studies that seemed to “form a unique syndrome not [previously] reported, which seems rare enough, yet is probably more frequent” (Kanner, 1943, p. 242). In the United States, Kanner researched a condition he termed *autism*, while in Germany, Hans Asperger (1944) researched a similar phenomenon (Baker & Welkowitz, 2005).

Both Kanner and Asperger observed individuals with some deficiencies in “reciprocal social interaction [and] communication” as well as an excess of “ritualistic and stereotyped routines” (Howlin, 1997 p. 142). Asperger’s work focused more on the high-functioning individuals, but he observed individuals with intellectual limitations as well (Asperger, 1944; Howlin, 1992; Kanner, 1943). World War II and the political culture of the times had a significant impact on the exposure of their work but, more specifically, on Asperger’s work. Since Asperger’s work was published in Germany during the war, it received little worldwide attention. By contrast, Kanner’s location in the United States afforded him the luxury of publishing in widely viewed journals. Howlin (1992) noted that it was not until 1981 when Hans Asperger’s original writings were brought to center stage for clinicians that Asperger Syndrome became a widely recognized diagnosis. However, Asperger Disorder was not included in the Diagnostic and Statistical Manual of Mental Disorders as a diagnosis until 1994 (American Psychiatric Association, 1994).

Individuals diagnosed with either high functioning autism or Asperger Syndrome typically have average or above average intellectual capacity but suffer from limitations in their social skills and require a high level of structure in their environment (Gutstein &

Whitney, 2002). Attwood (1998) claimed that individuals with autism have impairment in social interaction that may display in a failure to make age-appropriate friendships, inability to understand social cues as well as nonverbal cues, and a lack of social empathy or emotional reciprocity. In addition, individuals with this diagnosis typically have impaired communication skills often demonstrated by the lack of ability to conduct a reciprocal conversation.

Longitudinal Studies on Adults with Autism

Several empirically based studies have been conducted to chronicle the lives and outcomes of individuals with higher functioning autism or Asperger syndrome (Goode, Howlin & Rutter, 1999; Howlin, Goode, Hutton, & Rutter, 2004; Howlin, Mawhood, & Rutter, 2000; Kanner, 1973; Larsen & Mouridsen, 1997; Venter, Lord & Schopler, 1992; Mawhood, Howlin, & Rutter, 2000; Rumsey, Rapoport & Sceery, 1985; Szatmari, Bartolucci, Bremner, Bond, & Rich, 1989). Although the primary focus of these studies was not upon the educational attainment of these individuals, all of the studies to be discussed in this literature review did discuss it as an outcome. These studies offered mixed trajectories of adults with HFA or AS; some offered a more positive outlook than others on the educational success and outcomes for the individuals included in these studies.

The first study by Leo Kanner (1973) was a follow-up of the 11 patients that he initially diagnosed in 1943 in the U.S. He concluded that 28 years later, the patients had varying outcomes due to additional mental illness and lack of support. Kanner reported that of these 11 patients, only one was able to attend and attain a college degree (p. 164).

In 1985, a study was done by US scholars, Rumsey, Rapoport, and Sceery, to examine the psychiatric and behavioral outcomes of 14 men who ranged in age from 18 through 39 years of age and who were diagnosed with autism. This mixed method study noted that of the 14 participants, two reported attending a junior college and of those, one individual graduated with an associate's degree. Two additional participants were involved in a postsecondary educational experience in the form of a trade school or specialized college program.

Szatmari et al. (1989) completed a longitudinal study in Canada including individuals ranging from 11 to 27 years of age. The study included 26 young adults with an average age of 26 and an IQ range of 68 to 110. This mixed methods study noted that of the 26 participants, eight attended a four-year university or a community college. Subsequently, of those who attended college, 88% obtained a college degree. Degree attainment of these individuals included mostly bachelor's degrees but one individual completed an MBA and one an associate's degree.

An additional study by Venter, Lord, and Schopler (1992) consisted of a sample of 58 high-functioning children including 35 males and 23 females from the United States and the United Kingdom. Of the sample, 22 were over the age of 18 years of age and were followed for an average of eight years after the initial evaluation. Of the sample, 81 percent of the participants had IQs over 70 but academically the sample achieved less than those in previous studies. Only one of the participants completed a college degree and another participant attended a university but did not persist to graduation.

In 1997 Larsen and Mouridsen completed a study in Sweden on 18 children fulfilling the criteria of childhood autism or Asperger Syndrome. The children were followed for 30 years and the average age of the participants at the time of the study was 38. Of the participants of the study, four attended occupational training, not distinguished in the study from university or trade school. However, the study noted that none of the individuals obtained a degree. The four individuals included two from the identified Asperger group and two from the autism group.

In a comparative follow-up study based in London (Mawhood et al., 2000; Howlin et al., 2000), 19 young men with autism and developmental language disorder were studied. At the time of the follow-up study it was noted that six of the individuals had attended college. It was not stated if the individuals had obtained a degree but two did attend a university and the remaining four attended some sort of college training program. Additionally, Goode et al. (1999) examined the outcome of 75 individuals who were 21 years or older who had been initially assessed prior to the age of 16. Three of these individuals attended college but only two had obtained a college degree.

In 2004, Howlin et al. determined the importance of only including individuals with a childhood IQ of over 50 in the London-based sample. The sample was comprised of 68 individuals including 61 males and seven females. The researchers noted that although 78% left school without any formal education, three individuals obtained degrees in science and computing and two of these had participated in post-graduate education as well.

These studies offer insight into what has been researched empirically about the adult lives of individuals with autism or Asperger syndrome. In addition, these studies

offer a view of the limited research that has been studied empirically on the educational attainment and specific educational outcomes of this population in higher education.

Prevalence of HFA or AS in U.S. and College Enrollment

The directory for Aspergers (2006) estimates that one in every 500 people in the U.S. has this dysfunction, which can include everything from language disabilities to sensory problems and physical awkwardness. Data released in February 2006 by the Center for Disease Control indicated that on average, one in 150 children was diagnosed with autism from the sample gathered from 2000 thru 2002. It has been estimated that as many as 500,000 young people (birth to 21 years) in the U.S. have HFA or AS (Centers for Disease Control, 2007). In 2002, a population-based survey was completed to determine the prevalence of autism among children aged 8 to 14 years in 14 states. The study surveyed 10 percent of all U.S. 8-year-old children born in 1992 in the 14 states and confirmed that 2,685 were revealed to have a diagnosis of HFA or AS. The data “confirmed that ASD prevalence is a continuing urgent public health concern” (Centers for Disease Control, 2007).

Increasing numbers of individuals with disabilities are enrolling in U. S. colleges. In 2003-2004, 11% of undergraduates reported having a disability as compared to 7.7% in 1989-1990 (Wagner, Newman, Cometo, Garza, & Levine, 2005). Within this category is a group of students with autism or Asperger Syndrome. The number of college students with autism or Asperger Syndrome is increasing, and the backgrounds of these individuals vary vastly compared to students of previous years (Taylor, 2005). The two major catalysts for this increase were federal mandates-the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. These were the first major mandates

that led to the increase of individuals with disabilities seeking postsecondary educational services (Thomas, 2000).

In 2001, the American Council on Education (ACE) attempted to quantify HFA or AS numbers, but its report only yielded a biennial statistical profile with only aggregate data on “students who reported disabilities and who enrolled in Fall 2000 as full-time freshmen at public and independent four-year colleges and universities” (Henderson, 2001, p. 1). Consequently, ACE’s profile lacked sufficient data on institutional types and was unable to identify those specific individuals with HFA or AS. For example, while over 10,000 individuals identified as “other” disability were captured the profile provided no data about what percentage of those “other” identified individuals included individuals with HFA or AS. As recently as 2003, a study done by Luckett and Powell indicated that there were “no statistics yet available regarding the numbers of student with HFA or AS in higher education” (p. 162). In addition, Farrell (2004) reported that “there are no definitive statistics tracking how many students at the college level have Asperger Syndrome and similar Autistic Spectrum Disorders” (p. A35).

Although definitive statistics are unavailable, several attempts have yielded some insight into the demographics of this population in U. S. higher education. The National Longitudinal Transition Study-2 (NLTS-2) is a 10-year study funded through the US Office of Special Education, a division of the U.S. Department of Education, to “investigate the experience and achievements of youth with disabilities in multiple areas during their secondary education experience and transition to adulthood” (Wagner et al., 2005, p. ES-1). Wagner et al. looked at the post high school experiences of youth with disabilities and utilized the National Longitudinal Transition Study-2 (NLTS-2) to report

trends and current statistics of college students with disabilities. The National Longitudinal study included “14, 637 individuals with autism” (p. 162). Of those, “15% of individuals with autism are engaged solely in postsecondary education while an additional 13% are engaged in post secondary education and employment concurrently” (p. 41). More importantly, Wagner et al. provided critical data to support knowledge of the relationship between Autism Spectrum Disorders (HFA or AS) and college attendance. First, the report indicated that individuals with HFA or AS are *more likely* to attend postsecondary school (46%) than those in other disability categories (Wagner et al., 2005) Ironically, such individuals are not typically “among those most likely to be expected to attend” (p. 51). Nonetheless, 46% percent of the individuals with autism in the study reported enrolling in some type of postsecondary education or training. Additionally, the NLTS study showed that 34% of individuals with autism started their post secondary education experience by enrolling in a community college after graduating from high school.

Dr. Jane Thierfeld Brown (2007), Director of Student Services at the University of Connecticut School of Law, recently completed a survey to ascertain the number of college students with HFA or AS. She found that among the 90 higher education institutions that participated, there were a total of 508 students with HFA or AS and Asperger Syndrome (an average of 5.6 students per school). Of the 90 schools that responded, 71 were four-year institutions (with 396 HFA or AS students—an average of 5.8 students), while the remaining schools were two-year institutions with an average of 5.9 HFA or AS students attending each institution. This study provides the most recent

look at the increase in the numbers of individuals with HFA or AS attending universities across the nation.

Needs of People with HFA or AS Attending College

The needs of students with HFA or AS who attend college fall into three main categories: (1) transition to college needs, (2) academic support needs, and (3) social support needs. The following section will review what is known about the needs of college student with HFA or AS.

Transition to College

Students with HFA or AS experience intense periods of stress at the beginning of their transition to college (Welkowitz & Baker, 2005). The transition to college for individuals with HFA or AS can potentially include “difficulty with academic content, organization, time management and study skills” (Adreon & Durocher, 2007, p. 274). Researchers observe that academic problems can be magnified by several factors, including the lack of proper student supports identified at the college level, the nature of the hidden disability, students’ reluctance to disclose information about their disability, and the increase in college student-teacher ratio (Adreon & Durocher, 2007; Glennon, 2001; Perner, 2003). Glennon (2001) stressed that for these reasons, it is important for individuals with HFA or AS to establish contact with the institution’s support services before the beginning of their first semester. Such a proactive approach may provide individuals with HFA or AS with a substantial amount of support and strategies before embarking on the college experience. Williams and Palmer (2004) identified institutional characteristics that are particularly important for students on the autism spectrum: a

clearly structured academic program, a good disabilities services program, willingness to provide modifications and support for learning needs, and a counseling center with support services.

An important factor for many individuals with HFA or AS in making the transition to college is the institutional setting. As a result, many researchers recommend that individuals with HFA or AS first attend a community college—preferably during their last year of high school or first two years of college (Adreon & Durocher, 2007). Researchers have pointed to the individualized support that community colleges offer, as well as the potentially smaller campuses, that enable individuals with HFA or AS to navigate the campus independently (Perner, 2003). Clearly, many community colleges can provide a viable option for reducing the stress that many students with HFA or AS experience in navigating large campuses (Harper et al., 2004).

As with campus environmental and academic issues, living arrangements are equally critical to a successful transition to college. Whether individuals with HFA or AS decide to live at home or on a college campus, they must make strategic plans about their living arrangement and space. For example, many individuals with HFA or AS find it difficult to navigate the residence life of a college campus. In fact, significant sensory issues and the lack of daily living skills may affect an individual's choice to share a room (Adreon & Durocher, 2007). Requesting a single room may help avoid the sensory issue and social demands of sharing a room (Adreon & Durocher, 2007; Perner, 2003; Prince-Hughes, 2002). Furthermore, since lack of organization is a key symptom of individuals with HFA or AS, a strategy for the organization of a residential room may be essential as well. Coulter (2003) illustrated the importance of providing organizational strategies for

the room, including labeled organizational bins, stacking shelves, and closet organizers to make the most of a typically small residential room.

Glennon (2001) offered several suggestions for how individuals with HFA or AS may decrease the stress associated with the transition process. These suggestions include: touring the campus, going to the bookstore during off peak hours to investigate what is available, meeting the residential hall staff if questions arise, reviewing the expectations of orientation, developing a safe place, and meeting professors to discuss how specific classes operate. All these suggestions will familiarize the student with HFA or AS with the environment prior to beginning the first semester.

Academic Needs

Although most individuals with HFA or AS attending college have average to above average intelligence, there are still some academic challenges that may arise once they have made the transition to college (Adreon & Durocher, 2007; Dillion, 2007; Glennon, 2001; Perner, 2003; Myles & Adreon, 2001). However, even earnest attempts to accommodate students with HFA or AS may not be enough. As stated earlier, inadequate support arises primarily because of such challenges as the lack of information about the needs of individuals with HFA or AS-specific disability. Adreon and Durocher (2007) drew attention to the problems associated with HFA or AS students utilizing supports designed for students with other types of learning disabilities. These more general provisions include preferential seating, note taking, tape-recorded lectures, and extra time on exams if necessary. Such supports may not meet the needs of individuals with HFA or AS. Morgan (1996) contends:

[W]here access to further education has been achieved, adults with autism have been provided with a general service for people with additional learning needs,

rather than autism-specific provisions, and the educational infrastructure and support necessary for successful placement of those with more complex needs has often been lacking. (p. 145)

This section will provide an overview of the academic challenges encountered by individuals with this diagnosis.

Providing alternative methods to enable students with HFA or AS to accomplish conventional tasks such as group projects and interaction, professors must also accommodate individuals with HFA or AS by helping them to be more academically proactive. That is, professors should provide as much material as possible prior to the first day of class. Further, faculty should honor student requests for required texts before the beginning of the semester. This way, individuals with HFA or AS will have more time to spend on understanding the course content. Other accommodations may include providing alternative course material formats. For instance, several researchers note that students with HFA or AS may prefer computer-based materials and media as alternate forms of instruction (Luckett & Powell, 2003; Taylor, 2005).

Adreon and Durocher (2007) outlined additional HFA or AS-specific organizational strategies that may be necessary to accommodate students with HFA or AS who have “significant deficits in many aspects of executive functioning” (p. 276). For example, assistance in developing a plan for study skills, long-term projects and homework assignment due dates may be necessary (Myles, 2005; Myles& Adreon, 2001) as people with HFA or AS may have difficulty planning their time for the demands of coursework. While coursework may be an area where people with HFA or AS shine, it also involves organization of several different elements to produce a final product such as a written paper (Luckett & Powell, 2005). Consequently, students with HFA or AS

benefit significantly from tutoring, as well as organizational and personal support services (Adreon & Durocher, 2007; Lockett & Powell, 2005; Myles, 2005).

In addition, Taylor (2005) stressed the importance of faculty recognizing the difficulties that individuals with HFA or AS may experience as they attempt to interact and communicate with other mainstream peers in the class. Issues related to navigating the group dynamic may present unique challenges as professors assign group projects, labs, or discussion sessions. Taylor recommended that professors carefully match individuals with HFA or AS with class members who are mature and responsible. Ideally, all group members should have an understanding of the disability. As one alternative to conventional group communication, professors might try assigning virtual online group work using such programs as Blackboard or WebCT.

Social Supports

Adjusting to the social climate of a college setting may be the most daunting task for individuals with HFA or AS (Welkowitz & Baker, 2005). Specifically, students with HFA or AS can become socially isolated as they have difficulties making and maintaining relationships (Adreon & Durocher, 2007). Moreover, because college life has a distinct culture of its own, with many spoken and unspoken rules, (Glennon, 2001); students with HFA or AS can be at a distinct social disadvantage.

As individuals with Autism Spectrum Disorders become college students, they embark on a new path that can cause a high level of stress. In college, the non-academic challenges that could limit success at the postsecondary level become more evident. Glennon (2001) determined that individuals with Asperger Syndrome have difficulties with the college environment's lack of structure, such as changing classes and continuous

non-verbal cues that are commonplace within the culture. She further explained that these challenges are complicated by the fact that individuals *with high functioning autism* or Asperger Syndrome do not typically exhibit signs of stress or difficulty coping in the college setting. Often the signs of warning are not noticed until an individual with HFA or AS is in jeopardy of failing a class or dropping out of college for the semester.

Howlin (1997) contended that lack of social competence is the leading factor in the failure of most individuals with autism to develop and maintain quality relationships and social interactions in their lives. Social competence is defined as:

skills and strategies that allow individuals to have meaningful friendships; forge close, emotion-based relationships; productively collaborate with groups, teams, and work partners; manage public social settings; and participate in family functioning (Gutstein & Whitney, 2002, p. 162).

Hence, social competence provides a viable frame for looking at the difficulties individuals have with HFA or AS. Unlike “social skills,” which refer to skills or abilities that individuals either do or do not possess, *social competence* suggests the range of competence that an individual may acquire as it relates to these abilities.

One important aspect of college life is the nonverbal exchange that takes place between peers. Highlighting the difficulties associated with social competence, Adreon and Durocher (2007) noted that individuals with HFA or AS have difficulty making and keeping friends, which is an important part of college culture. As such, individuals with HFA or AS are often limited in their ability to understand the feelings of others as well as to relate to others’ point of view. Moreover, people with HFA or AS tend to have difficulty in carrying on a reciprocal conversation and may go on at length about a focused subject of interest to them. Furthermore, individuals with HFA or AS have difficulty with interpreting humor, figures of speech, and sarcasm. These are all areas of

difficulty where social competence may be lacking. Clearly then, detecting and responding to social cues requires skills unavailable to most students with HFA or AS. Thus, organizing and coordinating personal affairs and activities presents a serious challenge for most people with HFA or AS.

As the diversity of social challenges affects individuals with HFA or AS, there are also different responses to the social demands of college life. Such overwhelming stress as that brought on by attempting to navigate the social pressures of college, make the incidence of depression potentially higher in individuals with HFA or AS (Lockett & Powell, 2005). However, not all students with HFA or AS respond in the same way. While one individual may have no interest in social situations and find that completely avoiding them is a viable solution, another individual can have difficulty facing isolation and may make repeated unsuccessful attempts to make friends.

One solution to social limitations is to use mentors as a positive support to face the social challenges that occur at the college level (Glennon, 2001; Moreno, 2005). Mentors can be provided by the support services department or can be set up with parental assistance prior to the first semester. Further, peer mentors can provide support in a variety of situations, including the initiation and acclimation of students with HFA or AS into the college climate by introducing required or expected social phrases that are considered essential to the college culture (Glennon, 2001). Moxon (2007) enumerated some of the supports in place for individuals with HFA or AS in the United Kingdom. She suggested that students with HFA or AS may benefit from having access to a “key worker.” This is a person (usually a postgraduate student or member of staff) to whom the student can go for advice and support. Peer mentors can also assist individuals with

HFA or AS negotiate other types of difficulties. Other difficulties for individuals with HFA or AS include being flexible with respect to following rules or tolerating rule violations. As a result, individuals with HFA or AS may “become anxious or agitated when other students break an established rule (e.g., the honor policy for test taking, no alcohol rules in the dorm) and may attempt to enforce the rules on their own” (Adreon & Durocher, 2007, p. 273). In such situations, the student with HFA or AS may benefit from having a peer mentor who can help negotiate these types of situations.

Summary

This chapter provides a comprehensive look at the types of needs individuals with HFA or AS may have as they embark on a college campuses. The needs are multi-faceted as the literature reviewed included the issues of transitioning to college as well as academic support needs and social support challenges. While the literature reviewed in this chapter offers an understanding of what supports are ideal for college students with HFA or AS to be successful in higher education, it also presents the question of how these needs are being addressed in post secondary institutions across the country. This study provides information on two types of support programs available to college students with HFA or AS. With a focus on the appropriate support for college students with HFA or AS, the study illustrates each program by examining its structure and components. Doing so is an instrumental next step in order to understand how college students with HFA or AS are being supported in college and what resources are helping them to be successful.

Chapter 3

RESEARCH METHODS

Introduction

As accountability becomes a greater issue in higher education, administrators and program providers need to be able to document program success. In program planning and evaluation, success that is documented and clearly articulated through a model of service delivery is imperative. Providers of services for special groups are being required more frequently to chronicle specific interventions as well as outcomes that demonstrate program effectiveness (Yampolskaya et al., 2004). With this accountability demand, providers need to determine what services and policies lead to positive impacts in the lives of the students and families they serve (Yampolskaya et al., 2004). The programs in higher education that provide services to individuals with Autism Spectrum Disorders (HFA or AS) need to respond to these issues. To date, there is little empirical information about supports for college students with HFA or AS and even less data on the institutional programs that claim to support them (Farrell, 2004; Smith, 2007).

The purpose of the study was to investigate support programs in higher education for college students with HFA or AS. After determining what programs were available to support college students with HFA or AS, this study (1) described the characteristics of selected programs by completing a program logic model for each of the programs being examined, (2) determined how each program related to the disability program standards according to Shaw and Dukes' (2005; 2006) AHEAD postsecondary disability program standards and (3) determined to what extent the characteristics of institutional type and funding source made a difference in how the programs were structured and their outcomes.

This chapter describes the study's research design including the conceptual framework of program theory, data sources, population, collection methods and methods of data analyses used in this study.

Research Design

This was a qualitative study using a multiple-case study approach to investigate support programs in higher education for college students with HFA or AS. The case study method provided the opportunity to get acquainted with the people, schedules and components of the program which is noted as desirable in case study analysis (Stake, 1995). Case study research is appropriate when you want to investigate a particular phenomenon and the context in which the phenomenon is occurring (Yin, 1993). Using a multiple-case study method was most appropriate because it allows for an in-depth individual analysis as well cross-case comparisons for similarities and differences which strengthen the findings about the issues under study (Yin, 2003; Stake, 2006).

While this study was a multiple-case study, each case was studied individually without considering other cases. To that end, I used the same data collection and analysis procedures for each of the programs studied. These descriptive case studies provided a complete description of the phenomenon in its context with the production of a logic model. While I believe there may be some commonalities between these cases, I was interested in each program's uniqueness and how they serve college students with HFA or AS.

I believe that I held a pragmatist view when I conducted this study. Creswell states that researchers with this worldview are concerned with the applications or the "what works" (p. 22) and solutions to problems (Patton, 1990). I believe there must be a

focus on the practical implications of research and this study provided empirical evidence about the types of programs available to support college students with HFA or AS. This was done by describing what the programs look like and how they related to Shaw and Dukes disability program standards. The following subsections will provide more insight into case study design, population, and potential sites for study.

Case Study Design: Data Sources for Logic Model

A case study utilizes multiple techniques in order to gather data from a research site. These strategies included interviewing, observing, and analyzing documents (Merriam, 1998). The three strategies allowed the researcher to gather greater amounts of detail from each site.

Interviewing is an essential tool that allows the researcher to gather information from formal and informal discussions with individuals. In addition, interviewing allows the researcher to gather multiple realities of the same phenomenon. Qualitative researchers note that interviews should consist of a short list of issue-oriented questions that allow the participants to provide insight on their unique experiences (Stake, 1995). Appendix A is a list of the themed interview questions that were asked of the program interviewees. The semi-structured interviews lasted between 45 minutes to an hour and were digitally recorded. The digitally recorded interview was transcribed and interviewees were notified that if they wished or if needed, to review a copy of the transcription for member checking purposes.

Another important data source is direct observation. Direct observation occurs when a field visit is conducted during the case study. Direct observation allows the researcher to substantiate what has been communicated about the program components

by observing the different activities and functions of a program. In addition, observations allow the researcher to gain a better understanding of the case and the context as it covers events in real time and in the context of the event (Stake, 1995; Yin, 1994). Observation also allows the researcher to richly describe the setting, giving the reader a “sense of being there” (Stake, 1995, p. 63). Observations were important as I was able to take field notes around the program activities and observe how the program’s addressed its intended participants. While visiting the program I was able to spend time each of the days observing activities, interacting with intended participants and sitting in on other meetings to that I observed during my visit. At the end of my week visit, I spent a full day at each program verifying and clarifying all observation notes from my visit with the program director and other staff informally. I was also able to obtain additional clarifications via email from staff members once I returned from the site. In addition, I observed activities that were presented as unique components of the program and were emphasized in the interviews by program administrators and staff. See Appendix D for an outline of the time allotment I used for observations.

Another important data source are documents, which can serve as “substitutes for records of activity that the researcher could not observe directly” such as department meetings or yearly progress retreats (Stake, 1995, p. 68). I collected and analyzed documents including ones that discussed the program’s mission statement as well as program policies, procedures, organizational chart, and other pertinent documents on the first day of my visit (see Appendix D).

A data gathering plan is an important step in case study research (Stake, 1995). Appendix D describes my timeline for this study and outlines how I gathered the data. I

used this timeline to loosely guide my timeline of each site but was flexible given the time constraints and needs of each program. Creswell (2007) remarks on the fluid nature of qualitative research, noting that “the initial plan for research cannot be tightly prescribed [as] all phases of the process may change or shift after the researchers enter the field and begin to collect data” (p. 39).

Program Theory and Logic Modeling

In program evaluation and assessment, it is important to link theory to practice. A logic model design is one way to illustrate the underlying program theory. Creating a logic model requires a detailed step-wise sequence of events and answers questions regarding the “appropriate clientele, the relevant needs and meaningful interventions that if operationalized properly ... lead to designated intermediate results and long-term outcomes” (Stinchcomb, 2001, p. 49). The logic model framework provided a template of what information was needed to provide a clear picture of the connection between components of the program and how the program works to meet the needs of the target population (Yampolskaya et al., 2004). The program theory provides the set of expectations that describe why a program operates in the way it does as well as the program’s rationale for why these expectations will yield the desired results (Rossi et al., 1999).

A logic model can include many different components. The logic model used in this study (see Figure 1) consists of six components as adapted from the University of Wisconsin Extension model : (1) target population, (2) inputs, (3) outputs which include activities and participation (4) the intended program outcomes which include the short, medium and long-term outcomes, 5) external factors, and 6) program assumptions.

program includes the intended program outcomes. These include any expected changes or benefits the program believes will change the participants and the broader community as a result of participation in the program (Powell-Taylor & Henert, 2008). The fifth component of the logic model includes the external factors. These include any factors external to program that are in the program's environment that can influence the program's success. The sixth and last component of the logic model is the program assumptions. These assumptions are the basis of the program theory as they encompass the beliefs held by the program staff members about the how the program will work.

Participant Selection

The selection of the participants of this study depends upon on finding programs that provide specific support for degree-seeking college students with HFA or AS in higher education. Creswell (2002) states that intentionally selecting participants or a specific site to “learn or understand the central phenomenon” is purposeful sampling (p. 204). The programs listed in Table 1 are programs that have been identified using this purposeful sampling technique, by ensuring that the programs meet the criteria. First, programs had to include in their target population college students with HFA or AS. And second, programs had to support students who were enrolled in college to seek a degree. The following subsection will outline how it was determined that these programs meet the criteria.

Potential Sites for Study

Case studies are bounded systems and there are two criteria of this study (Stake, 1995). First, the program has to specify that it had a focus that included individuals with HFA or AS. Second, the program must support students with HFA or AS who were

enrolled in college to seek a degree. Programs that supported this population only in non-credit courses at the college level were excluded from the selection. To determine programs that met these criteria, I completed two target database searches offered by Perner (2002) and the Postsecondary Education Research Center project (ThinkCollege, n.d). I also conducted a Google search that yielded the remaining programs that met the study's criteria.

First, the list of schools offered on Perner's (2002) guide of colleges was explored. Perner (2003) conducted a Web survey of colleges with experience serving students on the Autism Spectrum. His list included 25 schools, but many of them did not offer individualized support for people with HFA or AS. Only one program from Perner's list met the criteria of the study (College Program for Students with Asperger syndrome at Marshall University).

The next step was to investigate the Postsecondary Education Research Center (PERC) project, coordinated by TransCen, Inc. The project established a Web site that provides information about resources on college options for students with intellectual disabilities. The Web site lists 121 postsecondary education options in at least 28 different states (ThinkCollege, n.d.). Among the programs listed, the distinction between programs that offer support to lower functioning individuals in a non-credit program and programs that offer support to individuals who want to obtain a college degree was unclear. I investigated each program website and made several calls to determine the type of students the program supported. After investigating each program listed to determine its mission, I found three additional programs to add to list of potential sites to study (Kelly Autism Program at Western Kentucky University, Pathways at UCLA Extension,

and Vocational Independence Program). Next, I conducted a Google search using the search terms “autism,” “higher education,” and “college”. This search yielded an additional three potential programs sites for the study (Achieving in Higher Education with Autism/Developmental Disorders (AHHEAD), College Living Experience, and the Gersh College Experience).

Table 1 provides profiles of the programs identified as a result of the searches. The university-based program profiles also include the Carnegie Foundation’s (2005) classifications of institutions. The three programs (College Living Experience, Gersh College Experience and AHEADD) that were not established by a postsecondary institution and are identified as in the model category as such while programs supported in a traditional university setting are identified as an institution supported model in the same category.

*Table 1
Programs that support college students with HFA or AS who want to obtain a degree*

Program	Model	School	Undergraduate Profile	Enrollment	Location	Size & Setting
Kelly Autism Program	Institution supported	Western Kentucky University ¹	Very High Undergraduate (VHU) Full-time/selective/high transfer in	18,485	Bowling Green, KY	Public, large four-year, primarily residential
Pathways at UCLA Extension	Institution supported	University of CA: Los Angeles ²	Majority undergraduate (MU) Full-time/more selective/high transfer-in	35,966	Los Angeles, CA	Public, large four-year, primarily residential
College Program for Students with Asperger Syndrome	Institution supported	Marshall University ³ (2008b)	High Undergraduate (HU) full-time, selective, high transfer in	13,920	Huntington, WV	Public large four-year, primarily nonresidential

Program	Model	School	Undergraduate Profile	Enrollment	Location	Size & Setting
Vocational Independence Program	Institution supported	New York Institute of Technology ⁴ (2008c)	Very high undergraduate (VHU) full-time, inclusive	668	Central Islip, NY	Private, not-for-profit, very small four-year, highly residential
College Living Experience	Private for-profit	College Living Experience ⁵ (CLE, 2007)	N/A	Unknown	Chicago, IL Austin, TX Denver, CO Ft. Lauderdale, FL Washington, DC Monterey, CA	Private, for profit Residential serving multi-state and campus support program
Achieving in Higher Education with Autism/ Developmental Disorders (AHEADD)	Private for-profit	Albany Area: College of St. Rose Rensselaer Polytechnic Institute Siena College University at Albany Union College Dallas Areas: Southern Methodist University Richland College University of Texas at Dallas Pittsburg Area: Carnegie Mellon University Chatham College Duquesne University The University of Pittsburgh ⁶ Washington Area: George Mason University Marymount University Northern Virginia Community College	N/A	Unknown	Pittsburg, PA Washington, DC Albany, NY Dallas, TX	Private, for profit program serving students in public, large, four-year, primarily residential
Gersh College Experience	Private for-profit	Daemen College ⁷	High undergraduate, full-time, four year inclusive	2,186	Albany, NY	Private for-profit program serving small, four -year, private, not for profit, primarily residential

¹The Carnegie Foundation for the Advancement of Teaching (2008f)

²The Carnegie Foundation for the Advancement of Teaching (2008d)

³The Carnegie Foundation for the Advancement of Teaching (2008b)

⁴The Carnegie Foundation for the Advancement of Teaching (2008c)

⁵College Living Experience (2007)

⁶The Carnegie Foundation for the Advancement of Teaching (2008e)

⁷The Carnegie Foundation for the Advancement of Teaching (2008a)

One sampling strategy that would give more insight into the different types of programs being created would be maximal variation sampling. Creswell (2002) suggests that when a researcher wants to present multiple perspectives, it is possible to do so by identifying a characteristic and then determining sites that differ on this dimension. In addition, data gathered from the two sites using maximal variation sampling “avoids one-sidedness of representation of the topic” (Patton, 2002, p. 109). Based on the willingness of the programs to participate and researcher feasibility due to financial resources, this study included one program that represents an institution-created model and one program that represents the private for-profit model. The for-profit model program I selected was the College Living Experience (CLE) and the institution supported model program I selected was the College program for Students with Asperger Syndrome at Marshall University (CPSAS).

Recruitment of Sites

Campus Institutional Research Board (IRB) was gained prior to contacting any sites about recruitment for this study. Once IRB on this study was approved, senior administrators for each institution-model and each for-profit model, were contacted via email to explain the purpose of the study. Each site was ranked according to my access, resources and proximity to the location. Once the study was explained and the site agreed to participate, the site provided the researcher with a site permission letter (see Appendix B). Once site consent was granted, communication with each program director yielded a list of potential personnel to interview. Once the names were received, an email regarding participation and an Informed Consent Form was emailed to each interviewee (Appendix C). Interviewees were asked their willingness to participate as I arrived at each site and

informed consents were signed. One site yielded five interviewees while the other yielded six. Interviewees allowed the interview to be digitally recorded and those interviews were later transcribed.

Trustworthiness

Triangulation is a method to strengthen a study's findings by combining methods (Patton, 2004). Denzin (1978) identified the use of different types of triangulation: data triangulation, investigator triangulation, theory triangulation, and methodological triangulation. Patton recommends an audit trail as a way to test the rigor of a researcher's field work as well as to confirm the data collection that a researcher has made is minimized with bias (p. 93).

In this study I sought to achieve triangulation in two ways. First, each case was studied using a variety of data sources including interviewing, observation and document analysis (Merriam, 1998). The multiple data provided multiple sources to confirm what was articulated by staff members about the program to what was observed in interactions with the targeted population to what was espoused in program documentation.

Trustworthiness of the data was also be achieved by confirming with program personnel that the descriptions in the logic model accurately captured all facets of the program and how it operates (Patton, 2002). Once the logic model was completed, each program director was contacted and provided with an electronic copy of the logic model to determine if there were any observed inconsistencies.

Ethical Considerations

As a researcher it is important to consider the ethical issues of gaining information from participants through interviews, documents and observation. Hatch

(2002) notes that researchers need to be sensitive to vulnerable populations, potential imbalance in power relationships, as well as potential participant risk. Thus, I sought consent from the University of Missouri's campus Institutional Review Board (IRB) prior to gathering any data or visiting any sites.

In order for the rights of participants to be protected, I gained site permission from each site and provided a detailed description of the study including the purpose, the potential risks and benefits and gained a site permission letter from each site (see Appendix B). In addition, I provided each interviewee with an informed consent form to explain the study, including the time commitment for their participation (see Appendix C) and asked them give their written permission by signing it.

Second, researchers should be aware of the bias and positions they bring to the research. While the complete eradication of bias is almost impossible it will be important for me to be aware of my preconceptions about individuals with HFA or AS since I am an individual who has worked with this population for the past eight years. It will be important for me to not make any assumptions about the programs and be as objective as possible, being aware that my biases have the potential to be damaging to the study.

Third, when completing qualitative work, there is an obligation to minimize any misrepresentation or misunderstanding of the data (Stake, 1995). Researchers should seek to accurately depict the account given by participants and provide an accurate reflection of what was said or observed (Stake, 1995; Creswell, 2007). In order to decrease any misrepresentations in the study, it will be imperative to use multiple strategies such as triangulation and confirmation (e.g., member checks) to eliminate any potential risk. I

will do this by using multiple sources of evidence (e.g. interviews, documents, and observation) and having a draft case study report reviewed by key informants.

Finally, researchers should always be aware of the importance of participant confidentiality. To increase confidentiality, I will not discuss with others responses given in interview sessions. In addition, to eliminate any recognition of interviewees I will use pseudonyms for all interviews and change the gender of the pseudonyms to increase confidentiality.

Analysis of Data

I used the information I gleaned from the documents, interviews and observations to complete a content analysis using a manual method to categorize the data (Rossi et al., 1999). Upon completion of my summary of the qualitative analysis I created graphic summaries for each program site of the data source material to check for any inconsistencies. If inconsistencies or incomplete portions were found, I clarified those areas with appropriate informants via email. Next, I took the pertinent information gleaned from each document in the form of thematic notes or excerpts and sorted them into the aspects of the program to which they related (e.g., program goals and objectives, program functions, components and activities) to depict program theory in a graphic form thus creating the appropriate categories of the logic model (i.e., target population and situation, inputs, outputs, and outcomes).

As indicated in Chapter 1, this study utilized several qualitative data analysis methods. This section will provide more detail about the analytic techniques that will be used to address each research question.

Question 1: What are the characteristics of existing support programs for college students with HFA or AS?

Question one was answered with the completion of a logic model for each of the programs in the study. A logic model allowed for the activities as well as the conditions of programs that support the targeted population to be operationally defined. In addition, the model provides knowledge around the structure of the programs. The model also provided insight into how these support programs were structured. The goal of selecting sites based on maximum variation sampling was to produce different models of service delivery given the institutional type or funding source. In chapters four and five each of the program findings were outlined and a logic model was included (Figure 2 and Figure 3).

In addition, triangulation of interviews and observations increased the trustworthiness of the study. Once site access was granted, each program director was given communication about the importance of multiple interviews. Each program director then yielded a list of potential personnel to interview. The staff interviews provided insight into the short-term as well as long-term outcomes of the programs studied. Stake (1995) stated that the protocols that are used to ensure accuracy and alternative explanations are called triangulation. The need for triangulation arises from the ethical need to confirm the validity of the processes. In case studies, this could be done by using multiple sources of data.

Question 2: To what extent do the programs relate to the program standards of the Shaw and Dukes' (2006) AHEAD disability support recommended guidelines?

Programs that support college students with HFA or AS have not been researched other than to document their existence. Therefore, no research has attempted to describe the effectiveness of these programs. Once the logic models have been created, I used Shaw and Dukes' (2006) 28 program standards as a lens to answer research question two. Shaw and Dukes identified 28 research-based program standards that higher education institutions should use to evaluate disability services. These standards have been approved by the membership of the Association on Higher Education and Disability (AHEAD). In 2005, Shaw and Dukes (2005, 2006) revised these program standards for disability offices and determined there were 90 performance indicators that were essential for best practices in the support of students with disabilities. The revised list of 28 standards reflects practitioner expertise in the field and was reduced to eight themed areas of programs standards. These standards include: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustment, (5) Counseling and Self Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development (Appendix F). These new standards and performance indicators also addressed the evolving needs of the field and provide clear benchmarks for an institution and its personnel to assess program effectiveness (Shaw & Dukes, 2005; 2006).

This study included a survey given to all personnel in each program to rate the frequency that the program meets each of the 28 program standards (Appendix G). All staff members in each program were asked to complete to the questionnaire about the program's relatedness to the 28 Shaw and Dukes AHEAD program standards. The survey instrument is an adaptation of a survey developed for a dissertation by Sneed (2006). I

modified the language of the questionnaire to focus the frequencies with which the programs being examined in this study related to the Shaw and Dukes program standards.

The original survey had 60 items including all 28 program standards and a selected list of the 90 performance indicators (Sneed, 2006). The revised survey used in this study only contains the 28 program standards. The survey items were divided into the eight themed areas: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustment, (5) Counseling and Self Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development. The survey data was entered into SPSS and coded by frequency of response to each item. All programs standards in each themed area were clustered together.

In summary, the Shaw and Dukes' (2006) AHEAD Performance Standards and Indicators provide service components that are critical to secure equal access for students with disabilities in postsecondary education. These "standards help postsecondary disability professionals evaluate the effectiveness of their programs and services and shift planning from a reactive...to a proactive approach based on data that provide evidence-based services and support" (Shaw & Dukes, p. 25). Leading to better quality disability programs including the services offered as well as the personnel that administer them.

Question 3: To what extent do institutional type and funding source make a difference in how the programs are structured and their outcomes?

Using institutional type and funding support model as the identifying characteristics, I selected two sites to explore in greater depth. The for-profit model program I selected was College Living Experience (CLE) and the institution supported

model program I selected was the College program for Students with Asperger Syndrome at Marshall University (CPSAS). CLE was selected since it was the largest for-profit program identified with multiple locations while CPSAS was selected as it was the oldest institution-supported model. I was interested in determining if these characteristics would make a difference in how the program is structured as well as the program's outcomes.

Summary

As the call for greater accountability in higher education continues, it is important to document what is happening in programs that support underrepresented groups in higher education. This study looked at programs that support individuals with HFA or AS in higher education. In this study, qualitative methods were used to study programs that support college students with HFA or AS. The participant program sites were chosen using purposeful sampling and maximum variation sampling (Creswell, 2005; Patton, 2002). The intent was to create a logic model of the programs in the research study to better understand the relationships among a program's inputs and outcomes (Yampolskaya et al., 2004). Upon completion of the logic model, each program was rated on its relatedness to the Shaw and Dukes' Association on Higher Education and Disability (AHEAD) program standards.

Chapter 4

FINDINGS

Introduction

The purpose of the current study was to investigate programs that support students with high functioning autism or Asperger syndrome (HFA or AS) in higher education. These programs included a broad range of institutional types including public and private, four-year and two-year institutions as well as for-profit models. Data were gathered from two sites using maximal variation sampling, which “avoids one-sidedness of representation of the topic” (Patton, 2002, p. 109). Based on the willingness of the programs to participate and feasibility due the researcher's financial resources, this study included one program supported in a public higher education institution that represented an institution-supported model and one program that represented the private for-profit model. The goal of using maximal variation sampling in this study was to provide insight into programs that are supported by different funding sources and connected to the institution in different ways. Using institutional type and funding support model as the identifying characteristics, I selected two sites to explore in greater depth. The for-profit model program I selected was the College Living Experience (CLE) and the institution supported model program I selected was the College program for Students with Asperger Syndrome at Marshall University. The finding in this chapter will provide detailed information regarding the institution supported model - the college program for student with Asperger syndrome at Marshal University (CPSAS).

The institution- supported model is a model offered in a traditional public university setting. The culture of the setting is typical of a traditional university setting

with shared governance and a concern for academic freedom. The program included in this study had a very open culture and very integrated into the college community as a whole.

The first section of the chapter provides the history and context about the institution-supported model at Marshall University. The second section of this chapter describes the finding for the first research question: What are the characteristics of selected support programs for college students with HFA or AS? The third section will address the finding of the second research question: To what extent do these programs align with the Shaw and Dukes' (2006) program standards for disability support services? The final section will provide a summary of the findings. The findings discussed in this chapter are based on five interviews with program staff, 13 survey responses, as well as numerous observations of the program's functions and a detailed analysis of a collection of program documents.

History and Context: College Program for Students with Asperger Syndrome

The College Program for Students with Asperger Syndrome (CPSAS) was established in 2002 on Marshall University's campus "to encourage qualified individuals to seek a degree in higher education. The program offers individualized academic, social and life skill supports so that students with autism spectrum disorders may have a successful college experience" (Fall 2008 Student Handbook, p. 3). The program was the first nationally formed public university based model for college students with HFA/AS. Subsequently, other public universities followed Marshall's lead and created similar programs such as the Kelly Autism program at Western Kentucky University and the Pathway program at the University of California- Los Angeles.

CPSAS was founded under the umbrella of West Virginia's Autism Training Center (WVATC), which was established in 1983 to support individuals with autism throughout the state. WVATC has a long history of being on campus at Marshall University where the central office is located. The Autism Training Center as well as CPSAS is located in the College of Education and Human Services. The administrative office of WVATC and governance of the center are not directly tied to the university's governing system as the center operates as a non-profit organization. Therefore although the WVATC is housed within a university college, its funding source comes from a unique precedent. In 1983 with the lobbying of the Center's creator, Ruth Sullivan, and parents of children with autism the state legislature enacted Senate Bill 172 which was reenacted in 1988 as House Bill 4042 (H.B. 4042) to provide annual funding to the West Virginia Autism Training Center. H.B. 4042 also called for the appointment of an advisory board to advise the center director on matters of policy.

The philosophy and mission of the West Virginia Autism Training center is that,

Individuals with autism can lead happy, productive lives and deserve the same quality of life that others without disabilities enjoy. The most effective way to support individuals with autism in enjoying quality of life experiences is through the commitment, hard work, creativity and problem solving efforts of a team of people who live in the individual's community and provide care, education and training for that person. Each individual with autism and their family or care providers are unique; therefore, instructional programs must be individually tailored to fit each unique situation.

The mission of the Autism Training Center is to provide education, training and treatment programs for West Virginians who have Autism, Pervasive Developmental Disorder (NOS) or Asperger's Disorder and have been formally registered with the Center. This is done through appropriate education training, and support for the professional personnel, family members or guardians and other important in the life of a person with autism. Training shall be provided by highly skilled and

appropriately experienced staff (West Virginia Autism Training Center, 2009).

The central offices of WVATC are located in Huntington, West Virginia at Marshall University; and there are two additional satellite sites in Fairmont and New Cumberland, West Virginia. While the offices of WVATC are housed at Marshall University, there is a wide range of services for families and educators offered throughout the state. The services for families include: a) an Autism Training Center newsletter, b) a lending library of autism related materials, c) a family-focused positive behavior support training process, d) informational briefs on topics related to autism, e) family coaching, f) community resources and g) two model programs including the Circle of Friends Preschool and CPSAS. In addition to services with a family focus, educators in the state can advantage of the following services: a) autism mentor training workshops, b) college coursework leading to an autism teaching certificate, and c) in-service trainings and workshops through out the state.

Since WVATC's purpose is to offer support to individuals with autism within the state throughout the lifespan, the creation of CPSAS was a natural next step in order to provide additional services to individuals on the spectrum as they progressed through life and wanted to take advantage of post secondary education opportunities. In 2001, WVATC was contacted by a father of a young man with Asperger syndrome about the possibility of a pilot program being created to support his son get through college. In 2002, that possibility materialized into a program that has grown to serve over 20 students in a variety of majors from across the country. The program is projected to serve over 30 students during its Fall 2009 semester.

The College Program for Students with Asperger Syndrome at Marshall University operates under some of the same philosophies as the WVATC. Both CPSAS and WVATC stress the importance of positive behavioral support, a collaborative assessment process used to develop effective, individualized interventions for students who have challenging behavior. The program exists to be able to support college students with HFA/AS with appropriate academic, social and independent living skills support in order for those individuals to have a successful college experience and learn skills necessary to enter a competitive workforce.

A student's participation in the program is based on a tiered system. Students first must be accepted into Marshall University based on their academic credential and academic abilities. Marshall University requires a student to have a high school diploma, a high school grade point average of 2.0, and a composite score of a 19 on the ACT or a combined score of 910 on the SAT (Marshall University Admission, 2009). Upon acceptance, students can apply to the CPSAS. Unlike the Disability Support Service model offered on most university campuses, participation in CPSAS is an additional component not open to every student on campus. Students must be motivated and *be accepted* to participate in the program. Acceptance into CPSAS starts with a basic interview where the college student is evaluated in a number of different domains including areas such as academics, independent living, socialization and campus safety. The CPSAS staff members are concerned as much about the student's college ability as they are about the student's fit within the program and the support offered. One staff member stated,

So basically as a result of that interview process we get a really good grasp on if this student is a good fit for our program. They might still be a good

fit for college, but they might need more of a residential facility or they might be so independent that they don't really need our services much, so we really get kind of a scaling of is this student going to be a good fit at this point.

The details of all activities and components of the program will be explored in greater detail as the logic model of the program is described.

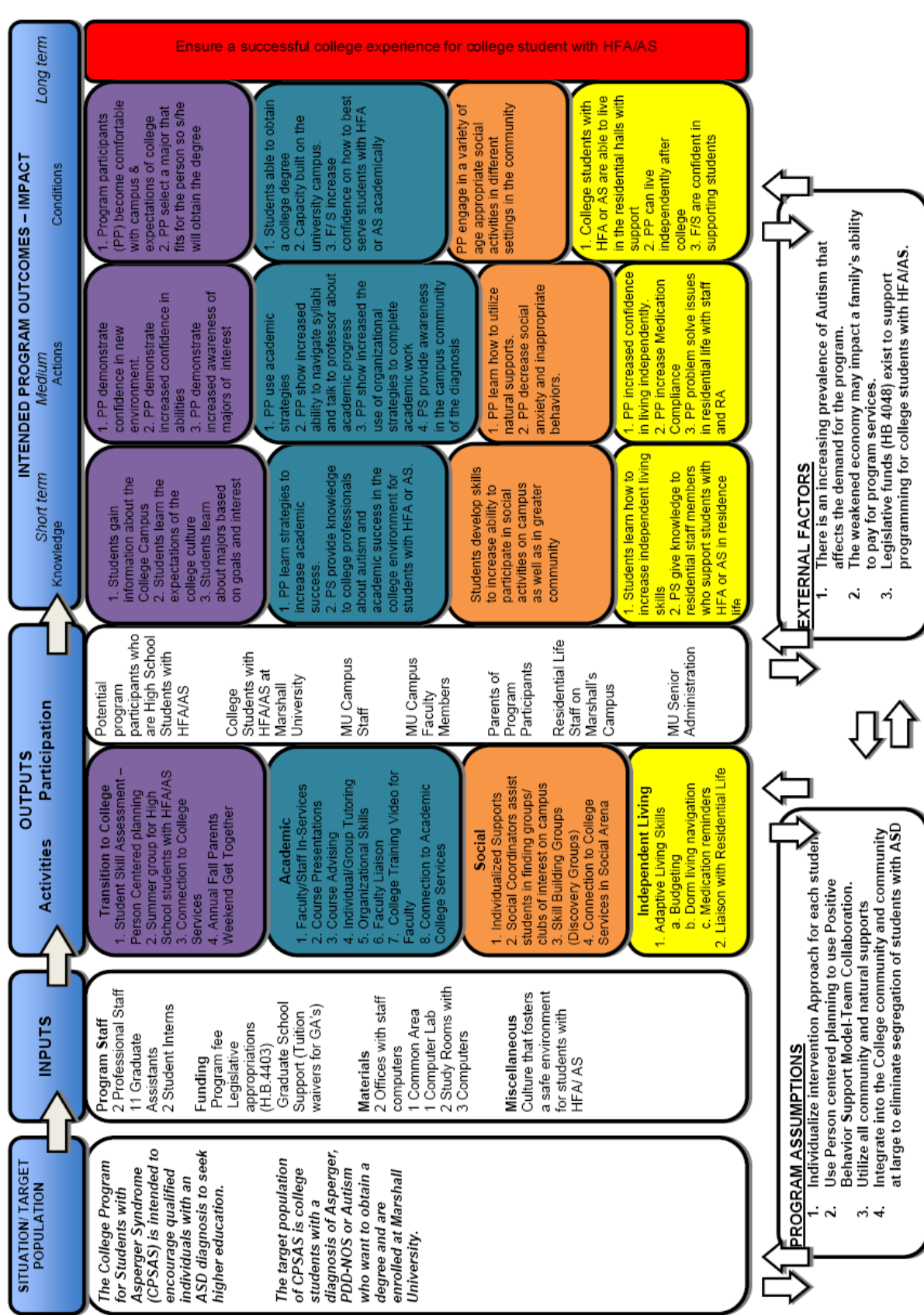
The program charges its participants a 3,200 dollar fee per semester to be involved in the program on a full-time basis. This fee is in addition to Marshall University's tuition, room and board, student activity and other related fees. This student must complete program fee payments before the beginning of the semester. Students can participate in the program on different levels of support and pay different amounts given the level of support provided. The different types of support will be discussed in a later section of this chapter.

The program's funding infrastructure is supported on multiple levels. The coordinator's position is funded under the HB 4042 state appropriations while the assistant coordinator's position is supported by the student fees received each semester. In addition, those fees support the stipends of the 11 graduate assistants currently working with the program. Through additional collaboration with the College of Education, there is additional support from the College in the form of tuition waivers for the 11 graduate students. This college partnership allows the graduate assistants to gain additional financial support for their work with the CPSAS program. The CPSAS program is fully integrated into the professional work of the College of Education.

Research Question One

This section of the chapter relates to the finding regarding the first research question: *What are the characteristics of this support program for college students with*

HFA or AS? To answer this research question, I created a logic model to address all components of the program. The completed graphic representations of the logic model findings are detailed in Figure 2. The purpose of using a logic model framework in this study was to provide a template of what information was needed in order to provide a clear picture of the connection between components of the program and how the program works to meet the needs of the target population (Yampolskaya et al., 2004). The logic model provides a graphic form of the connections of a program and can drastically change how a program is understood and interpreted (Patton, 2002). The logic model used in this study is based on the University of Wisconsin-Extension model. This model describes the sequences of actions of the program and how those actions lead to outcomes. The logic model focuses on the five main components: a) inputs, b) outcomes, c) assumptions, and d) external factors. In addition, to these 5 main components I have expanded the model to also include the target population. Thus the findings will be discussed in the following sections of the model: a) target population, b) inputs: program resources, c) outputs: program activities, d) outputs: participation, e) outcomes f) external factors, and g) program assumptions will be explored.



*PP=Program Participants
 F/S= Faculty/Staff
 PS= Program Staff

Figure 2. Logic Model of College Program for Students with Asperger Syndrome (CPSAS) at Marshall University (est. 2002)

Situation or Target Population

The target population of CPSAS was described by program staff members as “college age students, with a diagnosis of an autism spectrum disorder ...from all over the country... that [who]don’t need 24 hour residential care. [The] students that have some measure of independence and [will] likely will continue to improve.” The college students who are accepted must first be admitted to Marshall University to demonstrate they have the academic aptitude for college but include a “broad range, students with autism, Asperger’s disorder or, PDD-NOS.” The CPSAS program currently serves over twenty students on Marshall University’s campus who come from several states across the country. The students include traditional college age students as well as older non-traditional aged students and transfer students. In fact, one student transferred from Harvard University to receive the support the program has to offer.

Inputs: Program Resources

The CPSAS inputs are the resources and contributions made to the program and allow for the program to create outputs. The CPSAS program resources emerged in the following categories: a) program staff, b) funding, and c) materials. This section will provide more detailed information about each of these areas.

Program staff. The program staff consists of three levels of personnel. The first level is the two professional staff members hired full-time with an extensive background working with individuals with autism. The coordinator has worked with the program since 2005. In addition to the coordinator’s work in the program, the coordinator has worked with a variety of individuals within the spectrum of autism for 20 years in a variety of settings including residential and vocational placements. The assistant

coordinator has been connected to the program since its inception and has increased her role and responsibilities in the years she has worked with the program. The assistant coordinator's work with the program from its inception provides stability, institutional memory of how the program has grown, and a sense of consistency. That institutional memory is important since the coordinator position has been occupied by one other individual prior to the person currently serving in the role.

The second level of personnel is the 11 graduate assistants (GAs) hired to work with the program. Most GAs in the CPSAS program work 20 hours a week, but a few work closer to a full-time schedule of 30 hours or more. For the most part, GAs are completing a master's degrees in counseling and utilize their education and training to enhance the type of support they offer to the students with HFA/AS in the program. They are a crucial element in carrying out the daily logistical activities and providing required levels of support for the students in the program. One staff member explained the low student to GA's ratio, and the GAs' responsibility for keeping up with the students' status

[T]hrough the actual fall and spring terms it's a two to one ratio, our graduate staff had at least two students per staff member and their responsible for knowing absolutely everything about what's going on that semester for them [the college student with HFA/AS].

The third level is the student interns who are working in the program for the semester in the capacity of social coordinators. The student interns use their work with the program as an avenue to complete a capstone requirement to receive their degree in counseling. These individuals are replaced every semester with a new set of social coordinators.

Funding. The funding sources that allow the program to operate come from a collaboration of different sources. While the program is housed within the College of

Education, the funding for program personnel is generated from the legislative appropriations and the semester fees paid by participating students.

Materials and miscellaneous. The materials used and needed to run the CPSAS include physical space, technology, and a safe culture for the student in the program. The program is currently housed in the main administration building on Marshall University's campus, which is the same floor as the West Virginia Training Center. The CPSAS program has the use of two offices complete with computers for its professional staff members. In addition, the program has two smaller rooms used for confidential meetings or proctoring exams for students, if necessary. The program has an additional two spaces: one used as a computer or study room with three computers for student use and the other used as a lounge where students often come to decompress between classes. While these spaces serve as a physical facility for the program, a feeling of protectiveness or safety resonates within the walls. The coordinator explains the importance.

I think that having a place where people can feel comfortable, and it's more than the location, it's the people here...is...vital, um, in fact it's probably the most vital thing. We have students that will, um, between classes come here and de-compress and want nothing other than to come in and sit on the couch and relax for 20 minutes and then go back to class. Um, if we don't have that then people are going to avoid us. If people don't have that they're going to, um, not come for advice, so we really work hard to do that, and we do that in a couple different ways. We have very little rules about what you can do up here, the only thing is I've talked to one student about...stop cursing, um, as loud...you can curse, but don't curse as loud, and um, very few rules, just keep your clothes on, that's not...walking around topless, for one guy, that's happened, keep your clothes on, don't curse too loud, but otherwise it's ok.

To me the most important thing is, you know, having a place is fine, but you have to have people that make it comfortable and that make you feel safe. We work really hard to recruit people that are...naturally person - centered, naturally thoughtful about what they're doing, naturally curious about others and um, and then teach them some very basic bits of information. The most important quality every person here has is that they

care about human beings and if they, if the students can sense that I think then they feel safe here, so the location is nice but it really is the whole.

Outputs: Program Activities

The outputs of a logic model are the activities, events or products that reach the individuals who participate or are the targeted population. Outputs of this logic model include the activities, what is done or offered at CPSAS, and the participation, which includes the individuals reached by the program activities.

The activities provided by the CPSAS are the foundation of the extra support needed by individual with HFA or AS to be successful in college. The activities were grouped into four major areas that emerged: a) transition to college, b) academic, c) social, and d) independent living. The programs seemed to have the strongest focus on the academic and social components of the program. A staff member noted that “we focus on academic support, which might involve working [on] academic support, social support and to a little bit of a lesser degree, independent living support. I think there is an equal emphasis on academic and social support.”

Transition to college. The transition to college supports begins for many students before the first day of their first college course. The CPSAS program has expanded to include a summer group for high school junior or seniors who have an autism diagnosis and have been identified as potential candidates for admission to Marshall University. This opportunity allows students with HFA/AS to become familiar with the college environment and its expectations in a proactive manner.

In addition, to the summer group for potential high school juniors and seniors; there is a focus on transition for incoming freshmen. As soon as a student is admitted to

the university and the program, the coordinator and the assistant coordinator arrange to meet with the student and family to do a person-centered planning that results in a document entitled “Future’s Planning: The College Years”. This personal profile is comprised of six frames: a) the family profile, b) family dynamics, c) solutions and concerns, d) the dream, e) a summary of needs, and f) an action plan. This document helps guide the career path and goals of the individual while attending Marshall University. It provides staff members with a clear vision of what each college student with HFA/AS would like to achieve during their college years. The plan is evaluated every year to make sure the most accurate information is captured. This plan can provide an avenue for staff members to help support students in their desires to choose a major and ultimately a career path. Moreover, the entering freshman must attend a weekly group meeting to address other areas of support such as being a part of the campus community.

New students, considered incoming freshman, are encouraged to come in the summer to have more time to adjust to the new environment. One staff member described the experience:

[W]e suggest that incoming freshman, transition in over the summer and the campus is really a ghost town during that time, there [are]very few people here, so a young man from Alabama did just that and came for a full-term in the summer and um, then stayed over for the week and then started this fall. Sometime around later October he and I are walking across campus and he was really crowded and he was annoyed and he said suddenly, “Oh, these damn freshman!” And I said, “Dude you’re a freshman!” And he started laughing and said, “Well I just don’t feel like one” and to me that was a real positive statement about what our program did, it was there to help him feel, get to the point that he could feel confident about knowing the campus, knowing the system, knowing the process and then after that, you can work on other things. That first year for me is really about helping the students acclimate to the process.

These areas help the college students with HFA/AS at Marshall University make a smooth transition into the college culture.

Academic. Once a student is admitted to the program, the academic support begins with the assistant coordinator providing academic advising to each student for the upcoming semester. This session helps the student to determine what classes to take based on major areas or interest as well as determine what sequence of classes to take concurrently. Once the HFA or AS student's schedule has been determined, a student profile is created for each student. Each profile provides basic information on the student's academic rank, declared major and home state. This profile is similar to the Section 504 plan federally required for all students who are deemed eligible to receive services at the post secondary level. The Section 504 plan determines a student's eligibility and is a guide for the types of accommodations a college student can receive. Similarly, the profile also establishes for HFA/AS students a roadmap for support in the classroom.

The student profile is then given to the professors of classes in which the student has enrolled. Each professor receives information about teaching strategies that are known to be effective for the student, as well as ones that have not worked in the past based on prior coursework or strategies used in high school. Each student profile provides the instructor with requested accommodations that would typically be seen in a Section 504 plan provided by a Disability Support Services office. At the beginning of the semester, a graduate assistant that is assigned to work with the students with HFA/AS hand delivers the profiles to all professors of classes the student is enrolled. The hand delivery system is used to continue to break down any barriers between the professor and

the students. One graduate assistant noted that the “ very first weeks of school I put together a packet, um, all the G.A.s do this, we hand deliver them to all of the professors of our students, we talk to our student, we get their different syllabi, we get the office hours, we go deliver the packet”.

As the semester continues, the college students with HFA/AS are provided with ongoing support from their assigned graduate assistant. One graduate student recounts a typical day for graduate assistants.

on a typical day most G.A.s meet with, each G.A. has about 2 students assigned to them, an average of 2...and most all of the students we try to meet with daily, at least once daily, even if they don't have any homework or any kind of concerns it's just good to have kind of an update on how that student's progress is...so usually we sit down with the student and kind of go over their schedule for the week, see what assignments are coming up, projects that they might need to be working on, trying to help them organize that and figure out what would be a good time to work on tasks, and then so any other kind of just daily concerns that they might have with anxiety or stress, or hygiene and so, those particular students who might need to take a shower into their schedule...into their planner.

Most of the academic support students with HFA/ AS receive is largely focused around the organization of college coursework demands and problem solving, as one graduate assistant explained.

[Support is provided in the areas of] academic and social support, basically, but communication with professors, um, meetings with students, scheduling...scheduling as far as their class schedules, their, um, homework requirements, paper requirements, they have a hard time keeping up with when everything comes in, and also with time management, that's a big issue with our students, um, they really need someone to lay out that time, you need to work on this now so it will be done by its due date. Other than that, work with the students, I would say the biggest thing we do academically is communicating with the professors, making sure that professors understand the disability, um, that they are aware that the accommodations that the student is entitled to...and just kind of making sure that they knew that student, a little bit about them.

In addition to the direct academic support provided directly to the students, the program makes a concentrated effort to reach out to the college community to provide information and awareness about autism. The professional staff members of the program offer on-going training and seminars to faculty and staff members on campus. At one session I observed, the atmosphere of the session seemed to allow faculty and staff members to openly express their hesitations about working with individuals with HFA or AS. The training also served to dispel myths and provide better understanding and clarification about the typical difficulties experienced by college student with HFA or AS.

Training offered to faculty and staff members also includes the program's coordinator and assistant coordinator response to requests from professors to speak to large lecture sessions about the basics of autism and what classmates can do to support individuals with HFA or AS. As a result of this outreach to the academic community at Marshall University, the program is educating the community on how to become an active supporters of students with HFA or AS. Through increasing awareness about the teaching, learning, and other dynamics of HFA and AS diagnosed students, the program has also been able to help some students not previously diagnosed. For example, a professional staff member told a story of a individual not previously diagnosed who noticed that her challenges were similar to those described with persons who have autism. The staff member during a lecture to a class of over 100 students had discussed a biography of a young man with autism.

[The student] comes in the office with no hello, no how are you...8:00 am! And just hands us the biography back and says, what happens to this individual because I think that's my life...and it was amazing. She had never been diagnosed, she was actually from a different county, so, um,

turns out she became diagnosed through the psychology department that semester and became part of our program only for the, her last year here”.

Social. The next major area of support in the CPSAS program is social support. The program has two student interns who commit their time each semester working as social coordinators. The coordinators help the students with HFA/AS integrate into the college community by finding clubs or events of interest to each student to attend. In addition, the coordinators help the students participate in the larger community by arranging movie nights, trips to Wal-Mart, bowling and other socially age-appropriate activities. The activities are not just limited to leisure activities as the goal is to help the individuals in all areas of life to become more engaged in every social settings. For example, a coordinator worked with a student to help him/her learn how to access transportation and make friends to attend temple services.

Another major component of social support is delivered on a weekly basis in the form of mandatory discovery groups. There are two discovery groups, one for the freshman or incoming students who are new to Marshall University and have attended MU less than two semesters and the other group is for upperclassmen. The two discovery groups run each Friday for 12 weeks during the semester and focus on skill -building exercises with a strong emphasis on social interactions, but they also include some academic and independent living topics. One topic that I observed being discussed in the upperclassmen discovery group was social etiquette in the classroom. Many of the students that attended the group participated in a dialogue about the do's and don'ts of classroom life. One student discussed how he was not aware that others did not see his constant enthusiasm for learning when he answered each question the professor posed. This action was something the student never thought about before. Other group members

were able to give him insight about how he came across to others and the need for responsible participation that allows other classmates to engage in the class discussion with the professor. Other examples of topics addressed on the weekly agenda over the 12 weeks included relationship building, the importance of how others view the individual, and ways to create small talk. One program staff member describes the group.

Discovery group that you hear about is every Friday, um, and it's just an hour long skills building group, um, and it's kind of an informal setting even though we have an agenda, sometimes it's happened that ok, today we're going to talk about campus safety or today we're going to talk about student health, um, weeks we have it specifically for freshman, incoming students and one for upper classmen." [Other topics could include] how to be better organized, study habits, um, then we'll have some weeks where we're talking about relationship building and creating small talk, those kinds of things.

Independent living. The last area of support offered by the CPSAS is aid in living independently. For many of the students receiving services from CPSAS, living at Marshall University is their first opportunity living away from home without the natural support of their parents or guardians. This step of independence can be an overwhelming and daunting in the process of attending college. The CPSAS is deliberate in its approach to connect with staff members of residential life. Special sessions and training are offered to all residential life staff as needed. Additionally, each student's resident advisor is contacted by the graduate assistant assigned to the student to make a connection and keep lines of communication open. The CPSAS staff members often offer case-specific assistance and strategies to residential advisors who work with students with HFA/AS in the residential halls. The focus of independent living support is a secondary focus to CPSAS's work on academic and social support. Regardless, program staff members do what they can to offer support in the area of independent living area as well. I observed

one staff member sending text reminders to a student about taking his medications. Medication compliance can be essential for success in college. While these strategies may appear small they greatly impact the quality of the college experience for the students with HFA/AS.

As discussed earlier, another way in which independent living support is offered is through discovery groups. A staff member discussed an example of what is taught.

[During discovery group] they teach independent living skills, for freshman they'll talk about anything from, you really should wash your bedding, you should wash your bedding more than once a semester, you really should at least do it once a month, maybe once every two weeks, um, so with freshman that's really big." In addition, "we do have a few students that need to be told to take a shower, we do have those students and that's the graduate assistant's position to do that, um they will call them and say, it's Tuesday, take a shower.

Outputs: Participation

This section discusses the participation component of the logic model which is who is reached by the outputs of the program. The rationale behind the importance of this is that activities need to be delivered to a specific group of individuals before the expected outcomes can occur (Powell-Taylor & Henert, 2008). CPSAS reaches a wide audience of individuals on Marshall University's campus. The program is first geared to reach the individuals accepted into the program-college students with HFA/AS. In addition, CPSAS also reaches potential Marshall high school students who have HFA/AS. To be able to adequately support these individuals it is important that CPSAS reaches out to different constituents across the campus. The faculty and the staff of Marshall's campus are the individuals who will work most and come in contact with the

college students with HFA/AS. Specifically the program aims to reach the residential life staff on Marshall's campus due to the high volume of time spent in the residential halls.

Intended Program Outcomes

Outcomes are the “direct results or benefits for individuals, families” or the targeted population as intended by the program (Powell-Taylor & Henert, 2008).

Outcomes in this study are the implicit and explicit results of the activities of CPSAS.

The desired outcomes of CPSAS were not only the attainment of academic degrees for students with HFA/AS, but personal success and a successful college experience. In this section, the outcomes will be discussed in four areas: 1) transition to college, 2) academic, and 3) social, and 4) independent living. Each section will address short, medium and long term outcomes on a continuum. The short term outcomes are also the preconditions or knowledge that must be met in order for the medium and ultimately long term effects to happen. The medium outcomes include results such as behaviors and the long term outcomes discuss the ultimate impacts.

Transition to college outcomes. In the area of transition to college, Glennon (2003) stressed the importance for individuals with HFA/ AS becoming familiar with their new college environment. CPSAS confirms this belief that college adjustment to the environment as critical in achieving overall success for CPSAS participants. In order for this to happen, students gain information about Marshall's campus and learn the expectations of the college culture. A staff member discussed the importance of the transition to college and gave an example of the impact this had on a particular student transferring to Marshall.

[R]egardless of how academically bright and socially, um, competent they are, I can't think of one that would successfully complete a semester or

two without supports, um, at least in the beginning, um, the students are sometimes, especially in the first year, overwhelmed with the transition and with the change. For instance we had a young, a student from a military college, a military school, high school, came here and he was, in fact, he was probably one of the most independent students with Asperger's disorder I've ever met, um, came for a summer to transition in, his biggest problem was, in the military school, you studied one topic per term, so you might study history and study that pervasively for an entire term, so suddenly he's studying four or five classes at a time and he really struggled with that. We were there for a summer term and a full terms and he adjusted quite well and moved out of the program on his own, so without us being there, I think he really wouldn't have been able to do that, so I think we're here to help people be successful, help people acclimate to the university, get settled, doing whatever onboard supports we have, um, are awesome, terrific, but I don't think people would do as well without supports.

Academic outcomes. A key long-term goal of college student's involvement with CPSAS is assisting the individual participants to have all the necessary supports to obtain a college degree. For that goal to be reached, it is imperative that college students with HFA/AS learn strategies to increase behaviors that lead to success at the college level. Specific organizational strategies may be necessary to overcome "significant deficits in many aspects of executive functioning" (Adreon & Durocher, 2007, p. 276). For example, assistance in developing a plan for the developing study skills and completing long-term projects or homework assignments by their due dates may be necessary (Myles, 2005; Myles& Adreon, 2001). These types of short and medium outcomes have led CPSAS to help students be successful academically and obtain a degree. One staff member related some experiences in working with an college student in CPSAS.

I think the aspect of [college students with HFA/AS] being able to set a goal and understand what you have to do to work towards that goal, I think the [CPSAS] program helps them with that as they go through their degree programs, which is very important for anyone, to set a goal and understand how you move towards that goal and I think that's

something people with Asperger's syndrome have a lot of trouble with, those kinds of exercises.

CPSAS works to increase the awareness of autism and possible support that the campus community can provide to best serve and this population. Increased awareness and support from faculty members and other academic personnel is crucial.

Social outcomes. College campuses can be challenging environments with all of their distinct cultures and unwritten rules. These distinct cultures and unwritten rules can potentially put many individuals with HFA/AS at a disadvantage. CPSAS works with the individuals in their program to assist them in being able to participate and be fully engaged in a variety of social activities within the college community and the community at large. In order for this long term outcome to be achieved student who attend CPSAS must work on developing skills and awareness in order to participate in a variety of social settings. Once students had been able to grasp the skills necessary to participate in a variety of activities, CPSAS reports that the students' anxiety and stress around being a part of a social network decreases. One example of this outcome is expressed by a staff member about a student's growth with social settings.

We had a freshman that came in, extremely independent, that was from our area, and wouldn't come out of the dorms very much, even though his parents lived a few miles away, they still wanted him to get the whole college experience and I think the maturity that I've seen in him, because he is a junior right now, has been black and white, he's come from, you know, not really coming out of the dorms and not socializing very much to being one of our leaders in our group, um, and I think the change really did happen between that sophomore and junior year, um, which sometimes is hard to identify because, credit hours, etc, but, um, I think, he's an education major and he just started his student teaching, so again, I think it's that piece of getting into the community and really kind of being pushed into, all right, you're going to be the

leader now, and there was a big shift, both educationally and relationship-wise.

I think for him it was just kind of coming into himself, which was a result of being a part of our social skills group and being in the program, he's gone from full time to part time status, so I think that kind of shows his development, too.

Independent living outcomes. A large part of success for many college students is being able to navigate living independently of parents and guardians who have been traditionally been responsible for making sure a individual needs are taking care of on a regular basis. CPSAS works with students in the program to begin to take on these responsibilities themselves in order to for them to live successfully in the residential halls, and ultimately, be able to live independently after college. Although this is a secondary focus of CPSAS, the program still operates under the belief that working with students with HFA/AS on issues of living independently such as discussing plans for medication management, solving problems in the residential halls, keeping medical related appointment are all paramount to success in living independently.

External Factors

External factors are “conditions that influence the program’s success and over which the program has relatively no control” (Powell-Taylor & Henert, 2008, pg. 15). There were three factors that emerged that were external to the program but had an impact. These included the increased prevalence of autism, the impact of the current economy of program participants and their families, and the legislative appropriations.

The population of the students who are eligible for CPSAS services seems to be increasing. This may be due to increases in the awareness of this disorder, the early diagnosis and the prevalence of autism spectrum disorders. However, the increase in

prevalence is not thought to be due to an increase in diagnosis alone. Although, exact reasons for the increase in prevalence is still being examined, it is estimated that one in every 500 Americans *live* with this disorder and that one in every 150 children are *being diagnosed* (*Directory for Asperger Syndrome*, 2006; Centers for Disease Control, 2007). One program staff member noted “about three years ago we had maybe 15 or twenty applications a year, um, or sent out 15-20 applications a year to interested parties, um, this year, this calendar year we sent out more than 200, so there is a tremendous amount of interest out there, so I think that’s, that hopefulness is important”.

As the current American economy continues to bring about uncertainties, it is a major external factor that could impact the CPSAS’s success. Unlike other services offered within the scope of disability support, help for individuals who want to participate in the CPSAS comes with a financial cost to students and families. Students and parents must be able to afford the additional fee in addition to the rising tuition costs. One interviewee summed up by saying “the economy certainly is going to play a role, if people can’t...we have a lot of out of state students who are paying out of state tuition, dorm fees, all the other fees that are required and ours, and if the economy tanks, um, that’s going to affect us, but otherwise I can’t think of anything that would, um, that would greatly affect our program or what we do on a day-to-day basis.”

The third external factor that could affect the program’s success is the availability of legislative funds devoted to support the program. While these funds have traditionally been a resource for the program, any negative shift in funding would diminish the program’s ability to support their full-time coordinator who runs the program.

As the current uncertainty of the economic trends affect university campuses in the form of hiring freezes and other economic cuts, this could be yet another external factor for CPSAS. Any campus cuts in department or college budgets could affect the program use of College of Education support to fund the graduate students' tuition waivers.

Program Assumptions

This section will discuss the program assumption of CPSAS. Program theory reveals a set of assumptions or expectations that describe “why a program does what it does and provides the rationale for expecting that doing things that way will achieve the desired results” (Rossi, Freeman & Lipsey, 1999, p. 156). These assumptions are the basis of the program theory and provide the underlying rationale in the decisions made about a program. CPSAS had distinctive program assumptions that could be observed in the culture of CPSAS and were often articulated by staff members. The four overarching program assumptions appear to be established based on previous experience of staff members in providing support for individuals with HFA or AS.

The first assumption is the importance of a positive behavior support model that involves a person-centered planning. The model is used by CPSAS to get a better understanding of the college student's needs and priorities. The person-centered planning meeting allows CPSAS staff to facilitate a collaborative planning meeting with student and parent to complete develop a Transition Action plan. The Transition Action plan serves as an initial plan of action for the college students with HFA/AS attendance at Marshall University. One staff member explains the process.

We then begin our planning process, um, it's off the family-focus positive behavior support model, so it's hand in hand with the philosophy of the

[West Virginia Autism] training center. Our program is based on that, it's a futures planning tool.[It] is even a better picture of how we're going to support the student and out of that process, it's again, a 2-3 hour process.

[During the] thorough planning session where we're looking at those strengths, identifying what the challenges might be and then working with both of those things to try and develop some supports, and I think that having a specialized, um, professional, specialized expertise in that area gets at things that probably would be missed otherwise.

The second assumption of CPSAS focuses on the philosophy of individualized support. CPSAS believes that individualized programming is a key component for a college student with HFA/AS to succeed in the program. Individuals with HFA/AS may be as distinctive as snowflakes and may not exhibit similar symptoms or areas of difficulties. It is, therefore, important to treat each student's challenges individually. One staff comments of the type of program supports offered to the students.

I think you probably know this from experience and from being here, um, it's not a cookie cutter type of program, it is truly the type of program where you can anticipate [an individual's needs] and plan, and that carries you. All of that [individualized support], is key to their success,... it's just not cookie cutter, it is every individual's needs, we're trying to work with, and um, that can be a real challenge.

there are lots of challenges...um, doing an individualized support program, um, even though I think that's the best practiced, um, the best practice method of doing it, is a challenge, I mean, doing it in a way that is um, um, is absolutely individualized is hard. That's why people don't do those things very often because it takes up a lot of time and effort to do it, so, that's a challenge.

Utilization of all campus community and natural support is the third assumption espoused by CPSAS. The program is aimed at utilizing every natural support mechanism available to the student participants. CPSAS offers a specialized programming that is not offered otherwise on campus. Although there

are some services available on campus that meet student needs and CPSAS works hard to support students being a part of the mainstream college resources. One example of this is noted when students need to get additional assistance with tutoring or counseling services as a staff member explained.

We want to help students access those services on campus so, um, we might help them organize going to a tutor, provide some information about a tutor, about how best to support them, make sure that the meetings are being held, the same for counseling services, really, really using any of the campus community services. And, a similar approach towards social needs, I think we generally start on social needs, um, a couple of weeks after the academics, um, we want people to get accustomed to life for a couple weeks before they start going to parties, but, um, though we quickly do that.

The fourth assumption that CPSAS espoused is important to the type of programming they offer is the importance of complete integration into the campus community. It is important to CPSAS that there is total integration of their program and their students into the university community. Segregation of the students who participate in CPSAS from the general college population is avoided all costs. The staff of CPSAS is very clear that this is central to their mission and the student's ability to have successful outcomes in life.

We're completely embedded into the university and I think that's really what separates us from other programs. [We] never try to segregate our students and in the very beginning, I will tell you some of the history, a lot of our resident services, or administration wanted to put them all on the same floor, and we did away with that very quickly, because we said, yeah, some of them might, it would be real easy just to go to one floor and meet your student, but now they are totally peppered throughout all of the dormitories, and I don't know how that happened or if it was just, say, ok, the students with disabilities floor is the first floor of (?) hall, and sure it is wheel chair accessible, but our student aren't in wheelchairs .

I shy away from anything that feels controlling, so I mean the easiest thing to say would be, you know, um, let's segregate everybody and walk everybody to class, we're not going to do that, we not going to be that.

The fifth and final assumption of CPSAS is it is important to empower the students in terms of their disability. CPSAS includes in its title the focus of the disability of program participants. Autism and Asperger syndrome is discussed openly in the program. While observing at CPSAS, I often saw program staff members embrace and openly discuss the challenges and successes of students as it related to their disability of HFA or AS. Students at CPSAS seemed empowered by the open dialogue and were able to draw support and discuss issues related to their disability with fellow students in the program as well as with staff members.

Research Question Two

This section of the chapter relates to the second research question: *To what extent do the programs relate to the program standards of the Shaw and Dukes' (2005) AHEAD disability support recommended guidelines?* The following findings are based on the completion of the relatedness survey by program staff at CPSAS.

Shaw and Dukes identified 28 research-based program standards that higher education institutions should use to evaluate disability services. These standards have been approved by the membership of the Association on Higher Education and Disability (AHEAD) and in 2005, Shaw and Dukes (2005, 2006) revised these program standards for disability offices and determined there were 90 performance indicators that were essential for best practices in the support of students with disabilities. The revised list of 28 standards reflects practitioner expertise in the field and was reduced by Shaw and Dukes to reflect eight themed areas of programs standards. These standards include: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness,

(4) Academic Adjustment, (5) Counseling and Self Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development (Appendix F). These new standards and performance indicators also addressed the evolving needs of the field and provide clear benchmarks for an institution and its personnel to assess program effectiveness (Shaw & Dukes, 2005; 2006).

The questionnaire (Appendix G) was given to all personnel in the CPSAS to rate each program staff members' perception of the frequency that CPSAS related to the Shaw and Dukes' (2005, 2006) revised list of 28 Professional Standards (Appendix F). The 13 survey responses represent an 86% response rate of the entire CPSAS Staff. All staff members who completed the survey were asked to rate how each of the 28 Shaw and Dukes AHEAD program standards related to the CPSAS using a 4-point Likert scale. The responses captured how often each program standard related to CPSAS. Responses were coded with a "1" if respondents thought the program *never* met the program standard criteria, a "2" if respondents thought the program *rarely* met the program standard criteria, a "3" if respondents thought the program *occasionally* met the program standard criteria and a "4" if respondents thought the program *always* met the program standard criteria. Respondents were also given the option of marking a "5" if the program standard was *not applicable* to CPSAS. Using data from the responses from each question, I created new subscales corresponding to each of the 8 themed areas by calculating the mean scores for all questions answered within each themed area.

Table 2 provides descriptive statistics (i.e., means, SD, minimum and maximum scores) regarding staff ratings of the program in each of the themed areas. As indicated in

the Table, CPSAS program received the highest ratings on the program standards in the following themed areas: Consultation and Collaboration (Mean = 3.85; SD = .315), Information Dissemination (Mean = 3.77; SD = .370), Faculty/ Staff Awareness (Mean = 3.73; SD = .260), Academic Adjustment (Mean = 3.90; SD = .210), and Counseling and Self Determination (Mean = 3.85; SD= .376). These responses demonstrate that all CPSAS staff perceived that the program met the standards in these themed areas at least occasionally or always, thus demonstrating that they are a component of the program. On the other hand, there was more variance and inconsistency in program staff responses in three other areas, including Policies and Procedures (Mean = 3.36; SD = .723), Program Administration and Evaluation (Mean = 3.48; SD = .671), and Training and Professional Development (Mean = 3.72; SD = .731). As indicated by the minimum and maximum scores on these items, some staff members noted that their program rarely met the standards in these areas.

Table 2

Themed Areas of the Program Standards of CPSAS Relatedness (n=13)

Themed Areas	Min	Max	Mean	SD
Consultation/Collaboration	3.00	4.00	3.85	.315
Information Dissemination	3.00	4.00	3.77	.370
Faculty/Staff Awareness	3.25	4.00	3.73	.260
Academic Adjustments	3.33	4.00	3.90	.210
Counseling/Self Determination	3.00	4.00	3.85	.376
Policies/Procedures	1.40	4.00	3.36	.723

Program Admin/Evaluation	1.86	4.00	3.48	.671
Training/Professional Dev	1.33	4.00	3.72	.731

The following section will further examine the areas of CPSAS that were most related to the Shaw and Dukes program standards and offer some additional triangulation to validate the findings in the areas of a) consultation and collaboration, b) information dissemination, c) faculty/staff awareness, d) academic adjustments and e) counseling and self determination.

Consultation and Collaboration

This themed area of the program standards is this area involves advocating for issues related to students with disabilities and providing disability representation on appropriate campus committees as an essential element of services for students with disabilities. Although CPSAS is geared only for individuals with HFA /AS, the program still believes in offering advocacy work on Marshall’s campus. While the program staff may not sit officially on campus committees, the program is fully integrated into the professional work of the College of Education. The program also maintains an open line of communication with senior administration in order to increase the program’s presence and represent to the needs of college students with HFA or AS on Marshall’s Campus. One illustration of the program’s increased representation on campus is evident through the participation and demonstrated interest by senior administration.

The president and the university, tour our program pretty regularly, the president, we have an annual parent’s brunch where parents come, at parent’s weekend, and we have a wonderful day planned for them and the president and his wife have attended.

Information Dissemination.

The second themed area, information dissemination, is focused on communication across the institution regarding disability access. The standards under this themed area focus on three resource bases that disseminate information: (a) institutional publications both electronic and printed, (b) access to communication devices for individuals with disabilities, and (c) providing information about available resources to students with disabilities.

CPSAS is very intentional in providing communication in other areas of the university to eliminate any barriers or confusion about the diagnosis of autism and Asperger Syndrome. One staff member describes this area in the following excerpt. As I observed a scheduled training for faculty members and staff members, the campus director for information technology for the campus was in attendance to get a better sense of what her department could offer to support the college student's on Marshall's campus with HFA/AS.

The CPSAS staff members are also committed to providing information in written and electronic communication about the program and trainings. An electronic email is sent to all faculty and staff on Marshall's campus each semester to make faculty members and staff members aware of training dates. Each student has a student profile that goes to each instructor in addition to other materials to provide awareness about specific accommodations available to the student that the faculty member or staff member can take utilize.

Faculty/Staff Awareness

The third themed area, Faculty/Staff Awareness, is focused on providing faculty and staff with awareness about the needs of students and the services available. The standards under this area reflect a sense of ownership around providing faculty or staff with training on the students' needs as well as to provide an awareness of services available to the student. In addition, the area has a focus on consultation with all constituents as it relates to classroom modifications and modifications in other areas on campus if necessary (e.g. residential halls). One staff member gave this example,

We've been able to do trainings for new resident advisors and so we have a pretty strong relationship especially with the resident manager of the new freshman experience which is just one, not even a year old yet, and so just last week, last Friday Michelle and I went and gave a presentation on how to help students specifically in the dormitories, and roommates situations, this is the first year that we've had a lot of students want roommates.

Academic Adjustments

The fourth themed area, Academic Adjustments, is the determination and provision of appropriate academic adjustments in order to provide equal access for college students with disabilities. The standards addressed in this fourth area include a student plan for the provision of selected accommodations, aiding students to determine appropriate academic accommodations and consultation with faculty to ensure that the reasonable accommodations do not fundamentally alter the program of study.

Addition to, actually an invitation to lecturing, so hopefully it will be a good turnout, um, and then an informed consent so students sign each consent for each individual professor saying that the graduate assistant and our staff can speak freely about academics to the professor and in addition to the student profile, which is individualized for each student, obviously. And then, so we used to put a little information on Asperger's in there, but

professors really only read about one page, so...the staff are doing that this week. We prefer it to be the first week, sometimes it's not until this week.

CPSAS has a strong commitment and relationship with other constituencies groups on campus that support individuals with disabilities. One example is Marshal University's HELP program that was established originally to assist students with learning disabilities on MU's campus. One staff member discusses the potential connections and support of CPSAS collaborating with others entities on campus.

Even though we are relatively new, the HELP program has been here for years and they're specifically for students with learning disabilities, ADHD. We do have a marriage with them with some of our students, they do the academic piece and we do the social piece, but for the most part once we sort of identify student's with Asperger's they came to us.

Counseling and Self-determination

The fifth themed area, Counseling and Self Determination, is centered on service delivery that encourages independence for the students with disabilities. Self determination is also an essential component in student success. Self determination is defined as connection between skills and beliefs that enable a person to be engaged in autonomous, self-directed, and goal oriented behavior (Shaw & Dukes, 2006, p. 24). This philosophy assumes that when one acts under these assumptions, there is a better opportunity for an individual to take control of his/her life and assume a role of a successful adult in the society. CPSAS addresses this theme by providing needed levels of counseling and interpersonal skill development to students participating in the program. CPSAS provides individualized support to students to work on their individual needs.

Level of support may vary for each student participating in the program and is determined by CPSAS staff members with the input from students and their families. There are three levels of participation in the College program. The first and most intensive level of support is a full-time status where students participate in all levels of the program. The second level of support is a part-time status. Students receiving this level of support may not need as much individualized support but may require some part-time assistance with the challenges they face in college. The least intensive level of support is offered to students through the Discovery Groups that meet on a weekly basis.

Summary

The College Program for students with Asperger Syndrome at Marshall University is an institution-supported model geared to helping college bound students with a diagnosis of HFA or AS be successful in college at Marshall University. By providing support in the areas of academic, social, and independent living the program has been able to support students who want to earn a college degree. Degree attainment is not the only measured outcome of CPSAS, students in the program are also able to be successfully engaged in a variety of social activities in the campus community and navigate the challenges that come with living independently away from home in a residential hall on a college campus. In order to capture and accurate picture of all the program components a logic model was created which included the target population, inputs, outputs and outcomes of the program.

CPSAS has utilized the specific funding sources and support within the college community and the state of West Virginia to sustain its program and grow it from the pilot stage in 2002 with one student to a program now currently serving over 20 student

from across the country. The program has not only grown in student capacity but also in the number of staff supporting the program. The staff members now include 15 individual working in various capacities to increase the resources to support their growing program infrastructure.

The program has several informal evaluative documents to measure student performance but it does not have a formalized set of benchmarks to measure effectiveness. The goal of the second research question was to determine how CPSAS related to each of the program standards developed in 2005 by Shaw and Dukes to measure effectiveness of Disability Support offices in universities across the nation. The results of from the 13 staff members (86% response rate) indicated that CPSAS related to five of the eight themes areas including: a) consultation and collaboration, b) information dissemination, c) faculty/staff awareness, d) academic adjustments and e) counseling and self determination. As these were initial attempt to determine if the elements necessary for Disability support office may be similar to the areas necessary for specialized programs that support college students with HFA/AS in higher education.

Chapter Five

FINDINGS

Introduction

This purpose of this study was to investigate support programs available to college students with high functioning autism or Asperger Syndrome (HFA/AS). Maximal variation sampling was used in this study to provide insight into programs that are supported by different funding sources. This chapter will focus on the findings of the private for-profit model, one of two sites examined in this study. College Living Experience (CLE) is a for profit educational model that focuses on the new market driven reality regarding students with disabilities, one that is demanding more comprehensive support models that bolster students pursuing higher education. The private business model offers a top down, corporate system that designs services that are standard offerings at all six CLE sites.

The first section of this chapter will provide information regarding the history and context of the private for-profit model of College Living Experience (CLE). The second section of this chapter describes the finding for the first research question: What are the characteristics of selected support programs for college students with HFA or AS? The third section will address the finding for the second research question: To what extent do these programs relate to Shaw and Dukes' (2005) program standards for disability support services? The final section will provide a summary of the findings. The findings discussed in this chapter are based on six interviews with program staff, 10 survey responses, as well as numerous observations of the program's functions and a detailed analysis of a collection of program documents.

History and Context: College Living Experience (CLE)

CLE is a for-profit program that is a division of Educational Services of America (ESA). ESA is a national provider of “K-12 and post-secondary alternative and special education” (ESA website, 2009). ESA is based out of Nashville, Tennessee; and operates more than 130 schools and programs throughout the country in the four divisions: 1) ESA Exceptional Schools, 2) Ombudsman Program, 3) Spectrum Schools and 4) College Living Experience. The four divisions offer a distinctive set of educational opportunities to students in different settings.

The first division, Exceptional Schools, is located throughout Florida, California, and Illinois. “The schools’ curriculum includes programs designed to prepare individuals with professionally diagnosed learning difficulties for future normal education and/or living. ESA’s website (2009) states, “For many of our students, ESA Exceptional schools will meet this definition as its programs provide specialized education for students with professionally diagnosed learning difficulties”. Elementary, middle and high schools supported under the Exceptional Schools division are designed to meet students’ needs throughout their secondary educational levels.

The next division offered by ESA is the Ombudsman program. The Ombudsman Educational Services offers an alternate route to graduation for students who are at risk of dropping out of high school for a variety of reasons. No matter what challenges students face, they can "find academic success through Ombudsman’s alternative program. Ombudsman provides an alternative middle and high school program for students who

learn better in a non-traditional classroom setting and want an alternate route to high school graduation"(ESA, 2009). Ombudsman programs are operating in 13 different states through out the United States, including Colorado, Arizona and Missouri. The programs offered under the Ombudsman division work with high school age students to meet their educational needs in order to obtain a high school diploma.

The third division of ESA includes the Spectrum Schools, which offers a full range of educational opportunities to students with a diagnosis of autism, a developmental disability and emotional disturbance. The program is located in seven different sites within California. The Spectrum schools provide “positive outcome-based support for public school systems” (College Living Experience, n.d). The program helps public schools by providing specialized services to students with learning disabilities, attention deficit disorders, autism, moderate to severe handicaps, visual and audio difficulties, and other special needs.

CLE was established as the fourth division of ESA’s corporate entity in 2004 after the pilot program. The program, in its earliest inception, was established by Dr. Irene Spalter in Ft. Lauderdale, Florida where she developed the first site 21 years ago. It was then taken over by ESA in 2004 as Dr. Spalter was ready to retire. Ft. Lauderdale, Florida was the first site and in 2006 two sites were added (in Austin, Texas and Denver, Colorado). In 2007, three additional sites were added in Monterey, California; Chicago, Illinois and Washington, D.C. which brought CLE’s site total to six. CLE focuses on providing support to students with disabilities and list individuals with autism or Asperger syndrome as a part of the targeted program population. While all sites offer the

same basic set of services, I was able to spend time visiting the site based in Austin, Texas. CLE describes the philosophy of services offered by the program.

College Living Experience helps students with special needs prepare for life as independent adults. Young adults with autism, Asperger's, learning disabilities, traumatic brain injury, cerebral palsy and other special needs can successfully transition to independent adulthood with tailored support. With new-found skills and a degree or certificate in hand, our students find meaningful work and relationships as independent adults. CLE provides support in three areas: academics, social skills and independent living skills.

CLE tuition is 33,500 dollars a year, plus a non-refundable deposit of 1,500 dollars for new students joining the program. The tuition covers a 12-month period and students are provided with year-round services. CLE states that the comprehensive services and professional staff are the reason for the tuition as described in a posted statement from CLE.

Fees paid to College Living Experience cover a complete network of comprehensive support to help students live independently, achieve academically and engage socially. Each student receives academic, independent living and social skills instruction for a period of 12 months from a team of professionals whose goal is to help him or her become more self-sufficient, independent and confident.

For example, during a typical week, most students receive four to six hours of one-on-one tutoring and at least two hours of independent living skills training. They meet with their mentor a minimum of an hour a week and they participate in several hours of facilitated events and social interactions with peers and adults. Students also participate in a weekly discussion group led by the staff psychologist and they receive the ongoing support of a resident advisor, case manager, academic liaison and site director.

Participation in CLE's program is based on an initial individual evaluation of a student's needs in the areas of academic, social and independent living. Program fit is an important factor considered in determining eligibility for the program. Many factors are

considered but areas of safety and motivation are high on the list as described by CLE.

On CLE's website the requirements for admission are outlined.

Students' emotional and physical securities are considered in making all decisions regarding admission to a College Living Experience program. Each student is assessed individually to determine whether he or she would benefit from College Living Experience and to identify the most appropriate vocational, technical or academic program. In order to be successful, prospective students should be motivated to become more independent and they should be able to live safely in an apartment without constant adult supervision. (College Living Experience, n.d.)

One staff commented on the type of foundation and skills that a student should have to be able to successfully participate in CLE.

Some of the foundations are students need to be safe...ok. So one of the questions that we'll ask when they come in with different levels of severity in their disability or levels of needs is, you know, would...have you left your student alone for a weekend without calling home every 10 minutes! How safe can they be living independently because we are not a 24-hour residential program We need to make sure that they're going to be able to manage in that environment.

Research Question One

This section of the chapter relates to the first research question: What are the characteristics of CLE for college students with HFA or AS? To examine this research question a logic model was created to address all components of the program. The completed graphic representations of the logic model findings are detailed in Figure 3. The purpose of using a logic model framework in this study was to provide a template of what information was needed to provide a clear picture of the connection between components of the program and how the program works to meet the needs of the target population (Yampolskaya et al., 2004). The logic model provides a graphic form of the connections of a program and can drastically change how a program is understood and

interpreted (Patton, 2002). The one used in this study is based on the University of Wisconsin-Extension model. The model describes the sequences of actions of the program and how those actions lead to outcomes. It focuses on five main components: 1) inputs, 2) outputs, 3) outcomes, 4) assumptions, and 5) external factors. In addition, to these five components I have expanded the model to also include the target population. Thus the findings will be discussed in the following sections of the model: a) target population, b) outputs: program activities, c) outputs: participation, d) inputs: program resources, e) outcomes g) external factors, and g) program assumptions will be explored.

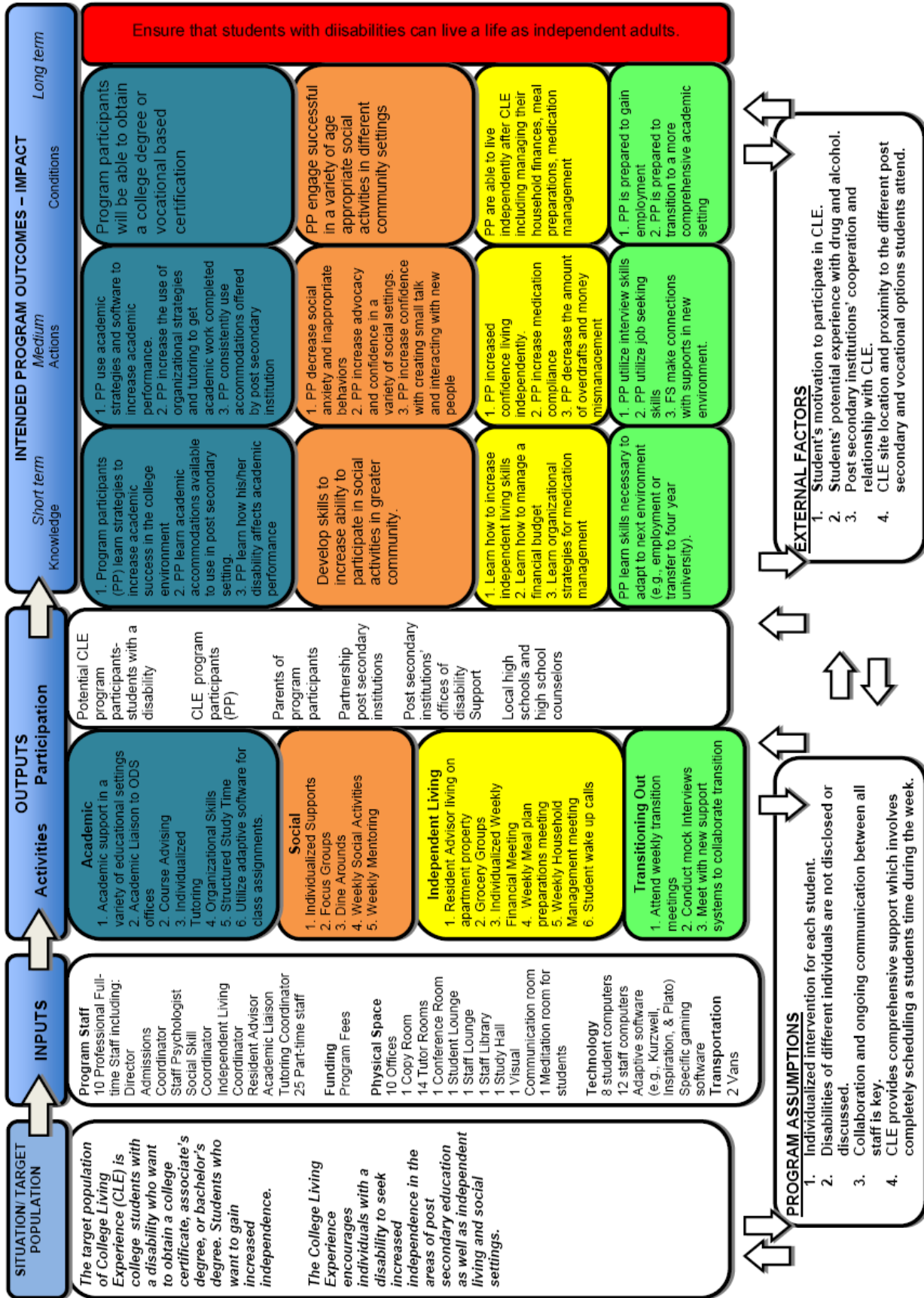


Figure 3. Logic Model of College Living Experience-Austin (CLE) (est. 2006)

Target Population or Situation

CLE is a program that typically offers support to high school graduates with a variety of disabilities. Some students have autism spectrum disorders, including Asperger's Syndrome. Others have conditions such as dyslexia and ADD/ADHD or social and emotional maturation issues. According to one staff member, the target population that CLE is serving is as follows:

We try to market mostly towards students with developmental learning disabilities [such as] ADHD. It's started to broaden a bit towards more students with mood or anxiety [disorders]. The target population would probably be developmental and learning disorders. Another way to think about it would be, if they have academic, independent living or social skills deficits, then certainly our program can help them address them.

In that the target population of developmental disabilities the program included students with HFA or AS. Due to the structure offered by the program, often staff members comment on the success of individuals with this type of diagnosis. One staff member commented on her beliefs about what types of students she has seen best served by CLE during her time as a staff member.

There are certain students that we find that tend to respond really well to the structure we have built into the program. Students on the autism spectrum especially...it's really great. Because it is really set and we can structure it as much as the student would like us to. So we will put anything in a student's schedule. So if they want to go work out or do their laundry we will plop it in [their schedule].

In addition to the types of students served there is also a minimum age for students who want to participate. There is typically a minimum age of 18 for students entering CLE (College Living Experience, n.d.). Students who will be high school juniors and seniors or have already graduated and want some exposure to CLE's program can join and be a part of their three-week summer program offered only at the Ft. Lauderdale

site. CLE's states that it has no maximum age limit (College Living Experience, n.d.).

One staff member gave her insight on the ages of student served at the Austin site.

I definitely would say college age...um, so, you know, right at the end of high school, post-high school, all the way through their 20s. We haven't had anyone, I know at CLE Austin, that's older than 28 that I know of.

Students attending CLE have many opportunities to gain skills and grow in the areas of support offered by the program but must be eligible given the age and disability requirements.

Inputs: Program Resources

The CLE's inputs are the resources and contributions made to the program and allow for the program to create outputs. The program resources of CLE were divided in the following categories: a) program staff, b) funding, c) physical space and technology. This section will provide more detailed information about each of these areas.

Program staff. One of the major resources for CLE is the many experienced staff that are hired to support the student at each CLE site. CLE has 10 full-time professionals that work collaboratively to manage all the different aspects of CLE. While program staff members are collaborative, they all have a distinct service area for which they are responsible. CLE full-time staff members include a director, an assistant director, a staff psychologist, an admissions coordinator, an academic liaison, a head tutor, a social skills coordinator, a tutor coordinator, a lead tutor and a resident and financial advisor.

To support the many activities of CLE, there are approximately 25 part-time staff members who work in some capacity in the program. These part-time individuals work in four main areas: tutoring, mentoring, independent living, or transportation. Since students can receive up to two hours of tutoring per class, there is a need for tutors needed in

many different subject areas. CLE is very purposeful in selecting tutors to work with CLE student. Tutors in most cases must have a master's degree and it is preferable if the tutors have worked in their field of study. In addition to tutoring, other part-time staff members are hired to assume the role of mentors for the CLE students. As discussed earlier, these individuals are working on an advanced degree in the field of counseling or social work and offer one-on-one support to CLE students on a weekly basis. Another program area where part-time staff are utilized is independent living. Specific staff members are hired to serve as independent living instructors and are in charge of all the HHO and MPP meetings with students. The last area where part-time staff are hired is transportation. There is a part-time van driver that is available during a restricted time each day to offer transportation to students. The rides typically include a doctors' appointments, therapy sessions or a trips to the bank.

Funding. Given CLE's for profit, private ownership standing; the program relies solely on program fees to support its operating budget. Students are committed to a 12-month contract and students participating in the full program will pay 33,000 dollars a year plus tuition and apartment expenses. There are cases where students receive support from state funding agencies such as vocational rehabilitation for some parts of the program as explained by a program staff member.

[W]e do quite a bit of work with DARS which is Rehab Services of Texas, so they are the ones that will help...it's kind of like a vocational rehab type of service in Texas, so, anything that will help a student move towards being able to work productively, DARS can usually help with, that includes paying for some tuition, paying for some books, paying for some of their vocational rehab services if that is something a student needs and sometimes they'll pick up certain parts of our services if they believe it's kind of under their purview, so that's an organization we work with.

For students who don't receive funding through a state agency, CLE as a division is considering alternative avenues that may be able to support student's participation as described by a staff member.

[S]o certainly the ability to find loans and find funding and that's something that the division looks at very carefully, too, how can we create scholarships, how can we find alternate funding sources, um...Martha and I established a relationship with a local lender, um, and they have...actually it's a credit union who was founded based on an education principle that we ran into at a chamber event, ran into someone and started talking with her and they have put together a loan package for CLE Austin parents that they are piloting and it's better terms than a lot of loans that are out there, um, and it's better terms than Sallie Mae, which we are also qualified for .

Physical space. CLE-Austin has a relatively large facility to support the needs of the program and its participants. It is housed in a large business suite that has a spacious layout. There are numerous staff offices and tutoring rooms to accommodate student and staff needs. Staff members can take advantage of the amenities of a staff library--to type progress notes into the database provided, check out books related to specific disabilities, or review specific strategies for a CLE student since student binders are housed in the library space.

Students can take advantage of a lounge which includes a ping pong table, kitchen and a seating area when they drop by between classes. Students also frequently use the study hall and the visual communication room which offers specific software to students majoring in gaming or any related visual arts major. Access to a mediation room and staff facilitators help students to decompress when they periodically need to do so.

Technology. The last area of program inputs for CLE is technology. The program has a wealth of hardware and software to aid student success in academic assignments. In the study hall area there are several computers available to students to support their word

processing and internet needs relative to coursework or other activities. Students who major in gaming or any of the visual communications fields have all the latest software in order to complete theory courses in their major. During my visit I observed a tutoring session where one student was working on manipulating an object in an electronic field. The tutor worked with the student on the mathematical calculations necessary to solve the problem, and was also able to assist the student in using the computational software necessary needed.

A really significant amount of support offered at CLE comes in the form of adaptive technology programs. These programs were purchased with the specific needs some of the students who participate in CLE have in accessing, comprehending and completing academic requirements. Software is particularly helpful with subjects such as reading and math. Another technology available in the center is a Kurzweil reader. It enables students to read, study and write more proficiently. It also assists program staff to differentiate instruction techniques without changing curriculum. One staff member explained several of the different software options purchased by CLE to help students.

We get any program within reason pretty much. So we have Kurzweil and they can use the Kurzweil on any computer. We have a shared drive and their stuff will go in there and as long as Kurzweil is loaded on the computer [and] Kurzweil can be on any computer. So for each student, we scan in the books, and they can go in there and look at them themselves. We [also] have another [program] that they read to...um, [it's called] My Reading Coach and all kinds of specialized software. It's individualized so if a student needs it we get it.

[Other examples of software include] Plato [which] is a program, um, that teaches math and English skills...some of our students, [it] improves reading skills...some of our students are using...um; we're also using something called Dragon Naturally Speaking.

Use of these adaptive software programs can also provide an avenue to ease the transition into the new academic environment. Many of CLE's students are familiar with the software programs from using them in previous educational settings and have utilized them to increase their academic performance in the new postsecondary education setting.

Outputs: Program Activities

The outputs of a logic model are the activities, events or products that reach the individuals who participate or are the targeted population. Outputs of this logic model include the activities offered through CLE, and the participation which includes who the activities reach. The activities of CLE are the foundations of supports needed by the target population to be successful in the adult world.

The areas of activities of CLE are grouped into three categories--academic, social, and independent living. A fourth category will also be discussed although it is currently being piloted by CLE. It includes the transition out of CLE services into the next stage of life for student participants. The program has an equally balanced focus on all three types of support for a program participant but all support is individualized to fit each student's needs. As soon as a student enters CLE, an individualized service plan (ISP) is created. One staff member explains how the ISP plan is integrated into the 3 main areas of support.

[An ISP is created] when they first come in and then every semester, we update them. It's a huge undertaking, but we want them to have short term and long term goals in each of those three areas in the program.

Academic. The first area of support offered by CLE is academic. Since CLE is a for-profit private program, it has the flexibility to support students at a number of different types of post secondary institutions and programs. Students who enter CLE can

work on taking classes towards earning an associate's degree, bachelor's degree or vocational certificate. CLE collaborates with a number of different certificate programs, two-year colleges and four-year universities as explained by a staff member.

[In the area of] academics, it can be anything. We're independent. We're not the school, we're not affiliated with anybody, so it opens it up for the students to be able to go anywhere and that's made for fun field trips for us. A perfect example is a young man [who] called me this morning [and] a year ago he came to visit. [During his visit] they visited a culinary academy here because he was thinking about going there.[W]e hadn't worked with many of the area schools yet, so we went to go visit the culinary academy and talked to them and told them about our program. And [their response was], "you know, we already have a student with Asperger's syndrome and we are getting a feel for that and we'd love to work with you." [The culinary academy said,] "Let's show you around" and so on and so forth. So, we get to kind of go out and explore these different options with different schools and it's all depending on what the students wants, so that's pretty unique.

In addition to supporting students in a variety of post secondary education settings, CLE offers a wide range of support to students to help them achieve academic success. One of the areas of academic support is offered through individualized tutoring. Each student is offered two tutoring sessions per week per class. As a result, students who carry a full class load of five classes a semester have the opportunity to receive up to 10 hours of tutoring a week. Student may choose to receive more or less time depending on how they are performing in a class as explained by a staff member.

We try to start out with two hours per class...um, plus SST, which is supervised study hall, but some need more and some need less and we shuffle accordingly and if a tutor comes to me and says the kid's got a test in two weeks and it's not looking good, then we'll get some more tutoring hours in there.

Students can receive individualized tutoring on a wide variety of subjects. One staff member gives an example of tutoring in a more non-traditional subject, all with the goal of helping the student succeed.

[W]e had another student who was tutored in Tai Chi, so the tutor would come in and they would go in the tutoring room and they would practice Tai Chi...absolutely! Again, it was like whatever they need to do.

Besides the individualized tutoring support, CLE also offers a group-based structured study time (SST) where students can receive extra support. It “is study hall to a degree, but there’s a staff member available who can help them out and make sure they’re on task [and] not on Facebook or email”. Depending on the student’s level of need, SST can be plugged into a student’s schedule every day during the week. Once students demonstrate that they are able to complete their assignments and organize their time, SST can be faded back to a few days a week or completely faded out of the student’s schedule.

Moreover, all CLE staff work collaboratively to support students’ needs but there is an academic coordinator who works very closely with the Office of Disability support (ODS) or other entities within each postsecondary setting to ensure that a student’s academic needs are being met. One CLE staff member explains some of the functions in this role.

I work really closely with the [institution’s] Office for Students with Disabilities, um, and getting them in the right classes, following the degree plan, asking for their accommodations, advocating, um, like well they had this in high school, can we try that, kind of stuff, to figure out what’s going to work best for the student, making sure that they go to class, doing walk-bys, sometimes escort them.

The academic support offered to CLE students help them to get acclimated to their new academic environment and ensure that the academic transition is as smooth as possible.

Social. Another area of support offered by CLE is social support. Students who come to CLE often lack the skills necessary to be involved in a variety of social activities with age-appropriate peers. In order to increase the student’s ability to be successful in this area, staff members work with students to help them develop the skills. Students are

provided with an average of three social outings a week. Evening activities can include a movie night at CLE or going out to dinner which are called “dine arounds” as one staff member explains.

We also have social activities in the evenings. Those activities are primarily for students that want to learn more about the Austin community. [For] students that have trouble making friends, students that are going to be bored on the weekends or in the evenings because they don't know how to ask someone to come watch a movie or hang out with them. And we [are] doing three a week now and they're in the evenings. [For instance,] this week we're doing a movie night here on a projector and actually our student leadership council decided they wanted to do that. [It will] probably be very, very popular. We get the most attendance when students promote the event, obviously, rather than me calling and trying to get a student to come back out (laughs). We're [also] going to the Olive Garden. Dine-arounds are the thing here. Dine-arounds are what we call them when we go to a restaurant. If there's food, they come...is kind of our mantra.

Students typically participate in these activities but the list also includes activities such as being a part of a newly formed student leadership committee as described by a staff member.

We just started it this year, we're very excited. [Students] have to apply and they have to interview and they're creating their own list of expectations. They want to plant a tree and [purchase] a picnic table to put out back by our little basketball hoop and have that to hang out.

Other events offered by CLE are geared to fit the interest of the college student as one staff member recounted.

We have town hall meetings or bar-b-ques, we'll pay. And then the other event this week...oh, they're going to see the Capitol, the Texas State Capitol. We've been to museums, we've been to the Capitol before, movies, bowling, pool, we're going to go to a coffee shop next week. We just, and I try [as] I plan all the activities so I try and just make it fit what a college student would do and places they'd go.

Advocacy in social settings is another skill set that CLE wants to help students acquire. Town hall meetings are an example of where students can demonstrate their advocacy skills.

A town hall meeting is where we meet once a month and it's going to be the primarily full time staff and the students. Full time staff if everyone you saw in our meeting today. [Usually] we feed them, which brings them in, and that's where we make announcements, that's where we have birthday celebrations...we have cakes and cards and everything every month. And we usually do some sort of programming, like last month we talked about respect, um, because we noticed, you know, staff was getting a lot of disrespect from a couple of students or being respectful of our community, you know, being respectful of the bathroom, being respectful of yourself. So we addressed all those and the way we did it, um, we just kind of did a dialogue with the students, we talked about all the different forms of respect, how students could show respect, how staff could show respect to students.

Under the umbrella of social support is a focus groups. Weekly focus groups are open to all students at CLE and allow students to process social interactions in a group setting with age appropriate peers who can offer feedback or support. The focus group is run by the staff psychologist and each group usually includes 6-8 CLE students. One staff explains the make up of the groups and how they are assigned.

We try and make it no more than 5 or 6...and we used to have, um, male and female groups and now we've just decided to do male [only] groups and female [only] groups. We've been doing that for past couple of years and we feel like it works well and it's pretty broad, they're really more looked at as support groups. The psychologist tries to implement lots of different curriculum, they talked about dealing with stress, stress management, test anxiety, dealing with your parents, processing drama that happens at CLE or how to stay away from college drama, how to ask someone out on a date, cool places to go in the community, so he does lots and lots of different things and of course, lots of social skills are developed in those groups, um, learning to listen to others, work as a team, they've played games before, lots of different stuff there. [The psychologist] will kind of form the groups based on who works well with each other. Sometimes we've done it by, you know, social skill level and

who works best that way, I think that's probably the way they done it this semester.

It's a chance to reinforce appropriate interaction, to give them practice at giving each other feedback, to talk about what's on their mind, they might bring up subjects, the staff members might bring up a subject, so that's what that is...it's not group therapy

The third major activity in the social arena of is mentoring. Each student in CLE is assigned a mentor and once a week the mentor and the student meet at an agreed upon location or event. One staff member explained what more about the qualifications of the mentors at CLE and the types of support they provide to students.

We provide mentoring. So mentors are basically students that are pursuing their master's degrees in the health services field, the social services field or PhD candidates that are getting their degrees in these areas. So, they will meet with the students one hour a week, one on one, to delve into social issues and it really just depends on the student. We have some that it's like, let's learn the basics, when you yell, people are going to perceive you in this way, with some students it's, I don't have friends, I'm going to learn how to make friends, or I want to get involved at my school on campus and I don't know how to do that. And they kind of problem solve and process issues that they[CLE students] might have. You know, they might need to go and vent about a staff member in the mentoring meeting and process something that has happened, so they're just kind of there as that big brother, big sister role to kind of process and they are there primarily to listen.

Mentors are supervised by the staff psychologist and have the educational backgrounds and expertise to effectively facilitate the mentoring process.

As a result of CLE's programming, students have many formalized opportunities to work on their current social abilities. Successful social interactions are often modeled at CLE in a variety of settings and were described by one staff as "the undercurrent" of all that CLE does.

social...which is, again, it's sort of a little difficult to define...but it's almost like the undercurrent to everything that goes on here because we're

sort of keeping an eye on that with every interaction that we have with students. If I'm in here with the door open...this just happened last week...if I'm in here with the door open a student will come flying in here...I need to ask you a question! And I'm like...stop...go back...you know, they know... she knew...she goes back and before I even had to say it she's knocking on the door and she's like, can I come in? and I said yes...she was standing like right here and so she started walking over and I said, now I want you to stop right there because I need personal space, you can either stand right there or you can sit in that chair. She made her choice and I was like, now you can ask me your question. And she knew! You know, she knew and so its stuff like that or just a lot of feedback on an individual basis.

Independent Living Skills. CLE believes that supporting students to live independently is just as important as supporting them in other areas of development. CLE offers an extensive amount of activities aimed at increasing a student's ability to successfully live at independently. Since CLE students are attending various post secondary institutions, participants primarily live in apartments as opposed to a residential hall on a college campus. CLE believes that their responsibility is to prepare students with disabilities for living away from home. This statement is on their website regarding the housing of the students.

The goal of College Living Experience is to prepare students for independent adulthood. For this reason, students live in apartments so they can learn to shop for groceries, cook, clean and manage basic maintenance such as unclogging a sink. Under the direction of an independent living skills coordinator, students gain experience and confidence in accepting responsibility for tasks of daily living. Equally important, CLE students receive the social benefits of sharing living space, responsibilities, interaction and friendship with a roommate. (College Living Experience, n.d.)

Similar to a residence hall, CLE provides a resident advisor who lives on the apartment grounds and is available for any type of emergency that may occur for students in the program. Also, program staff members have established open communication with a local apartment complex where a majority of the students

live in an effort to best facilitate successful experiences for the students and the property managers. Some students who do not require as much support may decide to live at home if location to CLE and the type of programming a student needs allows for it.

CLE students have several weekly structured activities to work on improving their ability to be independent. There are two key activities related to independent living. They are Household Organization (HHO) and Meal Planning and Preparation (MPP). A staff member explains how they work with students to develop these skills.

[In the area of] independent Living Skills we meet with students two hours a week. Students have the same instructor. We've done it [different] ways [in the past] where they have two different instructors, one for each hour. But we found that it is more effective when they have the same instructor for follow up purposes and for [developing] rapport. So the hours are called HHO, which is Household Organization and MPP, meal preparation and planning.

The first area HHO is an hour-long weekly meeting where a staff member meets with a student in their apartment to work on a variety of different goals. The goals of household organization could include a variety of topics from medication management to teaching students how to clean a vacuum or clean a toilet. One staff member commented, "We do a lot of toilet cleaning around here....yes, very comprehensive".

Hygiene is another area that many students often receive support if needed during their HHO appointment. One staff discusses a student's goals in HHO as it relates to organization of tasks in self-care as well as examples of other student HHO goals.

They're working on specific things like you know, showering...the organization of taking a shower, washing your hair, body wash, washing your feet. How long does it take to blow dry your hair...so they are really breaking that down. Also breaking down how long to get to school, how long to get here, how long to get there, so she is on time for things. That's a big focus for them right now.

Other students the focus all semester might be...I can't walk through your living room, there is so much garbage in here. I know I've been working with one student for two years and she has grown tremendously and we've been working on finding ways for her to remember [that] it's time to pick up the garbage, it's time to pick up my cans, time to clean the bathroom.[It is] working on [all] those skills, so for a lot of them it's getting into the routine.[T]he first thing we're going to do, though, is make sure they're proficient. A lot of our job is, you know, getting them to continue to do it and following through, later on. But initially we've got to make sure they do know how to do these things, so we know when we're gone its happening.

During my visit to CLE I was able to observe an HHO where the staff member and the student were making a list of chores that needed to be routinely completed and attaching a time value to each of them to determine how the student could break them up into manageable tasks to complete on different days of the week.

The next area of Independent Living is meal planning and preparation (MPP). MPP is an hour-long weekly meeting where staff members meet with students in their apartments and discuss all aspects of meal planning and meal preparation. Students spend much of their time during MMP learning how to prepare healthy meal options for themselves in their apartment. This process includes for some learning the consequence of their nutritional choices. A staff member talks about this experience with a student.

They go to college and they're like, I can drink all the soda I want! So, it's teaching them, ok, you're right, you can, you're the adult, but if you drink 10 sodas, what are the results of that? Yes, you gain 10 pounds and you can't go to sleep at night. So, a lot of it we also teach is the effect of this food on your body...that's been something I've been working with one student on knowing, this is a carbohydrate, this is a protein, this is a fat...how am I going to feel when I eat this? When should I eat it, should

I eat M & Ms before I run a race...you know, why not? How is it going to make me feel if I do that, what should I eat before I run a race, what should I eat before an exam, how is it going to affect my body? How is it going to affect how I feel? How does it affect my sleep? Basic food pyramid stuff, I mean, we've all seen it, but actually putting it into action, and looking at a food pyramid and making a meal plan for a day. So, it's a hard thing for...I mean, it's a hard thing for me to follow sometimes...so, um, I think in ILS we're constantly giving them tools, we're constantly giving them these tools and trying to set up routines and making sure they're proficient in these things. So working with them on ways that they can bring it back. Yes, many of them are in college, many of them aren't going to be into eating super healthy, they're in college, they still want to have fun, but we also want to teach them, these are tools that you have that can make you feel better, that can make your life easier.

Skills that students learn in the areas of MMP and HHO are reinforced by CLE staff members with the creation of different activities to showcase their talent. Staff members are flexible and creative when it comes to helping the students use the skills that adulthood demand in a fun way. One staff member discussed creative ways they get students to utilize the skills.

We also try and include as many contests and games as we can, so something in the spring we've had, this will be our third annual meal preparation and planning cook-off...so it's an opportunity for students to enter, under a category, and cook things and we've had taste testers come in and they win awards, so we try and reward them when we can. We've also had the cleanest apartment contest before parents' weekend...and they loved it! Yes! Whatever motivates them, which is typically money, food, praise...we do it.

In addition, to the major areas of HHP and MPP, CLE also offers weekly grocery groups for all students. Some students have greater independence with their own transportation but for others grocery group is a weekly time that they have a guaranteed ride to the local grocery store to buy food for the week. During my observations of grocery group, there were six students from CLE that piled in the van for one of the scheduled grocery groups for a weekly run to the local market. The students shopped

unsupervised and picked foods of their choice. It was easy to tell that several students had mastered the lessons of MPP and had a mix of nutritious foods while others still needed some work as they loaded their baskets with cake, soda and magazines.

The last activity emphasized in the area of independent living is a weekly financial meeting. Financial independence is an equally important task in managing your household independently. Students meet once a week with a staff member who has the title financial advisor. During this weekly meeting students can discuss topic including how to create a budget to how to set up automatic payments on line. One staff member gave more detail about the types of activities covered in that weekly meeting and the variance of student's needs at CLE as it relates to their finances.

[During the] weekly meeting to go over their budgets and that's huge. It's paying the bills, paying the rent. But it's also looking at the different ways to do it. You can write a check, you can do it online, [or] you can [have] an automatic deduction. Talk about credit scores [is included]. And how that starts now because you're renting an apartment and your name is on there and you've got to think about that. So that's a big piece and then figuring out how to manage their money and we sort of have this informal level system for that. We have some students who can only have their debit card with a staff member standing right next to them watching the ATM machine so they don't take out all their money. Because we have a lot of students that are impulsive and they do a lot of impulsive spending and then we have other [students] who are pretty independent, they're fine, they have their checks, and they have their credit card, a debit card, no big deal. And that also kind of can be a little bit fluid, we have one student who is very responsible but then he got here and the social part was crazy and he's over 21 and people are like, hey, and he overspends.

Transition out of CLE. Transition out of CLE is another concern being addressed by the program. CLE saw a need for providing support to students leaving the program making a successful transition. They are now piloting activities to address this issue. For student participants, leaving CLE can mean many different things. Some will be looking for employment, moving to a new city, or transferring to a four-year university. The

average participation of a student in CLE is about 2 ½ years. Once a student is ready to consider transitioning out of CLE to a less supported environment, every attempt is made by CLE staff to make that transition as smooth as possible. A staff member shared experiences which confirmed the need for the support with transition..

As students begin to move on, typically I think students are here about two years; it just depends on the student. We've seen the need for [support during the transition out of CLE]. [For instance], this one student is going to go to a four year college. [In doing that] they're leaving tutoring, ILS, us helping them advocate in the school, mentoring, focus groups, events planned every night for them to go to, they are leaving all of this. And now they're going to go and have to do it on their own, so yes, of course they've grown, yes they have a lot of skills, but taking those skills and applying it to a brand new setting...when you have Asperger's that huge, you're in a whole new place. So, I think we've recognized that we definitely need to help students ease into that more, so if you're going into a four-year college, ok, you're doing this on your own for the first time...let's start with, you know, what's the office for students with disabilities like...who could we get in touch with, where is it? What accommodations can you get from them? How can they help you...is there tutoring on campus? How much does it cost? What classes are you taking? Who's someone that you could hook in with at the university that can help you...ok, where are you going to live, do you want to live in a dorm? Do you think you'd do better to have a roommate or do you think you'd prefer living on campus? How are you going to get to class? How are you going to manage your academics, do you have a plan? What works? All these tiny, tiny, tiny little things go straight into that [meeting].

CLE staff members want to provide as much assistance with transition as needed for the students to have a smooth transition out of the program. It is important for students to experience a reduced level of program support before solely relying upon natural support systems.

Outputs: Participation

This section discusses the participation component of the logic model. The participation column refers to individuals who are reached by the activities of the

program. The rationale behind the importance of this is that activities need to be delivered to a specific group of individuals before the expected outcomes can occur (Powell-Taylor& Henert, 2008). CLE casts a wide net in the market of potential clients who can benefit from the program. The primary focus of CLE is to reach the target population of program participants; a wide variety of students with disabilities. In order to reach this population, CLE has identified local high schools in each site jurisdiction. Specific targeted marketing is given to high school counselors who may be serving students with disabilities who would benefit from support through CLE as they pursue their next like transition into a post secondary education opportunity. In addition, while providing support to CLE student their parents and families are reached by the program. One staff member discussed their ongoing communication that CLE has with the parents of program participants.

We give some structure to that transition which is helpful to parents and students. It's not, you know, always as much structure as parents would like and it's usually....more than what students like...so we try to keep it somewhere in between so both groups are fairly happy with it.

Moreover, working with different offices of disability support (ODS) on each campus is critical for students to receive as much comprehensive support as possible. One staff member discussed the importance of the collaboration with CLE and ODS.

[At ACC, in] the ODS office my partner in crime over there is really good at like, well if we do this or if we register for this class or looking at the best way to serve the student, so um, that is, I think, the best resource and then having her do the campus stuff, getting to the departments that don't want to [or won't] know they can work with me or a lot of the professors, even if I go with the student, don't want to talk to me during office hours, so working with that to let them know, yeah, you can talk to her, so that relationship is really important to my job.

For CLE to create a program that reaches its intended population and targets outcomes it is also necessary to reach out to area post secondary programs. This connection allows CLE to be able to support individuals in a variety of educational opportunities.

Intended Program Outcomes

As discussed earlier, program outcomes are the benefits or the direct results of participation in the program for the individuals included in the target population. The desired outcome of CLE is not only academic success but a greater focus on increased independence in all areas of life as stated by this staff member.

Our mission is to foster the skills that will help our students be successful living independently. I mean it's pretty simple, although that's complex because it involves an awful lot of different variables. But, our goal really is to get students to not need us.

The outcomes discussed in this section are broken into four areas: 1) academic, 2) social 3) independent living and 4) transition out of CLE. Each of these four areas will be addressed relative to short, medium and long-term outcomes. Short term outcomes can be described as essential knowledge that is necessary for participants to be able to achieve the medium and long term goals. Medium term outcomes include the resultant behaviors or actions. While the long term goals demonstrate how the target population will be different and discuss the ultimate impacts of the program.

Academic outcomes. The ultimate academic goal for students participating in CLE is to receive a college degree or vocational certification. The diversity of degree paths being pursued by CLE student include working towards an associate or bachelors' degree to attending a culinary institute or completing a vocational based program. In order for students to be able to achieve this long-term goal, they work with CLE staff members to

increase the strategies they have to be successful academically and then taking those strategies and turning them into performance of desirable behaviors as described by a staff member.

[We want students to demonstrate] going to class first. In addition, to that using their accommodations. They need to know what that looks like, how to ask for them and why you should use them, when you don't have to use them. Just kind of knowing all that, knowing their disability and how that affects them in school.

Once students are able to demonstrate success in their academic work, some students are empowered to make a transfer to a more comprehensive four year university as described by a staff member.

He was with us for two years at the community college and transferred to a four year university in town. He still retains some services with us, the academic services, but he is well on his way. But he knows, he will say, I couldn't have done this without this kind of support to get me started.

Other students are able to find academic success for the first time as explained by another staff member.

He's come a long way and he had a break through with his studies. While working with a tutor, it was last spring semester, I think. And you know, with Asperger's, students oftentimes it's like here, you tell me how you want it to look. You know, because it's their idea and if it fits with their framework they're going to buy in. So, it's like, ok, this is the material, what do you recommend? And he took control of his learning in a tutor approved way and with follow up and he got an A in this class. [It was] his first A ever and that really propelled him through the summer. He got another good grade in the summer. [In another class] he went from an F to an A in four weeks last fall...I didn't even think that was possible in these classes!

Moreover, other students for the first time are taking full accountability and responsibility for their education. This accountability is seen in the shift from the advocacy of their parents or guardians to them taking responsibility to get their own needs met as described by a staff member.

In a year we should see better advocacy abilities by the students. I would say...um, that's another example for this population is that we've seen studies that say parents of students with disabilities are incredible advocates. They go to IEP meetings twice a year, they talk to who needs to be talked to, and they really push to make sure that their child receives the services that they think they need. In college there's a big change there, most colleges don't talk to parents regularly. So there's a bit shift between the parents being responsible for the academics to the student becoming responsible for that.

All these outcomes allow students who participate in CLE to secure academic success in a variety of different ways.

Social outcomes. The long term goal of CLE's programming to support students socially is to have program participants be able to actively engage in a variety of activities throughout their communities—campus or otherwise. Students engage in structured and informal activities as described by a program staff member.

One of the most obvious improvements to parents and our staff is social improvement. I think, especially for students who come in with developmental disabilities or autism diagnoses. A great thing that our program does is it gets students here, um, quite a bit of the time, so they get a lot of experience with just real common everyday short interactions that we all have with people. So every time they come [to the CLE site office] there are 10 or 15 staff that model how to say "good morning" to someone and [other spoken rules such as] maybe say hi when you pass them in the hall, but you don't not say hi to them every time that you see them and pass them in the hall.

Students also show improvement toward developing a social network. The students who attend CLE are very welcoming. During my visit, students were interested to learn where I was from and tell me all about their experiences in CLE. One staff members explained how friendships are made easily and barriers are overcome by students as they notice that other students in CLE are having similar challenges.

That's a really helpful part of our program. The fact that our students meet other students that are around their age group and have some of same challenges and experiences that they've had. so we can get people from

rural Texas, um, who they're the only one in town, maybe, who had a disorder or an Asperger's diagnoses and um, they come here and they are just amazed to find out that there's this many people in the state who have had experiences like that they have. So friendships are made really quickly within the first couple of weeks, [especially] with the number of activities and the amount of time that our students spend in our center. We've had a number of parents say, on Christmas break after a semester or after a full year, on summer break, that's one of the biggest changes they've noticed [is] that their student feels more comfortable talking with people, [creating] small talk and having little conversations.

Social growth can be viewed in a variety of ways. Whether it is establishing a new social network or engaging in a new variety of extra-curricular interests, both represent opportunities for social growth. One staff member staff member noted that students experience the most positive change in the area of socialization.

I think students grow most here socially, I'll say that. I've seen students come in and they don't communicate, they won't want to talk to us, we've had students, not turn in assignments for whatever reason, we've had students that come in and that have no friends and they come here and they find other students that are a lot like them...um, or that they like playing video games or they like, um, doing the same stuff or maybe they understand them a little bit better and they grow exponentially and they feel comfortable and safe. It does take time, I will say that, you can't get into our program and expect in one month you're going to be a completely different person. I'd say, over time, students do steadily improve in all sorts of ways, whether it's a tiny little thing or it's huge, but they do improve.

Independent living outcomes. Living independently in an apartment while managing all financial responsibilities and day -to-day activities of living is the goal CLE would like to see all of its students achieve. For many students participating in CLE, this is the first time they have been away from the environment where they grew up. The long term goal is for students to be able to live independently including keeping a tidy apartment. CLE wants student to be able to manage their finances, prepare their meals, take care of making appointments, and manage their medication independently. In order

to do these things, CLE starts with basic and has wake up calls for CLE students as explained by a staff member.

Initially we have students on wakeup calls and we have some students who are great, you never have to call them, they're off them right away. Others, you know, eventually we have to sit down and go, look, we're not the Hilton, how are you going to start doing this on your own? The point is to figure out how you're going to do this for yourself, and um, what we, the typical structure of it is, if they call us before we call them, if they call and say I'm up, I'm going, I'll be there...for two weeks, 10 days, then we'll take them off the wakeup calls and they're done, so it's...you know, demonstrate the you can do it and we'll pull back, we'll take that off their and you can do something else with your time, so...that's kind of how we operate.

As students continue to participate in the program and follow the individualized programming provided staff noted that progress is seen very quickly.

Many of our students catch on very quickly, um, so after a year many of our students have the ability to live in an apartment pretty much on their own, we also lump the financial in with independent living and that's something where we see quite a bit of growth with students. After a year most of them are familiar with how to make a budget and how to stick to a budget and we don't see the overdrafts or the overage charges.

Transitioning out of CLE outcomes. The focus on supporting students' transitioning out of CLE is, as stated earlier, a recent addition to the services offered by CLE. Several sites are piloting this area of support after several students expressed a desire to receive assistance in making a smooth transition out of the program into their next stages in life. The most common settings that students are being supported to transition into include employment and transferring to a four-year institutions. CLE hopes that by offering this fourth component that program participants will have a foundation of all the support and strategies available to help them be successful. While visiting CLE, I was able to observe one student during her transition meeting. During the meeting, staff provided a mock interview based on a set of questions that they had been developing of

what may be asked during a job interview. This mock interview was being held after the student had already worked with the staff member to prepare a resume. One staff member recounted her work with a student leaving at the end of the summer.

[With one student] we've been working on transition since fall and it's better for her because she's starting to ease into the idea that "I'm going to be leaving after summer". [To prepare mentally] and say "I'm going to be leaving, this is what I'm doing next". So I think having that year where they are starting to slowly gravitate away from us, to know that they are going to go do something new, is huge for them. Definitely huge, so it's definitely something we needed and we're working on right now and with my one student we've had great success.

External Factors

External factors are "conditions that influence the program's success and over which the program has relatively no control" (Powell-Taylor & Henert, 2008). There were five major external factors that were specific to CLE that emerged. These external factors included student motivation, student use of drugs and alcohol, the relationship with post secondary education institutions, distance of the location of CLE to some of the support post secondary education programs, and the financial cost of the services.

Student motivation was the first external factor identified. Given a student's 12-month contractual commitment to CLE, consistent student motivation can sometimes pose a challenge for CLE staff members as described.

It certainly is difficult, probably most difficult when we have a student decide that they don't want to do anything, they don't want to be here, they don't care if they fail their classes, they just don't want to do anything...um, so we do, if internal motivation is lacking we'll try to externally motivate. Usually we'll try to do that with a reward system set up through the parents...that's adding...ample money and cars are two things that we noticed students love and really motivates them.

The second external factor noted by staff members was students' potential usage of drugs and alcohol. Students participating in CLE come with a myriad of challenges which coupled with alcohol or drug use could potentially affect the ability of the program to impact their success. As discussed by a staff member, college students are typically in a developmental and experimental stage in life where they are susceptible to new influences that could affect their ability to succeed.

Drug and alcohol issues are another big one with this population. I guess there's a lot of different reasons why they would use. The first two, in my mind, that would probably be most important is, the amount of freedom that they have, that there is no parental oversight and they're exercising their freedom and the fact that people at this age are pretty experimental, they want to try new things and find out what it's like. Most of our students, you know, just kind of delve into alcohol drugs and it doesn't really affect their functioning too badly[but] there certainly are a few who get into more regular use and could probably qualify for dependency. So we spend, I guess I spend a lot of my time dealing with those issues.

The third external issue gleaned from CLE staff members is the nature of relationships CLE has with the postsecondary educational organizations enrolling their students. Since CLE is an outside entity and is not a part of any specific post secondary degree or certificate granting institution, the program must rely on partner institutions to effectively serve their clients in the area of academic support. Each of the six CLE sites works in collaboration with local higher education and vocational institutions in order to establish a working relationship that will appropriately support the students. In this regard, CLE does not have control the culture in of the higher education institutions nor is the CLE a major stakeholder in campus decisions. One staff members discussed the importance of communication with these institutions and the barriers for some CLE sites to access certain campuses.

There are other CLE sites that can't go on campus at all. [One our partner institution] kind of tried that, but since I worked there and kind of know the loopholes. [So to avoid restricted access] I registered for a class so I was a student so they couldn't [restrict my access]. There is just that fear [of an outsider coming into their academic community]. We're not there to look at how professors are teaching or to cause problems, we're mainly there to get students to class which each professor should welcome but it's not always welcome. So I think that is a huge barrier, even though we meet with [the post secondary institution] before we built the site and everyone agreed to work, but a couple years down the road not one knows who talked to who or what we are. So it takes a lot of time to build that relationship and to see the [demonstrated] success. [Where we can show that] we worked with student and...yes...this was a success and then they start talking to the other people in the departments and stuff.

If the college campus has not established a strong relationship with CLE where the culture of the higher education institution agrees with and supports the mission of CLE, it makes it very challenging for program staff members to connect with faculty and staff on the various campuses in order to better support student success. One staff member recounted the challenges of working with faculty on a campus where connections had been made but the culture didn't reinforce the need for collaboration.

One challenge is definitely the professors and the confidentiality. [Professors sometimes] do not understand. We have a written release with each student that goes with the accommodation letter [sent to the each professor] at the beginning of each semester. [Some professors] are just scared to allow any of that and that goes all the way up. We've had departments who have just made the blanket statement, "You won't talk with CLE". And it's like, ok, wait a second, can we talk about this. Even with a letter from OSD? We try sending out a letter saying this is who we are, we're on campus, we're trying to do tables [at events]. We're at some of their main [college] events, but until you have a student in your class, you're not going to look at all that. So I think that's probably one of the biggest challenges.

CLE's proximity to many of the post secondary institutions students attend could present a challenge. It can be difficult to support a variety of post secondary opportunities when distance is an issue. One staff member discussed the proximity of

CLE and working with an additional institution, “I think eventually [Private college name], but they’re so far away that it makes it hard to look at full program with [that private college], so that’s why [the local community college] is so handy for this location”. While the diversity of support for students attending CLE is a benefit, campuses that are closer to the program location can provide more ease in visits that are needed to support students fully. The site I visited was located less than a quarter of a mile from the local community college but was quite a distance from the four year public state institutions that some of the CLE students attended.

As the current American economy has plummeted, cost has become a major external factor in the CLE’s success. CLE comes with a major financial cost to students. Students and parents must be able to afford the additional fee on top of rising tuition costs. The expense of colleges plus service costs may preclude some eligible students from participating. One staff member addressed this issue.

[CLE] is a private organization so there is a monetary issue or major financial consideration. However, there are also a lot of grants and loans, etc, available as well. [The admission coordinator] does a lot with trying to figure out, trying to help people get the money to get here. So, as far as opportunity, other than the financial consideration, we bend over backwards to work to get anyone in here that wants to be here.

Program Assumptions

Program assumptions can be described as a set of expectations that describe “why a program does what it does and provides the rationale for expecting to that doing things that way will achieve the desired results” (Rossi, Freeman & Lipsey, 1999, p. 156). The assumptions of CLE are the basis of the program theory and provide a greater understanding of the decisions made about the program. CLE had four program

assumptions that were observed and articulated by staff members. The four assumptions appear to be established based on communication and protocol with the corporate office as well as previous experiences of staff members providing support in CLE.

The first assumption is based on the importance of individualized intervention and programming. CLE serves a wide variety of individuals with disabilities so the challenges for each individual need to be assessed and programming provided based on that assessment. Every student has an individualized service plan that includes individual goals for each student in the three skill areas--social, academic, and independent living. Students receive short-term, and long-term, and annual goals that guide the programming described by a staff member.

Well we have individualized service plans that we use, so basically what we do for all areas of the program, we look at each student and then we make two long term goals, um, and with each long term goal, a couple of short term goals, um, we actually also have annual goals which is kind of a very broad goal so it might be...to become more assertive or it might have something to do with social skills and we kind of take that one big annual goal and make sure it has to do with all the rest of their goals here.

Individualization has such a major focus that CLE sites use it to tailor each student's programming to meet their specific needs and develop a program plan for participation in the program. On staff member elaborated on the importance of individualization.

Individualization is very important...which it has to be with this population, that's the whole point, if they fit somewhere else they would be somewhere else, right? So you've got these square pegs that aren't fitting in a round hole and my question is, why does the hole have to be round? Can we not change things in a little bit for them and have them change a little bit, their behavior and somehow get them to be able to function

The second assumption of CLE focuses on the idea that all staff members must work collaboratively and be in constant communication with each other to address

students' needs. Staff members at CLE are assigned to specific areas of the program but given the nature of the program there is a lot of overlap. In order to keep to date on all student progress, full-time staff members meet twice a week to ensure up-to-date progress on all students is communicated to all staff members. The director leads a meeting that is a round table discussion where each student is discussed. One staff member discusses how interconnected all the services at CLE are for each student.

I speak with someone in [independent living skills](ILS) and mentoring every day. I speak to the psychologist every day about a handful of students. So, let me give you an example, ok, we had a student who was having trouble with mom and dad. I spent 40 minutes of a 50 minute tutoring session yesterday trying to redirect the student. Giving him some coping skills so we could do the academic assignment which falls under my purview. When I left that meeting, I went directly to his mentor and I said, [the student] is having trouble compartmentalizing and we need to focus on this work, what are we going to do? And then we sat down and wrote down what the goals were going to work on for [the student]. So yes, it was in the mentoring area, but it directly affected his academics and it was actually an academic person, a tutor, who broached it. We try to get everyone on the same page, [so] we're repeating the same things over and over. Every time the student comes, I don't care who they go to, they're going to hear the same thing.

Yeah, it does kind of overlaps and a lot of it, to look at it, I guess follow up in all those areas, a lot of it has to do with who's following up because frankly there's some stuff that you don't know where it fits and we're going to do whatever we need to do to get the kid out the door successfully. So, if that means, yesterday I was out in heels hiking through the woods because one of the students needed landscaping photos! Or to, you know, on my hands in knees in the bathroom cleaning up after someone who got the wrong med interaction.

The third program assumption revolves around the confidentiality of the students. Since student participating in CLE have several hidden disabilities. An individual's disability is never discussed. In fact, the program believes that because of confidentiality rights it is imperative to keep that information private.

We're not allowed to disclose who has what. People don't primarily talk about their disabilities, um, well we can't talk about the disabilities, they're certainly welcome to share, but we're not allowed to do that.

The last program assumption revolves on the level of support students are given at CLE. After speaking with several staff members and learning more about the activities that are offered through the program, it is a given that if a student signs up for a 12-month full time contract, students will be given as much support and assistance as possible until students can demonstrate they have the skills in order to be successful. For instance, each student receives a weekly color coded schedule that provides all of their major activities during the week. One glance at any students schedule showed me that there was little down time offered to students during the week with SST, HHO, MMP, tutoring and other meetings plugged into their schedule. There is a staff member who generates weekly schedules for all the students in the program.

Research Question Two

This section of the chapter relates to the second research question: *To what extent do the programs relate to the program standards of the Shaw and Dukes' (2005) AHEAD disability support recommended guidelines?* The following findings are based on the completion of the relatedness survey by program staff at CPSAS.

In 2005, Shaw and Dukes identified 28 research-based program standards that higher education institutions should use to evaluate disability services. These standards were approved by the membership of the Association on Higher Education and Disability (AHEAD). In 2006, Shaw and Dukes revised these program standards for disability offices and determined there were 90 performance indicators that were essential for best practices in the support of students with disabilities. The revised list of 28 standards

reflects practitioner expertise in the field and was reduced to eight themed areas of programs standards. These standards include: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustment, (5) Counseling and Self Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development (Appendix F). These new standards and performance indicators also addressed the evolving needs of the field and provide clear benchmarks for an institution and its personnel to assess program effectiveness (Shaw & Dukes, 2005; 2006).

The questionnaire (Appendix G) was given to all full-time staff members and any part-time staff members available during the visit to CLE. The program staff member were to rate their' perception of the frequency that CLE related to the Shaw and Dukes' (2005, 2006) revised list of 28 Professional Standards (Appendix F). The 10 survey responses represent a 29% response rate relative to the entire CLE Staff, but an 80% response rate for the full-time staff. Of the ten surveys received, one survey had to be dropped from the analysis because of the questionnaire was incomplete. Limited access to staff was one reason for the limited response rate. Part-time staff members were not available to receive the survey in person so they received the questionnaire in assigned mailboxes. Only part-time staff that checked their mailboxes during the time of my site visit participated. Also, professional staff members at the site were not very receptive to survey itself. Some staff members were very concerned that the survey was trying to measure and rate the type of services offered through CLE. There was also a concern by a senior administrator that staff would not understand the nature of the questionnaire so encouragement from that level of the organization was not provided to other employees.

All staff members who completed the survey were asked to rate how each of the 28 Shaw and Dukes AHEAD program standards related to the CPSAS using a 4-point Likert scale. The responses captured how often each program standard related to CPSAS. Responses were coded with a “1” if respondents thought the program *never* met the program standard criteria, a “2” if respondents thought the program *rarely* met the program standard criteria, a “3” if respondents thought the program *occasionally* met the program standard criteria and a “4 if respondents thought the program *always* met the program standard criteria. Respondents were also given the option of marking a "5" if the program standard was *not applicable* to CPSAS. Using data from the responses from each question, new subscales corresponding to each of the 8 themed areas was created by calculating the mean scores for all questions answered within each themed area.

Table 3 provides descriptive statistics (i.e., means, SD, minimum and maximum scores) regarding staff ratings of the program in each of the themed areas. As indicated in the Table, CLE program received the highest ratings on the program standards in the following themed area: Information Dissemination (Mean = 3.48;SD= .340), Academic Adjustment (Mean= 3.76; SD= .251), and Counseling and Self Determination (Mean= 3.89; SD= .333). These responses demonstrate that all surveyed CLE staff perceived that the program met the standards in these themed areas at least occasionally or always, thus demonstrating that they are a component of the program. On the other hand, there was more variance and inconsistency in program staff responses in five other areas, including Consultation/Collaboration, Faculty/Staff Awareness, Policies and Procedures, Program Administration and Evaluation, and Training and Professional Development. As

indicated by the minimum and maximum scores on these items, some staff members noted that their program rarely met the standards in these areas.

Table 3

Themed Areas of the Program Standards of CLE Relatedness (n=9)

Themed Areas	Min	Max	Mean	SD
Consultation/Collaboration	1.50	4.00	3.44	.810
Information Dissemination	3.00	4.00	3.48	.340
Faculty/Staff Awareness	2.50	3.50	3.25	.375
Academic Adjustments	3.33	4.00	3.76	.251
Counseling/Self Determination	3.00	4.00	3.89	.333
Policies/Procedures	1.20	3.60	2.60	.829
Program Admin/Evaluation	1.86	4.00	3.11	.768
Training/Professional Dev	2.00	4.00	3.61	.656

The following section will further examine the areas of CPSAS that were most related to the Shaw and Dukes program standards and offer some additional triangulation to validate the findings in the areas of a) information dissemination, b) academic adjustments and c) counseling and self determination.

Information Dissemination

Information dissemination is focused on communication across the institution regarding disability access. The standards under this themed area focus on three resource bases that disseminate information: (a) institutional publications both electronic and

printed, (b) access to communication devices for individuals with disabilities, and (c) providing information about available resources to students with disabilities. While CLE is not a part of an academic institution, the programs works hard to provide the areas high schools and colleges with information on the types of supports available to students in CLE. In addition, internally there is a lot of communication and resources that are made available to staff on student's diagnosis. One staff member described one of her weekly duties which include keeping staff members up to date on research and other new resources for the different disabilities served at CLE.

Here we have a weekly email that goes out that has everything in there from hey, here's the new research out right now on dealing with dyslexia. [We have] students with this type of dyslexia. This is something I do every week. It's the most fun of my week, compiling those emails after reading new books [and other material]. As I read I think "God, that'd be awesome" [so I] highlight the information to send out. In additions, the tutors also chip in, hey, look what I found [that may be a helpful strategy]. We also have a meeting where we all sit around and talk about what has worked and what's effective and what's not and so the students get great academic tutoring here.

Academic Adjustments

The fourth themed area, Academic Adjustments, is the determination and provision of appropriate academic adjustments in order to provide equal access for college students with disabilities. The standards addressed in this fourth area include a student plan for the provision of selected accommodations, aiding students to determine appropriate academic accommodations and consultation with faculty to ensure that the reasonable accommodations do not fundamentally alter the program of study. CLE works with participants to help them determine what accommodations are available to them, why those accommodations are helpful and how to ask for the accommodations when needed. The academic coordinator works with participants on these skills as well as

working with the ODS offices on the campus to consult with faculty should there be a concern about the accommodations offered.

Counseling and Self-determination

The fifth themed area, Counseling and Self Determination, is centered on service delivery that encourages independence for the students with disabilities. Self determination is also an essential component in student success. Self determination is defined as connection between skills and beliefs that enable a person to be engaged in autonomous, self-directed, and goal oriented behavior (Shaw & Dukes, 2006, p. 24). This philosophy assumes that when one acts under these assumptions, there is a better opportunity for an individual to take control of his/her life and assume a role of a successful adult in the society. CLE addresses this theme by the mission of the work they do to support the students. One staff member talked about the culture of CLE.

We really want open dialogue, we want them to say, this is not working for me, this is not what I want. You hear a million times the word advocate here. We want them to advocate. So, you know, if a student flies into my office and is like, I don't want this on my schedule, this isn't going to work for me at this time, I'm going to talk to them about the way they approached me [and their tone] but I'm also going to talk to them about how I am pleased that they are coming to me. I may [model] this is how you could request it in a more appropriate way but you are standing up for yourself and saying this isn't what I want.

Summary

CLE is a for-profit based model to support students with disabilities in achieving independence in all areas of life. While CLE's website included individuals with HFA or AS the program serves students with a wide range of disabilities. The program works to provide support in the academic, social and independent living areas. In addition, the program is piloting a fourth area that focuses on helping students prepare for the

transition out of CLE. The outcomes that CLE works with participants on include independence in all parts of an individual's life not just with degree attainment. To capture an accurate picture of all the program components, I created a logic model which included the target population, CLE's inputs, outputs, outcomes as well as program assumptions and external factors of the program.

CLE is one of the divisions of the for-profit organization Educational Services of America. The division began its inception in 2002 and has grown from its initial site in Florida to include an additional five sites in Texas, Colorado, California, Illinois and the District of Columbia. All the sites work to offer a standardized set of services to students with disabilities. Each CLE site includes several full-time staff members who offer support in specialized areas.

The program has several evaluative pieces to measure student performance and standards of CLE, but the programs that are included in this area have not established a formalized set of benchmarks to measure effectiveness. The goal of the second research question was to determine how CPSAS related to each of the program standards developed in 2005 by Shaw and Dukes to measure effectiveness of Disability Support offices in universities across the nation. This study hoped to offer this initial attempt to determine if the elements necessary for disability support offices may be similar to the areas necessary for specialized programs that support college students with HFA/AS in higher education. The results from the nine staff members indicated that CLE related to three areas including: a) information dissemination, b) academic adjustments and c) counseling and self determination.

Chapter 6

DISCUSSION OF FINDINGS

Introduction

With the 2006 publication of The Spellings Commission Report, *A Test of Leadership: Charting the Future of U.S. Higher Education*, a call emerged for higher education institutions “to invest to develop new pedagogies, curriculum and technologies to improve learning” (U.S. Department of Education, 2006, p. 5). The Spellings Report (U.S. Department of Education, 2006) also claimed that too little attention has been paid to “innovations that would increase institutional capacity, effectiveness and productivity” (p. 14). By providing empirical information about higher education innovations designed to support students with high functioning autism (HFA) or Asperger Syndrome (AS), the current study is a first step toward answering the call of the Spellings Report as well as providing empirical support of the programs available for college students with HFA or AS who want to earn a degree. As the next generation of students enters higher education, there will be an increase in the number of students with HFA or AS seeking viable higher education opportunities. These students are seeking educational opportunities that effectively address all of their needs: academic, social, and living.

The purpose of the multiple case study was to examine the types of support programs in higher education for college students with HFA or AS. Although, some support programs exist, there are no empirical data to document the types of efforts established by these programs. After determining what programs were available to support college students with HFA or AS, this study (1) described the characteristics of two different models by completing a program logic model for each of the programs

examined, (2) determined how the programs relate to the Shaw and Dukes' (2005; 2006) AHEAD postsecondary disability program standards, and (3) determined to what extent the characteristics of institutional type and funding source made a difference in how the programs were structured and their outcomes.

This final chapter discusses a summary and analysis and indicates areas for further research, and implications for practice and policy. The chapter also describes the finding for the third research question: To what extent do the characteristics of institutional type and funding source make a difference in how the programs are structured and their intended outcomes?

The chapter is divided into the following sections: summary of findings, an analysis of findings including a comparison of the two cases in the study, an analysis of the third research question, implications for research, implications for policy, and implications for practice.

Summary of Findings

This section will provide a brief summary of the study's findings for the two research questions. The first research question examined was: *What are the characteristics of the selected programs in the study for college students with HFA or AS?* To answer this research question a logic model was created to address all components of the two programs in this study: the College program for students with Asperger syndrome (CPSAS) and College Living Experience (CLE). The logic model of each program identified the target population; the program inputs, which included the program's activities and who was reached by these activities; the program outputs; and

the program outcomes. In addition, the program's assumptions were documented as well as external factors influencing each program.

CPSAS demonstrates the institution supported model of these programs by being the oldest university supported program for students with HFA or AS who want to obtain a degree. CPSAS was established in 2002 and is housed at Marshall University in Huntington, West Virginia. CPSAS exclusively served college students with HFA or AS and offered several outputs labeled as activities in four major areas- transition to college, academic, social, and independent living. While the major focus of CPSAS was degree attainment for its participants, the program also had outcomes in the four majors areas mentioned above. In addition, CPSAS determined four program assumptions that were the basis of its program theory. These assumptions were distinctive to CPSAS and were observed in the culture of CPSAS and were often articulated by staff members. These assumptions will be analyzed in further detail in the next section as illustrated in Table 4. Also, those interviewed at CPSAS identified three external factors that could affect the program's success. The completed graphic representations of the logic model findings were detailed in Figure 2.

CLE is one of the divisions of the for-profit organization Educational Services of America and began its inception in 2002 and has grown from its initial site in Florida to include an additional five sites in Texas, Colorado, California, Illinois and the District of Columbia. All the sites work to offer a standardized set of services to students with disabilities. Each CLE site includes several full-time staff members who offer support in specialized areas. In contrast to CPSAS, CLE served a wider target population of individuals with disabilities that included individuals with HFA or AS. The program had

an extensive amount of resources in the form of staff, technology, space, and vehicles in order to support the students in the program. The outputs ranged in activities in four major areas: academic, social, independent living and transition support out of CLE. While the overall projected outcomes of these activities was to increase the participants' independence in all areas of life, outcomes focused on the four mentioned areas. CLE also reported a set of three program assumptions that guided its program theory. In addition, four external factors were identified that could impact the program's success. All of these points were illustrated in a logic model that graphically represented the findings in Figure 3.

The second research question examined was: *To what extent do the programs relate to the program standards of the Shaw and Dukes' (2005) AHEAD disability support recommended guidelines?* Questionnaires were provided to staff members at each of the programs for the staff to provide feedback on how they perceived their program related to each of the 28 program standards created by Shaw and Dukes. The responses were given in a 4-point Likert rating of the perceived frequency that the program did each of the program standards. Using data from the responses from each question, I created a new subscales corresponding to each of the eight themed areas by calculating the mean scores for all questions answered within each themed area: (1) Consultation/Collaboration, (2) Information Dissemination, (3) Faculty/Staff Awareness, (4) Academic Adjustment, (5) Counseling and Self Determination, (6) Policies and Procedures, (7) Program Administration and Evaluation, and (8) Training and Professional Development (Appendix F).

CPSAS staff members completed the questionnaire and rated their perceptions of the frequency that CPSAS related to the Shaw and Dukes' (2005, 2006) revised list of 28 Professional Standards (Appendix G). The 13 staff members who completed the questionnaire represented an 86% response rate of the entire CPSAS Staff. All staff members who completed the questionnaire were asked to rate how each of the 28 Shaw and Dukes AHEAD program standards related to the CPSAS using a 4-point Likert scale. CPSAS received the highest ratings on the program standards in the following themed areas: Consultation and Collaboration (Mean = 3.85; SD = .315), Information Dissemination (Mean = 3.77; SD = .370), Faculty/ Staff Awareness (Mean = 3.73; SD = .260), Academic Adjustment (Mean = 3.90; SD = .210), and Counseling and Self Determination (Mean = 3.85; SD= .376). In the other areas-- Policies and Procedures, Program Administration and Evaluation, and Training and Professional Development there was a greater variance of the responses given by program staff of CPSAS.

CLE staff members completed the questionnaire and rated their perceptions of the frequency that CPSAS related to the Shaw and Dukes' (2005, 2006) revised list of 28 Professional Standards (Appendix G). The 10 staff members who completed the questionnaire represented a 29% response rate relative to the entire CLE Staff, but an 80% response rate for the full-time staff. Of the 10 surveys received, one survey had to be dropped from the analysis because the questionnaire was incomplete. The limited response rate was partly due to limited access to staff in that part-time staff members were not available to receive the survey in person so few part-time staff members completed the questionnaire. An additional limitation was the lack of receptiveness about the questionnaire by some of the senior staff members. Some senior- level staff members

were very concerned that the survey was trying to measure the effectiveness of the types of services offered through CLE. There was also a concern by one senior administrator that staff would not understand the nature of the questionnaire so encouragement was hesitantly provided to other employees.

Overall, the CLE program related most to the themed areas of Information Dissemination (SD= .340), Academic Adjustment (SD= .251), and Counseling and Self Determination (SD= .333). These areas showed the least amount of variance in staff members' responses. All CLE staff responded that the standards in these themed areas were noted either occasionally or always in the program, thus demonstrating that they were components of the program. In the other areas (Consultation/Collaboration, Faculty/Staff Awareness, Policies and Procedures, Program Administration and Evaluation, and Training and Professional Development) there was a great variance in the responses given by program staff of CLE. Also shown in Table 3, the standard deviations in these areas are double those in the other three areas.

Analysis of Findings: A Comparison of the Cases

A multiple-case study allows for an in-depth individual analysis as well cross-case comparisons of similarities and differences which strengthen the findings about the issues under study (Yin, 2003; Stake, 2006). This section will provide an in-depth comparison of the two models researched in this study: the institution-supported model and the for-profit model. While I compared the two models, was not my intention to determine which model works best for this population; rather, I sought empirical information on how services have evolved to serve college students with HFA or AS. The comparisons made of these two programs will be discussed in eight major areas: target

population served, program inputs, outputs including what type of support offered by each program, program outcomes, program external factors, each program's assumptions, and the Shaw and Dukes program standards. Table 4 provides an overview of the summary traits of each case in the eight areas. Thus the table provides a graphic representation of the commonalities and differences of each case in the mentioned traits. Each area listed on the table will be explored in further detail in the following section, which provides in depth information on the comparisons of these two cases.

*Table 4
Summary of Case Comparison Traits*

Program Name	Target population	Inputs	Outputs: Categories of Activities	Desired Outcomes	External Factors	Program Assumptions	Shaw and Dukes' Standards	Program Model & Culture
College Program for Students with Asperger Syndrome (CPSAS) at Marshall University	Exclusively students with HFA or AS attending Marshall University	Program fee(6,400 annually) 2 FT staff 11 PT staff 9 rooms in physical space 3 student computers 2 Staff computers	1. Transition to college 2. Academic 3. Social 4. Independent living	Degree attainment & successful college experience. Outcomes identified in four areas: transition to college, academic, social, and independent living	1. Prevalence of autism 2. Impact of economy on program participants 3. Legislative appropriations	1. Research based intervention: Positive Behavioral Support including person centered planning 2. Individualized programming 3. Utilization of all community natural supports: CPSAS services are peripheral 4. Integrated into a college setting offering services at Marshall University 5. Openly discussed disability and used to empower students	Relate to: Academic Adjustments Consultation/Collaboration Counseling/Self-Determination Faculty/Staff Awareness Information Dissemination	Culture and governance similar to academic public four year institution with open, collegial decision making, not focused on profit Institution supported model fully integrated into the college campus
College Living Experience (CLE)	Wider population of disabilities including HFA or AS	Program Fees (33,000 annually) 10 FT staff 25 PT staff 32 rooms in facility 8 student computers 12 staff computers 2 Vans	1. Academic 2. Social 3. Independent living 4. Transition out of CLE to next stage of life	Improved independence in all areas of life. Specific outcomes in four areas: academic, social, independent living, and transition out of CLE	1. Student motivation 2. Student usage of drugs and alcohol 3. Relationship w/ post-secondary institutions 4. Site distance	1. Individualized programming 2. Constant staff collaboration and communication 3. Disclosure of disability was not discussed by program staff members 4. Comprehensive supports regardless of what is offered at post secondary institutions	Relate to: Academic Adjustment Consultation/Collaboration Counseling/Self-Determination	Culture and governance similar to corporate, top down managerial style Private For profit model operated in a facility separate from all post secondary institutions it serves (e.g. CC, four-year college, and culinary school)

Target Population

Target population defines the groups targeted by the program's mission. As noted in Table 4, both CLE and CPSAS have a target population that included college students with HFA/AS but there was a difference in the range of individuals included in that target population. CPSAS had a target population that was exclusively college students with a diagnosis of Asperger, PDD-NOS or Autism who want to obtain a college degree and were enrolled at Marshall University. CLE had a target population that included a variety of students with disabilities who wanted to pursue a variety of degrees and certifications in postsecondary educational settings and wanted to gain more independence. In Chapter 5, one staff member described the target population of CLE as marketing "mostly towards students with developmental learning disabilities [such as] ADHD. It has started to broaden a bit towards more students with mood or anxiety [disorders]. The target population would probably be developmental disability and learning disorders". The differences in target populations also changed the focus on the goal of program participants. CPSAS' participants' ultimate goal was to receive a college degree from Marshall University while CLE's participants had more varied goals to include any type of post-secondary training. The differences also capture the differences in the primary mission of the program.

Inputs

Inputs are the resources that go into a program including staff time, materials, money, and equipment as well as the facilities that house a program. CPSAS had some resources similar to those of CLE but there was a clear difference in the amounts of inputs available to each program. Most of the differences in resources could be attributed

to the differences in the two funding models. The for-profit model had more full-time staff, technology, physical space and funding; thus considerably more inputs to offer its program participants. These inputs contributed greatly to the amount of outputs each program offered in terms of its activities. CLE was able to offer more comprehensive and extensive services in all three areas which reflected the mission of the program.

Outputs

College students with HFA or AS have multi-faceted needs, including the need for a supportive academic program and assistance with the social challenges that can be faced in the new environment (Williams & Palmer, 2004). The two programs examined in this study demonstrated some similarities in the basic activities provided to the student, although the extent of the support provided varied as illuminated in Table 4. Both CLE and CPSAS provided support in the areas of academic, social and independent living skills as necessary steps to support the goals of program participants. CPSAS emphasized the academic and social components, while independent living skills were a secondary focus of the program's mission. For instance, one staff member explained in Chapter 4 that "we focus on academic support, which might involve working [on] academic support, social support and to a little bit of a lesser degree, independent living support. I think there is an equal emphasis on academic and social support." CPSAS believed that the services it offered needed to be peripheral. In contrast, CLE reflected the belief that providing comprehensive support in all three areas (academic, social and independent living) was essential to the goals of its participants. Staff members at CLE noted in Chapter 5 that the program has an equally balanced focus on all three types of support for its program participants.

While both programs reflected the empirically demonstrated need for transition support, they emphasized different aspects of transition. CPSAS addressed and provided formal support for student as they transition into the college environment at Marshall University, providing activities geared to helping students becoming accustomed to the new college environment throughout their first year. In contrast, CLE has developed a formalized interest in helping students transition smoothly out of CLE and into their next stages of life. CLE has developed a more extensive set of supports to meet students' needs that include the college setting but focus on independence beyond as well.

Intended Program Outcomes

Outcomes are the “direct results or benefits for individuals, families” or the targeted population (Powell-Taylor & Henert, 2008). The program outcomes of the two cases had some similarities as well as differences in each program's desired outcomes. The desired outcomes of CPSAS were not only the attainment of academic degrees for students with HFA/AS, but personal success and a successful college experience. CPSAS had outcomes identified in four areas: 1) transition to college, 2) academic, and 3) social, 4) independent living. In comparison, CLE had a strong desire in helping participants achieve greater increased independence in all areas of life. CLE's desired outcomes were identified in four areas as well: 1) academic, 2) social 3) independent living and 4) transition out of CLE. The differences in outcomes also reflected the differences of each program's mission and program assumptions as well as resources.

External Factors

External factors are “conditions that influence the program's success and over which the program has relatively no control” (Powell-Taylor & Henert, 2008). While

both programs identified external factors that influence the program's success, those factors did have some commonalities and differences due to their funding source and differences in program models. CPSAS identified three factors that were external to the program but had an impact. These included the increased prevalence of autism, the impact of the current economy on program participants' ability to pay the required program fees, and the legislative appropriations. In contrast, CLE identified five factors that were specific to CLE that could affect the program's success. These included student motivation, student use of drugs and alcohol, the relationship with post secondary education institutions, distance of the location of CLE to some of the support post secondary education programs, and the financial cost of the services. The differences noted in these external factors are specific to the context of each of these programs.

Program Assumptions

Program theory reveals a set of assumptions or expectations that describe “why a program does what it does and provides the rationale for expecting that doing things that way will achieve the desired results” (Rossi, Freeman & Lipsey, 1999, p. 156). These assumptions are the basis of the program theory and provide the underlying rationale in the decisions made about a program. Both programs had distinctive program assumptions that were articulated by staff members and were observed in the culture of each case. CPSAS had five overarching program assumptions which included 1) utilization of positive behavior supports using person centered planning, 2) an individualized approach for each student, 3) utilization of the college community natural supports, 4) the importance of integrating into the college community to eliminate any segregation of program participants, and 5) embracing and empowering the students about their

disability. Conversely, CLE identified four assumptions that were central to the program's operation. These included 1) an individualized approach for each student, 2) the importance of collaboration between all staff members, 3) the confidentiality of any student's disability and the 4) extensive comprehensive support for all participants. While many of the identified program assumptions by the two cases were specific to the context of the program, there was one assumption that was similar at each program and one assumption that revealed a distinctive difference in how each program viewed the subject of the assumption.

The one similarity in assumptions between the two programs was the importance of individualized programming of participants to achieve the intended results of the program. Staff members at both programs discussed the importance of individualized programming for participants as an essential yet challenging task. In chapter 4, CPSAS believed that individualized programming was a key component for a college student with HFA/AS to succeed in the program since individuals with HFA/AS may be as distinctive as snowflakes and may not exhibit similar symptoms or areas of difficulties. In comparison, since CLE served a wide variety of individuals with disabilities the importance of individualized programming surfaced for a similar reason. CLE staff members communicated that every student has an individualized service plan that includes individual goals for each student.

As it relates to the focus of the program, there were different viewpoints at CLE and CPSAS on the subject of disability disclosure. These differences were noted in the program theory for each of these programs. CPSAS includes in its title the focus of the disability of program participants. While observing CPSAS, often program staff members

embraced and openly discussed the challenges and successes of students as it related to their disability of HFA or AS. Students at CPSAS seemed empowered by the open dialogue and were able to draw support and discuss issues related to their disability with fellow students in the program. Conversely, CLE staff members were careful not to discuss a student's disability. In fact, some staff members were not proponents of the word disability and preferred to use the word *challenges* to describe student disabilities. One of the reasons noted for the beliefs about disclosure at CLE was the range of diagnoses of students served at CLE. Other possible reasons for this philosophy may revolve around communication from the corporate office on their view of this topic.

Shaw and Dukes' Program Standards

The last area of comparison was the program standards created by Shaw and Dukes. The goal of the program standards created by Shaw and Dukes (2005) was to create standards for the types of disability services offered in higher education (regardless of institutional size, location, type, or funding source) so as to yield the best practices in the support of students with disabilities. Shaw and Dukes' program standards offered the first standardized system that offers insight into how standards of effectiveness for disability services in higher education institutions might be measured. While the programs studied in this program are not in offices of disability support, their target population do include individuals who have a specific type of disability.

At each site, program staff members completed a questionnaire to determine how their programs related to the program standards to determine if these standards could also be used as a standardization guide for these types of programs. Surprisingly, even with the differences noted in climate and funding sources in each case study, both CPSAS and

CLE related to three of the eight themed areas: academic adjustments, information and consultation, and counseling and self determination. In contrast, CPSAS also related to the program standards in the areas of consultation/collaboration and faculty/ staff awareness. CPSAS met more of the standards based on the model of the program. While both programs strive to support college students, CLE was limited in its application due to the private for profit model of the program.

In addition, there was a limitation of the results of the questionnaire due to the 4-point Likert scale developed to capture each program's relativity to the standards. This 4-point scale provided too restricted a range of responses. While this was an initial attempt to provide an area of standardization tot these programs, a future study should include an expanded scale to more accurately capture the program frequencies.

Research Question Three

.This section of the chapter relates to the finding regarding the third research question: *To what extent do the characteristics of institutional type and funding source make a difference in how the programs are structured and their intended outcomes?* To answer this research question, observations were made in the program culture of the two institutional types. In addition, other observations and results of the program that could be linked to the institutional type of funding source were noted. There were two notable differences in how the program model affected the structure of the program. The two differences related to each model's culture which affected the governance of each program and the integration of the student in their campus community.

First, there was a notable difference in the observed program culture of the two program models. As described in the history of CPSAS, its culture was similar to that of

the public, four-year university campus where the program resides; while CLE operated under a for-profit market driven culture. These differences also played a part in the program's governance observed in these two cases. Academic governance is typically characterized as "shared" by faculty, administrators, and trustees and is characterized by consultative and decentralized decision-making, diffuse authority, and devolution of responsibility (Mortimer and McConnell, 1978; Birnbaum, 1988; AAUP, 1990). CPSAS demonstrates collegial decision-making and provided services based on the best considerations for the students without regard to the revenue considerations. For instance, students were able to pay different fees based on the amount of support a student received. The director described a situation where one family received a refund given the limited amount of support the individual actually required during the previous semester. The director described that this refund was not expected by the family but it seemed like the right thing to do.

As described in Chapter 4, CPSAS had a very open culture and very integrated into the college community as a whole. In contrast, corporate governance has a focus more characterized by a central source of authority power. The exercise of this power places emphasis on the realization of a profit from operations and the maximization of the wealth of the corporation (Besse, 1973; Blair, 1995). Revenues serve as a dominating motive of corporate activity, control and command is characterized as a hierarchical organizational structure with centralized power (Besse, 1973; Giroux, 1999). CLE's culture is that of standardization and a top-down, corporate style management originating at the corporate office and mirrored in the governance of the sites. For instance, as noted in Chapter 5, CLE staff members all work in compartmentalized areas of the program.

There is open dialogue and communication but the director and the staff psychologist are the main sources of communication on the direction of the program as it relates to different issues. Policy changes or new program directions come from the corporate office and are related to each site's director. This study illuminated that these differences in culture of the models have the potential to impact the service delivery in each case study. For example, if CPSAS believes that a policy change could allow the staff members to better serve students, that change can happen immediately without the approval of several higher level administrators. On the other, hand CLE can only make policy changes with additional input from several higher level stakeholders who may be able to have a different vantage point of the trends of students' needs.

Another area that differed given the program model was the difference of the type of integration the program had in the college community. CPSAS is an institution-supported model that is based on being completely integrated into a college campus and community. This integration allows its students to be fully immersed in all aspects of the college experience. Students participating in CPSAS live in residential dorms and experience many of the same experiences of full-time typically developing peers at Marshall University. In contrast, CLE is a for-profit private model and is not attached to any post secondary institution. While this factor allows participants to have additional options regarding where they can receive institutional support, this model is not integrated into any of the college campuses it currently serves. So students receive support from CLE with their academic or social needs but not in the college setting where the challenges may occur. Most students live in apartments close to the CLE facility and receive extra programming support at the site facility.

Summary

The previously discussed commonalities and differences of these two cases offer insights into some different program supports being offered to student with HFA or AS in higher education institutions seeking a degree. The differences can be determined based on the essence of case study research which focuses on studying the phenomenon in its natural investigate a particular phenomenon and the context in which the phenomenon is occurring (Yin, 1993). Some of the differences noted are because of the differences in context. As noted, the two programs have different funding models. Due to these differences in the models, the missions of these two programs differ slightly offering a different focus on how certain aspects of each case was identified. The two cases also had some commonalities; these highlighted and supported the empirical research on the types of supports necessary for students with HFA or AS who want to pursue higher education.

Implications for Research

This study provides a rare glimpse into programs that support college students with HFA or AS on college campuses across the nation. Much has been written about the kind of accommodations critical to serve college students with HFA/AS. Previous literature up to this point has focused on the ability of individuals with HFA or AS to attend college and what needs they have (e.g., the importance of organized proactive strategies to support the transition to college). In contrast, this study offers an exploration of two different models of how the support can be operationally defined. This study provides an in-depth analysis of how these supports are being provided.

There are several gaps in what is known about how higher educations institutions are meeting this need of college student with HFA or AS. Additional research is needed

to provide more empirical information on serving this population in higher education. In order to develop empirically supported practices, comprehensive examination of all existing program models is needed. Only when all possible models and components are known can the impact of each component be evaluated in terms of predictive validity of success. In addition, it will be important to provide higher education institutions with more information on all of the institutions-supported models currently available. With this information a comprehensive comparison of the services offered at the different universities can be conducted to determine the commonalities and differences as well as best practices procedures for other institutions to follow.

An additional step necessary to provide more empirical information on these programs is including the voices and perspectives of program participants. It will be equally important to research the perspectives of the students who are receiving these supports and report on their perceived levels of satisfaction and the impacts they perceive they received as a result of participation in the programs. While program staff provided detailed information about the expected outcomes of the program for its participants and described possible outcomes of participants, the student perspective can give a better idea of the program's effectiveness and actual impact experienced by students.

Additionally, through using the Shaw and Dukes standards, this study was an initial attempt at determining if the elements of effectiveness benchmarks necessary for Disability Support Offices may be similar to those necessary for specialized programs that support college students with HFA/AS in higher education. Additional research is needed to determine if these program standards can be applied to this specialized subset of programs offering support to a specific population of individuals with disabilities.

Implication for Policy

Dillon (2007) argued that while colleges are responsive to the growing numbers of students with disabilities, there are large numbers of intelligent students with HFA or AS who are unable to navigate the college environment with the accommodations typically provided. Generally, these accommodations are historically insufficient in meeting the needs of students who have deficits in areas other than academic achievement. There are currently no clear cut rules that guide the policies around the accommodations available to students in higher education at different institutions. Institutional policies on accommodations are typically based on the understanding of the nature of the student's impairment, fundamental requirements of the courses the student with this disability will be taking and the resources and policies on an individual campus (Thierfeld Brown & Wolf, 2008). The results of this study raise questions about college policies regarding disability support and accommodations systems. Can colleges restructure policies related to accommodations to be more proactive and inclusive of individuals with HFA or AS? The finding of this study demonstrates that the types of accommodations typically needed by college student with HFA or AS do not involve a large amount of financial resources in order to implement. Policies should be considered with some flexibility and support to the different supports needed. As required by the federal amendment in 2008 of the ADA, it will be important for colleges to be more inclusive of more individuals with disabilities. Some of the supports offered to students in these two case studies involve flexibility on the part of faculty, staff and administration to better serve this population.

In addition, at the federal level several clarifications need to be updated in the language of the original of Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794). These include changes in obscure terminology, thus providing more guidance to the broad interpretation of key constructs such as such as “substantially limits,” “otherwise qualified,” and “reasonable accommodations” (Eichhorn, 1997). The changes will provide more insight given an individual’s unique needs to determine appropriate accommodations that will no longer be based on stereotypical features of a specific disability.

Implications for Practice

The increased diagnosis of the individuals with HFA or AS will inevitably impact American colleges and universities. As the many newly diagnosed students reach college age, there are implications for university administrators and the type and scope of student support programs traditionally offered by institutions of higher education. The educational practices of many college campuses are not providing adequate services to allow college students with HFA or AS to meet the challenges autism presents in attending college. In addition, as more businesses like Walgreens are taking note of the growing needs of individuals with autism and creating specialized positions in various departments, it will be imperative for individuals with HFA or AS to have a more advanced set of skills. It will be important for universities to be able to meet the need by providing the business sector with more qualified individuals with autism in the workforce.

The cases in this study illuminate the need for building capacity on college campuses. It will be important to see studies that address the implications around the type

of culture and support needed by faculty and staff to be able to provide a successful atmosphere for this population. One area of practice involves building capacity for faculty members on college campuses across the nation. Educating faculty on the needs of college students with HFA or AS is a simple step to increase awareness and support on a college campus. As this study demonstrated, education of faculty on HFA/AS can be done in a variety of ways from a semester training open to all faculty across the campus to a letter or fact sheet that incorporates basic information on how to support students with HFA/AS in the classroom. Furthermore, a university expert on HFA or AS can be hired or identified to offer additional resources to faculty. As we see from the case studies included, support from senior administration is fundamental for faculty and staff members across the campus to be reached. Targeted training of faculty and other subgroups on college campuses will be critical to better support college students with HFA or AS.

Another implication is to increase the transition from the secondary educational settings to the new post secondary environment. Glennon (2001) stressed the importance for individuals with HFA or AS to establish contact with the institution's support services before the beginning of their first semester. Such a proactive approach may provide individuals with HFA or AS with a substantial amount of support and strategies before embarking on the college experience. Universities should work to develop a more formalized process and create orientation opportunities for college students with HFA or AS. These orientations would allow new college students with HFA or AS to be introduced to the new campus setting in the summer prior to beginning in an academic program. Greater acclimation to the new environment can be easily achieved with

increased collaboration with staff, parents and the individuals with HFA/AS prior to the semester. This time allows students with HFA/AS to have a better understanding of the rules and expectation that comes with shift in educational cultures.

There are a more colleges that are creating initiatives and programs on their college campus to support college students with HFA or AS. A beneficial step to capture all these new programs would be a database that specifies all the options of support available to support students with HFA or AS who want to obtain a degree would be an additional next step. Individuals with HFA or AS need to be more informed and educated about the opportunities available to support their successful transition into the college community. Taking this a step further, creating a consortium would allow for these programs to be able to provide more practitioners with an outlet to dialogue with other practitioners running similar programs. Creating a consortium of institution-supported models would also provide families and educators who support this population with better resources in helping support the individuals' interest in attending college. This consortium could provide also offer communication on the new and efficient strategies used in each placement.

Welkowitz & Baker (2005) posited that individuals with autism are provided with the general accommodations offered to individuals with a variety of learning challenges. As a result, because individuals with HFA or AS often do not need specific academic support and are able to do the work, most institutions do not provide other adequate support for them, leaving students with HFA or AS in need of more structural and social supports. The other implication of this study is for college administrators to examine the list of activities offered at each of these programs in this study and determine how some

of these activities can be easily be incorporated into the list of reasonable accommodations currently offered. While creating a program specific to college students with HFA or AS would be ideal, small steps in improving the current program infrastructure to support college students with HFA or AS is necessary for college campuses.

Conclusion

This study illuminates some specific programming designed to support individuals with HFA or AS who want to obtain a college degree. As accountability becomes more of an institutional responsibility, the institution-supported model provides an example of how institutions can take responsibility for this growing population of college eligible students and create documented program initiatives. In addition, the private for-profit model, provided examples of alternative ways to support students with HFA or AS in their higher education endeavors. Providers of services for special interest groups are being required more frequently to chronicle specific interventions and his study has illuminated two cases that are providing these types of interventions for college students with HFA or AS.

The challenge for policy makers as well as practitioners will be writing and enacting policies as well as creating programs that make it easier for college students with HFA or AS to overcome challenges that preclude successful matriculation at the post secondary level. There is a growing population of college aged young adults with HFA or AS who want a variety of viable higher education options. Many higher education institutions will need to answer the demands of these consumers and create more options to foster a successful college experience for this underserved population.

Increasing opportunities for this population of students will allow universities to increase their capacity as well as receive numerous returns from alums with HFA or AS who have successfully completed a degree program.

Appendix A

Interview Questions for Program Staff Members

Performance Indicators/Outcomes

1. What do you see as the program's end goals or long term outcomes?
2. What provisions or short term outcomes must be in place for the end goals of this program to occur?
3. What will be different or have you seen that is different for this population as a result of their participation in this program?

Task and activities

1. Let's talk about all the services that the PROGRAM NAME provides. What are they?
2. How does each of these services contribute to the accomplishing the program goals?
3. What challenges do you face in performing these tasks?
4. How effective are these activities in accomplishing the short and long term outcomes?

Goals and Objectives

1. What is the purpose of PROGRAM NAME?
2. What are the goals that the program established to meet this purpose?
3. What changes or difference if any is this program making with regard to participants in the next 2 years?
4. What changes or difference if any is this program making with regard to participants in the next 7 years?
5. Are there any additional strategies to improve to enhance your services to participants?

Resources

1. What resources are available at to carry out the different components of the program? Resources include staff, funding, etc.
2. How adequate are these resources?
3. Are there any external factors that could influence the program's ability to achieve the expected results?

Population Targeted

1. Who does your target population for this program include?
2. What conditions do you believe that this program will help to improve for this population?
3. To what extent do you feel you reach the target population?

Appendix B
Site Permission Letter



The College Program for Students with Asperger Syndrome

WV Autism Training Center
College of Education and Human Services
One John Marshall Drive
Huntington, WV 25755-2430

December 11, 2008

Cristi D. Ford
Thompson Center for Autism and
Neurodevelopmental Disorders
300 Portland St., Suite 110
Columbia, MO 65211

Dear Ms. Ford:

This letter is in support of your dissertation proposal, "An Investigation into Support Programs in Higher Education for College students with ASD." As you have described the project, it is designed to investigate programs that support college students with ASD. We understand that your dissertation will shed light on the promising results of programs such as ours. We applaud your efforts to expand literature on these types of programs that provide access and support to individuals with Autism.

As program administrators, we have seen our students with ASD struggle with their social encounters with peers, and in many cases, their academic performance also suffers. Moreover, we are very interested in seeing our program gain greater exposure in the literature and thus increase the understanding and awareness of post secondary opportunities for youth with ASD who want to attend college.

The College Program for Students with Asperger's Syndrome, at Marshall University, welcomes the opportunity to support your proposed project and to collaborate in the development of a logic model of our program. Based on previous successes evidenced by our students in our program, we are confident that this proposed project will be both informative and beneficial to our students with ASD and the college community who work with them.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mall' or 'Ellison', written in a cursive style.

Marc Ellison, Coordinator
Autism Training Center,
Marshall University
304-696-2848 / ellison13@marshall.edu



College Living Experience January 6, 2009

Dear Ms. Ford:

This letter is in support of your dissertation proposal, "An Investigation into Support Programs in Higher Education for College students with HFA or AS." As you have described the project, it is designed to investigate programs that support college students with ASD. We understand that your dissertation will shed light on the promising results of programs such as ours. We applaud your efforts to expand literature on these types of programs that provide access and support to individuals with Autism.

As program administrators, we have seen our students with ASD struggle with their social encounters with peers, and in many cases, their academic performance also suffers. Moreover, we are very interested in seeing our program gain greater exposure in the literature and thus increase the understanding and awareness of post secondary opportunities for youth with ASD who want to attend college.

CLE Austin welcomes the opportunity to support your proposed project and to collaborate in the development of a logic model of our program. Based on previous successes evidenced by our students in our program, we are confident that this proposed project will be both informative and beneficial to our students with ASD and the college community who work with them.

Sincerely,

A handwritten signature in cursive script that reads "Stephanie Martin".

Stephanie Martin

Senior Vice President of Operations

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Appendix C

Recruitment and Informed Consent Letter
University of Missouri-Columbia

Insert Date

Dear Potential Interviewee:

I am a doctoral candidate at the University of Missouri (MU) in the Higher and Continuing Education Ph.D. program in Educational Leadership and Policy Analysis. Both before coming to MU and while attending it, I have spent a great deal of time working with young adults with autism. I believe the challenges faced by these students as they enter college will require them to secure as many resources as possible while attending a postsecondary institution. There is a dearth of literature about the support programs that support college students with HFA or AS. Hence, my dissertation will investigate support programs in higher education for college students with Autism Spectrum Disorders.

The purpose of this letter is to ask if you are willing to participate in this study. Doing so would require you to participate in a 45-minute interview during my upcoming visit to your program. The questions asked in the interview will allow me to gain more insight about the inner workings of your program. Interviews will be digitally recorded and transcribed. Upon completion of the transcription, you will be asked to review the transcript of your interview for accuracy, but also have the opportunity to decline to review it.

If you wish more details about the study, I can be reached at the Thompson Center for Autism and Neurodevelopmental Disorders, Columbia, MO, 65203, at 443-801-7752 or 573-884-5305, or at cdfp5f@mizzou.edu. If you wish to contact Barbara Townsend, my dissertation director, you can do so by at 202 Hill Hall, Columbia, MO, 65211, or 573-882-1040 or townsendb@missouri.edu. If you wish to contact the university's Institutional Review Board (IRB) about the study, you can do so by calling 573-882-9585 or writing the Board at the University at 483 McReynolds, Columbia, MO, 65211.

Thank you for your consideration,

Cristi D. Ford, Ph.D. candidate

If you are willing to participate, please sign the statement below and return to the researcher.

I understand that my participation is entirely voluntary and that I may withdraw my permission to participate in this study without explanation at any point.

Signature

Date

Appendix D
Recruitment and Informed Consent Letter
(Questionnaire Participation)

Insert Date

Dear Potential Questionnaire Participant:

I am a doctoral candidate at the University of Missouri (MU) in the Higher and Continuing Education Ph.D. program in Educational Leadership and Policy Analysis. Both before coming to MU and while attending it, I have spent a great deal of time working with young adults with autism. I believe the challenges faced by these students as they enter college will require them to secure as many resources as possible while attending a postsecondary institution. There is a dearth of literature about the support programs that support college students with HFA or AS. Hence, my dissertation will examine support programs in higher education for college students with Autism Spectrum Disorders in order to describe the characteristics of the types of support programs available to this population.

The purpose of this letter is to ask if you are willing to participate in this study by completing a questionnaire in order to describe how your program relates to the Program Standards.

If you wish more details about the study, I can be reached at the Thompson Center for Autism and Neurodevelopmental Disorders, Columbia, MO, 65203, at 443-801-7752 or 573.884-5305, or at cdfp5f@mizzou.edu. If you wish to contact Dr. Barbara Townsend, my dissertation director, you can do so by at 202 Hill Hall, Columbia, MO, 65211, or 573-882-1040 or townsendb@missouri.edu. If you wish to contact the university's Institutional Review Board (IRB) about the study, you can do so by calling 573.882.9585 or writing the Board at the University at 483 McReynolds, Columbia, MO, 65211.

Thank you for your consideration,

Cristi D. Ford, Ph.D. candidate

If you are willing to participate, please sign the statement below and return to the researcher.

I understand that my participation is entirely voluntary and that I may withdraw my permission to participate in this study without explanation at any point.

Signature

Date

Appendix E

Data Collection Outline

Time Allocation: I plan to spend 4 days at each research site. A follow up visit may be scheduled with each site after the gathered data has been analyzed.

<i>Prior to visit</i>
<ol style="list-style-type: none">1. Discuss potential residential room options for site visit stay.2. Determine the cost of ticket or cost of gas to drive to site.3. Arrange preliminary access to program that is director approved.4. Arrange interview times with director and additional program staff.5. Communicate action plan and arrange for time for visit.6. Discuss the best order for interview with program director and other pertinent staff members.7. Discuss space and resources available to researcher.8. Request any documents accessible prior to visit (e.g. mission statement, policies and procedures, previous months of activities, organizational chart, list of all program personnel).
First day of visit
<ol style="list-style-type: none">1. Tour the program and facilities.2. Spend time meeting program personnel.3. Review data collection action plan with director and make changes if necessary.4. Determine space and resources available to the researcher.5. Identify additional information and documents that will be available that were not provided prior to visit.6. Interview any available participants.7. Make preliminary observations about program (e.g. facility, layout of program) during tour and orientation of the program.8. Administer survey to program staff.
Second Day of visit
<ol style="list-style-type: none">1. Meet any remaining personnel in the program.2. Complete remaining interviews with personnel.3. Make observations based on the schedule of activities occurring in the program (i.e. workshops, group meeting, etc).
Third Day of Visit
<ol style="list-style-type: none">1. Observe activities, groups or meetings with students in program.2. Review additional documents.
Fourth Day of Visit
<ol style="list-style-type: none">1. Make final observations of the program.2. Gather any additional information pertinent to the study.3. Follow up with staff about any miscellaneous issues.

Appendix F

AHEAD Program Standards and Performance Indicators

Shaw and Dukes' (2005, 2006) revised list of 28 Professional Standards and 90 Performance Indicators organized into eight themed areas.

1. Consultation/Collaboration

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

1.1 Serve as an advocate for issues regarding students with disabilities to ensure equal access.

- Foster collaboration between disability services and administration as it relates to policy implementation.
- Ensure key administrators remain informed of emerging disability issues on campus that may warrant a new or revised policy.
- Foster a strong institutional commitment to collaboration on disability issues among key strong administrative personnel (e.g. deans, registrar, campus legal counsel).
- Work with facilities to foster campus awareness regarding physical access.
- Work collaborative with academic affairs on policy regarding course substitutions.
- Foster and institutional commitment to promoting student abilities rather than a student's disability.

1.2 Provide disability representation on relevant campus committees.

- Advise campus student affairs regarding disability-related issues (e.g., student discipline, student activities).
- Participate on a campus-wide disability advisory committee consisting of faculty, students, administrators, and community representatives.
- Participate on campus administrative committees such as a campus committee on individuals with disabilities.

2. Information Dissemination

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

2.1 Disseminate information through institutional electronic and printed publications

regarding disability services and how to access them.

- Distribute policy and procedure(s) on availability of services via all relevant campus publications (catalogs, programmatic materials, web sites, etc.).
- Ensure referral, documentation, and disability services information is up to date and accessible on the institution's web site.
- Ensure that criteria and procedures for accessing accommodations are clearly delineated and disseminated to the campus community.
- Ensure access to information about disabilities to students, administration, faculty and service professionals.
- Provide information on grievance and complaint procedures when requested.
- Include a statement in the institutional publications regarding self-disclosure for students with disabilities.

2.2 Provide services that promote access to the campus community.

- Facilitate the acquisition and availability of a wide variety of assistive technology to help students access materials in alternative formats (e.g. JAWS for Windows, screen reader, Kurzweil Voice Pro, Mountbatten Braille).
- Provide information for the acquisition of computerized communication, text telephone (TT), or telecommunications devices (TDD) for the deaf.
- Promote universal design in facilities.
- Promote universal design in communication
- Promote universal design in instruction.

2.3 Disseminate information to student with disabilities regarding available campus and community disability resources

- Provide information and referrals to assist student in accessing campus resources

3. Faculty/ Staff Awareness

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

3.1 Inform faculty regarding academic accommodations, compliance with legal responsibilities as well as instructional, programmatic and curriculum modifications.

- Inform faculty of their rights and responsibilities to ensure equal educational access.
- Inform faculty of the procedures that students with disabilities must follow in arranging for accommodations.

- Collaborate with faculty on accommodations decisions when there is a potential for a fundamental alteration of an academic requirement.

3.2 Provide consultation with administrators regarding academic accommodations, compliance with legal responsibilities, as well as instructional, programmatic, physical and curriculum modifications.

- Foster administrative understanding of the impact of disabilities on students

3.3 Provide disability awareness training for campus constituencies such as faculty, staff and administrators.

- Provide staff development regarding understanding of policies and practices that apply to students with disabilities in postsecondary settings.
- Provide staff development to enhance understanding of faculty's responsibility to provide accommodations to students and how to provide accommodations and modifications.
- Provide administration and staff training to enhance institutional understanding of the rights of students with disabilities.
- Participate in administrative and staff training to delineate responsibilities relative to students with disabilities.
- Training for staff (e.g. residential life, maintenance, and library personnel) to facilitate and enhance the integration of students with disabilities into the college community.

3.4 Provide information to faculty about services available to students with disabilities.

- Provide staff development for faculty and staff to refer students who may need disability services.

4. Academic Adjustments

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

4.1 Maintain records that document the student's plan for the provision of selected accommodations.

- Create a confidential file on each student including relevant information pertaining to eligibility and provision of services.
- Document the basis for accommodation decisions and recommendations.
- Develop a case management system that addresses the maintenance of careful and accurate records of each student.

4.2 Determine with student's appropriate academic accommodations and services.

- Conduct a review of disability documentation.

- Incorporate a process that fosters the use of effective accommodations, taking into consideration the environment, task, and the unique needs of the individual.
- Review the diagnostic testing to determine appropriate accommodations or supports.
- Accommodation requests are handled on a case-by-case basis and relate to students' strengths and weaknesses, which are identified in their documentation.
- Determine if the student's documentation supports the need for the requested accommodation.
- On a case-by-case basis, consider providing time-limited, provisional accommodations pending receipt of clinical documentation, after which a determination is made.

4.3 Collaborate with faculty to ensure that reasonable academic accommodations do not fundamentally alter the program of study.

- Provide reasonable accommodations for students with disabilities to ensure program accessibility, yet do not compromise the essential elements of the course or curriculum.
- Ensure an array of supports, services and assistive technology so that student needs for modifications and accommodations can be met.

5. Counseling and Self-Determination

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

5.1 Use a service delivery model that encourages students with disabilities to develop independence.

- Educate and assist students with disabilities to function independently.
- Develop a program mission that is committed to promoting self-determination for students with disabilities.

6. Policies and Procedures

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

6.1. Develop, review, and revise written policies and guidelines regarding procedures for determining and accessing "reasonable accommodations."

- Develop, review, and revise procedures for student to follow regarding the accommodation process.
- Develop, review, and revise polices describing disability documentation review.

- Develop, review, and revise procedures regarding student eligibility for services.
- Develop, review, and revise eligibility for services policies and procedures that delineate steps required for student to access services, including accommodations.
- Develop, review, and revise procedures to determine if students receive provisional accommodations during any interim period (e.g. assessment is being updated or re-administered).

6.2 Assist with the development, review, and revision of written policies and guidelines for institutional rights and responsibilities with respect to service provision.

- Assist with the development, review, and revision of policies and procedures on course substitutions including institution requirements (e.g., foreign language or written requirements).
- Assist with the development, review, and revision of policy and procedures regarding priority registration.
- Develop, review, and revise policies and procedures that maintain a balance between *reasonable accommodations* and *otherwise qualified while not substantially altering technical standards*.
- Develop, review, and revise disability documentation guidelines to determine eligibility for accommodations at the postsecondary level.
- Assist the institution with the development, review, and revision of policies regarding the faculty's responsibility for serving students with disabilities.
- Collaborate with the development, review, and revision of policies regarding IT (e.g., alternative formats).
-

6.3 Develop, review and revise written policies and guidelines for student rights and responsibilities with respect to receiving services.

- Develop consistent practices and standards for documentation.
- Develop, review, and revise policies regarding students' responsibility to provide a recent and appropriate documentation of disability.
- Assist with the development, review, and revision of policies regarding students' responsibility to meet the institution's qualifications and essential technical, academic, and institutional standards.
- Develop, review, and revise policies regarding students' responsibility to follow specific procedures for obtaining reasonable and appropriate accommodations, academic adjustments, and/or auxiliary aids.
- Assist with the development, review, and revision of procedures a student must follow regarding program modification (e.g. course substitutions).
- Develop, review, and revise procedures for notifying staff (e.g. interpreter, note taker) when a student will not attend a class meeting.

6.4 Develop, review, and revise written policies and guidelines regarding confidentiality of disability information.

- Develop, review, and revise policy articulating students understanding of who will have access to their documentation and assurance that it will not be shared inappropriately with other campus units.
- Develop, review, and revise policies and procedures regarding privacy or records, including testing information, prior records, and permission to release confidential records to other agencies or individuals.

6.5 Assist with the development, review, and revision of policies and guidelines for settling a formal complaint regarding the determination of a “reasonable accommodation”.

- Assist with the development, review, and revision of procedures for resolving disagreements regarding specific accommodations requests, including a defined process by which a review of the request can occur.
- Assist with the development, review, and revision of compliance efforts and procedures to investigate complaints.
- Assist with the development, review, and revision of a conflict resolution process with a systematic procedure to follow by both the grievant and the institutional representative.

7. Program Administration and Evaluation

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

7.1 Provide services that are aligned with the institution’s mission or services philosophy.

- Develop a program mission statement and philosophy that is compatible with the mission of the institution.
- Program personnel and other institutional staff understand and support the mission of the office for students with disabilities.

7.2 Coordinate services for students with disabilities through a full-time professional.

- At least one full-time professional is responsible for disability services as a primary role.

7.3 Collect student feedback to measure satisfaction with disability services.

- Assess the effectiveness of accommodations and access provided to students with disabilities (e.g., timeliness of response to accommodation request).
- Student satisfaction data is included in evaluation of disability services.

7.4 Collect data to monitor use of disability services.

- Provide feedback to physical plant regarding physical access for students with disabilities.
- Collect data to assess the effectiveness of services provided.

- Collect data to identify ways the program can be improved.
- Collect data to project program growth and needed funding increases.

7.5 Report program evaluation to administrators.

- Develop an annual evaluation report on your program using the qualitative and quantitative data you've collected.

7.6 Provide fiscal management to the office that serves the students with disabilities.

- Develop a program budget.
- Effectively manage your program's fiscal resources.
- Seek additional internal or external funds as needed.
- Develop political support for your program and its budget.

7.7 Collaborate in establishing procedures for purchasing the adaptive equipment needed to assure equal access.

- Assist with the determination of needs for assistive technology and adaptive equipment at your institution.
- Advise other departments regarding the procurement of needed assistive technology and adaptive equipment.
- Provide or arrange for assistance to student to operate assistive technology and adaptive equipment.

8. Training and Professional Development

To facilitate equal access to postsecondary education for students with disabilities, the office that provides services to students with disabilities should:

8.1 Provide disability services staff with on-going opportunities for professional development.

- Provide orientation and staff development for new disability personnel.
- Ensure that professional development funds are available for disability personnel.
- Provide opportunities for ongoing training based on a needs assessment of the knowledge and skills of disability personnel.

8.2 Provide services by personnel with training and experience working with college students with disabilities (e.g. student development, degree programs).

- Ensure staff can understand and interpret assessment/documentation.

8.3 Assure that personnel adhere to relevant Code of Ethics (e.g. AHEAD, APA).

- Refer to and apply relevant professional code of ethics when dealing with challenging situations.

Appendix G: Survey of Program Standards

This purpose of the 28 item questionnaire is to determine to what extent your program relates to the Disability Program Standards listed below. The questionnaire will be one component in a larger study of the support programs in higher education for college students with ASD. This research project will include interviews, observations, and document analysis for the purpose of gathering information. Read each statement below and rate how often your program relates to each of these program standards.

<i>Frequency with which the criteria is met</i>				
Never 1	Rarely 2	Occasionally 3	Always 4	Not Applicable 5

To what extent does your program do the following:

1. **Serve as an advocate for issues regarding students with disabilities to ensure equal access.**

1 2 3 4 5

2. **Provide disability representation on relevant campus committees.**

1 2 3 4 5

3. **Disseminate information through institutional electronic and printed publications regarding disability services and how to access them.**

1 2 3 4 5

4. **Provide services that promote access to the campus community.**

1 2 3 4 5

5. **Disseminate information to student with disabilities regarding available campus and community disability resources.**

1 2 3 4 5

Frequency with which the criteria is met

Never 1	Rarely 2	Occasionally 3	Always 4	Not Applicable 5
--------------------------	---------------------------	---------------------------------	---------------------------	-----------------------------------

To what extent does your program do the following:

6. **Inform faculty regarding academic accommodations, compliance with legal responsibilities as well as instructional, programmatic and curriculum modifications.**

1 2 3 4 5

7. **Provide consultation with administrators regarding academic accommodations, compliance with legal responsibilities, as well as instructional, programmatic, physical and curriculum modifications.**

1 2 3 4 5

8. **Provide disability awareness training for campus constituencies such as faculty, staff and administrators.**

1 2 3 4 5

9. **Provide information to faculty about services available to students with disabilities.**

1 2 3 4 5

10. **Maintain records that document the student's plan for the provision of selected accommodations.**

1 2 3 4 5

11. **Determine with student's appropriate academic accommodations and services.**

1 2 3 4 5

12. **Collaborate with faculty to ensure that reasonable academic accommodations do not fundamentally alter the program of study.**

1 2 3 4 5

Frequency with which the criteria is met

Never

Rarely

Occasionally

Always

Not Applicable

1

2

3

4

5

To what extent does your program do the following:

13. Use a service delivery model that encourages students with disabilities to develop independence.

1 2 3 4 5

14. Develop, review, and revise written policies and guidelines regarding procedures for determining and accessing “reasonable accommodations”.

1 2 3 4 5

15. Assist with the development, review, and revision of written policies and guidelines for institutional rights and responsibilities with respect to service provision.

1 2 3 4 5

16. Develop, review and revise written policies and guidelines for student rights and responsibilities with respect to receiving services.

1 2 3 4 5

17. Develop, review, and revise written policies and guidelines regarding confidentiality of disability information.

1 2 3 4 5

18. Assist with the development, review, and revision of policies and guidelines for settling a formal complaint regarding the determination of a “reasonable accommodation”.

1 2 3 4 5

19. Provide services that are aligned with the institution’s mission or services philosophy.

1 2 3 4 5

20. Coordinate services for students with disabilities through a full-time professional.

1 2 3 4 5

Frequency with which the criteria is met

Never

Rarely

Occasionally

Always

Not Applicable

1

2

3

4

5

21. Collect student feedback to measure satisfaction with disability services.

1 2 3 4 5

22. Collect data to monitor use of disability services.

1 2 3 4 5

23. Report program evaluation to administrators.

1 2 3 4 5

24. Provide fiscal management to the office that serves the students with disabilities.

1 2 3 4 5

25. Collaborate in establishing procedures for purchasing the adaptive equipment needed to assure equal access.

1 2 3 4 5

26. Provide disability services staff with on-going opportunities for professional development.

1 2 3 4 5

27. Provide services by personnel with training and experience working with college students with disabilities (e.g. student development, degree programs).

1 2 3 4 5

28. Assure that personnel adhere to relevant Code of Ethics (e.g. AHEAD, APA).

1 2 3 4 5

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VITA

Cristi D. Ford was born in Houston, Texas where she completed her formal education. She completed a Bachelors of Arts in Psychology from Hampton University in 2000 and a Masters of Science in Applied Psychology with a concentration in Industrial/Organizational Psychology in 2003.

While earning her master's degree she worked at Kennedy Krieger High School, a level five nonpublic high school program in Maryland, where she served as a guidance counselor and transition specialist for five years. In her position she focused heavily on the transition from high school to post-secondary opportunities. She realized that her plight was to increase access to higher education for students from underrepresented populations and she worked with the local community college to establish a dual enrollment program and by the time of resignation had expanded the program to include satellite coursed offered on the high school campus.

While completing her doctoral degree Cristi created the Integrated Supports for Young Adults clinic at the Thompson Center for Autism and Neurodevelopmental Disorders in 2007. Through her coordinator of the Integrated Support Services for Young Adults clinic, Cristi has been able to serve young adults with autism and other Neurodevelopmental disorders. Starting August 2009, Cristi will assume the position of Associate Director of Training at the West Virginia Autism Training Center at Marshall University in Huntington, WV.

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