CRITICAL FACTORS IN SUCCESSFUL NAVIGATION OF HIGHER EDUCATION
FOR STUDENTS WITH AUTISM SPECTRUM DISORDER:
A QUALITATIVE CASE STUDY

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Lynn A. Ciccantelli
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CRITICAL FACTORS IN SUCCESSFUL NAVIGATION OF HIGHER EDUCATION FOR STUDENTS WITH AUTISM SPECTRUM DISORDER: A QUALITATIVE CASE STUDY

Lynn A. Ciccantelli
Dissertation

Approved:                     Accepted:

Advisor                     Department Chair
Dr. Shernavaz Vakil          Dr. Bridgie A. Ford

Co-Advisor/Committee Member  Dean of the College
Dr. Evangeline Newton        Dr. Mark D. Shermis

Committee Member             Dean of the Graduate School
Dr. Harold M. Foster         Dr. George R. Newkome

Committee Member             Date
Dr. Karen Majeski

Committee Member             
Dr. Susan Witt
ABSTRACT

The increase in number of students with disabilities entering institutions of higher education necessitates greater understanding of their needs. Youth with disabilities are pursuing postsecondary education together with peers in the general population. In fact, postsecondary education is a primary post-high school goal for more than four out of five secondary school students with disabilities who have transition plans (Cameto, Levine, & Wagner 2004). However, despite advanced preparation in high school, students with disabilities encounter a variety of challenges as they transition and begin to navigate college which impact their postsecondary outcomes (Conley, 2008; Szafran, 2001; Wells, Sandefur, & Hogan, 2003). This study examined the perspectives of students with Autism Spectrum Disorder, their parents, and Office of Accessibility staff at the institution of higher education attended by the student and identified critical factors for successful navigation of the academic, social, and independent living demands of institutions of higher education for students with Autism Spectrum Disorder. Findings of this study and implications for students with ASD, parents of students with ASD, K-12 teachers and administrators, higher education faculty and staff, and teacher preparation programs are discussed.
DEDICATION

To my Lord and Savior, who allowed this to happen by opening every door possible and giving me the strength to persist.

To my family and friends who provided me ongoing encouragement and support throughout this process.
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With admiration and respect to all parents of children with special needs who continue to educate others while tirelessly supporting their child to reach their greatest potential.

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CHAPTER I

INTRODUCTION

Over the past decades, enrollment in postsecondary education had become increasingly common and vital for individuals to be more marketable and for our society to remain internationally and economically competitive (Carnevale & Desrochers, 2003; Ewell & Wellman, 2007). College enrollment rates of high school graduates from 1960 to 2004 revealed a 26 percentage point increase in student population (U.S. Department of Education, National Center for Education Statistics, 2006). In 1959, only 20% of workers needed some college preparation for their jobs; however, by 2000 56% needed advanced training (Carnevale & Fry, 2000). Longitudinal studies, such as the Ohio Longitudinal Transition Study: Annual State Report on Transition (Baer, Daviso, Queen, Dennis, Flexer, & Izzo, 2010) and the National Longitudinal Transition Study-2 (2009), reported that youth with disabilities are pursuing postsecondary education together with peers in the general population. In fact, postsecondary education is a primary post-high school goal for more than four out of five secondary school students with disabilities who have transition plans (Cameto, Levine, & Wagner 2004) resulting in youth with disabilities taking more rigorous academic and college preparatory courses in high school in order to prepare them for their future college education (Wagner, Newman, & Cameto, 2004). However, despite advanced preparation in high school, students with disabilities encounter a variety of challenges as they transition and begin to navigate
college which impact their postsecondary outcomes (Conley, 2008; Szafran, 2001; Wells, Sandefur, & Hogan, 2003). Consequently, students require not only the academic skills, but also the social, and interpersonal skills to manage their educational careers (Getzel & Wehman, 2005; Palmer, 2006).

Postsecondary Education

“Higher education is considered the ultimate educational experience and the way to attain greater income, improve the options in one’s life, achieve status, make more friends, and promote lifelong networks that allow for individual empowerment and personal capacity” (Getzel & Wehman, 2005, p. 3). It is a time of transition that is complicated by a tug-of-war between an adolescent’s reliance on family for physical, emotional, and financial support, to his or her need to develop a sense of independence and autonomy separate from the stability of home. As such, the transition to college is reported as one of the most stressful adjustment phases in the lives of young adults (Benson, 2007; Eckes & Ochoa, 2005; Kerr, Johnson, Gans, & Krumrine, 2004; Merchant, & Gajar, 1997; Oswald & Clark, 2003;).

Conley (2008) noted that, “The likelihood that students will make a successful transition to the college is believed to be a function of their readiness, or the degree to which previous educational and personal experience have equipped them for the expectations and demands they will encounter in college” (p. 3). Some researchers cite student involvement, social integration, and institutional characteristics as contributing to success and satisfaction with college (Clark, 2005; Kenyon & Koerner, 2009; Yazedjian, Toews, Sevin, & Purswell, 2008). Others deem that the primary cause of
dissonance is not the academic rigor of higher education, but largely due to the emotional and/or social demands of this critical transition (Pritchard & Wilson, 2003; Szulecka, Springett, & dePauw, 1987). Nevertheless, adjusting to college presents challenges for all young people because of the expectations of institutions of higher education (IHEs).

In order to respond to the increasing enrollment of students with disabilities entering higher education, IHEs established an office on campus, sometimes called the Office of Accessibility (OA), which served as a liaison and advocate between students with disabilities and faculty. Through disclosure, confidential information about the student was carefully reviewed and adjustments or accommodations were documented and provided to the student’s instructors by the OA (Palmer, 2006; NLTS2, 2005).

Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a lifelong, nonprogressive neurological disorder, and as the term spectrum implies, it consists of a wide range of skills and abilities that occur in any combination and range from very mild to severe (Manning-Courtney et al., 2003). Hence the saying, if you have met one person with autism, you have met one person with autism. While autism affects individuals to various degrees, its diagnosis is made based upon the presence of a “triad of deficits” (Graetz & Spampinato, 2008; Waterhouse, 1998) which include deficits in social reciprocity, communication, and behavior (Adreon & Durocher, 2007; Diagnostic and Statistical Manual of Mental Disorders, 1994; Jobe & White, 2007; Prince-Hughes, 2002; Wing, 1997; Wolf, Brown, & Kukiela-Bork, 2009).
Prior to the 1990s, little was known about the disorder called autism; however, as it is becoming more prevalent and more-widely recognized, there is a heightened interest in learning more about autism spectrum disorders. It was not until the early 1990s that autism was added as a special education category (CDC, 2009). The Center for Disease Control’s most recent estimate is that 1 in every 166 children in the United States has a diagnosis of Autism Spectrum Disorder, with some estimates reported to be as high as 1 in 150 in some parts of the United States (Bertrand, Mars, Boyle, & Bove, 2001; VanBergeijk, Klin, & Volkmar, 2008; Whitby & Mancil, 2009). This amounts to over 500,000 Americans having a diagnosis of ASD, and upwards of 486,000 individuals with this diagnosis under the age of 20 (Fombonne, 2003).

While individuals with ASD demonstrate struggles in the areas of social functioning, communication, and behavior, they may also demonstrate greater challenges due to sensory issues, learning-style differences, and heightened stress and anxiety (Camarena & Sarigiani, 2009; Jobe & White, 2007; VanBergeijk et al., 2008). Even those individuals with ASD who have average to superior intellectual ability experience significant and limiting interpersonal challenges in college (Camarena & Sarigiani, 2009; VanBergeijk et al., 2008). Consequently, students with an ASD at IHEs require a range of educational and supportive accommodations in order for them to be satisfied and successful both academically and socially.

The transition to college is a critical juncture for many young adults and particularly challenging for youth with autism because of social and communicative difficulties which are essential to success in higher education environments (Camarena & Sarigiani, 2009; VanBergeijk et al., 2008). Given the increasing number of youth
with disabilities entering institutions of higher education, and the significance of this period for an individual’s long-term satisfaction with college, facilitating their ability to successfully navigate the years immediately following secondary school is critical for them as well as for the colleges and universities they will attend (Wells et al., 2003). Unfortunately, a review of the literature revealed a lack of research specific to the successful academic, social, and independent living demands of IHEs for students with ASD from the perspectives of the key players: students with ASD, their parents, and Office of Accessibility (OA) staff from the IHEs attended by the student.

In order to address the needs of this growing population of students entering postsecondary academia, it was necessary to understand the academic, social, and independent living needs of students with ASD from the perspective of the students, their parents, and OA staff from IHEs attended by the students. Therefore, this study was guided by the research questions to present a thorough review of the literature. This study sought to contribute to the current literature and proposed to accomplish the following: (a) present an accurate portrait of the shared experiences of the participants; (b) identify factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD, and (c) offer insights to the higher education community that will deepen its understanding of those factors identified by the stakeholders as influential in the success of students with ASD.

Statement of the Problem

It is well accepted that the transition to college is one of the most stressful adjustment phases in the lives of young people (Benson, 2007; Eckes & Ochoa, 2005;
Kerr et al., 2004; Merchant & Gajar, 1997; Oswald & Clark, 2003). For individuals with Autism Spectrum Disorder, such transition is complicated by the very nature of their disorder, a disorder whose hallmark is one of social, behavioral, and communication deficits (Adreon & Durocher, 2007). As the population of individuals diagnosed with an ASD who are entering into IHEs is rapidly growing, IHEs must be prepared to understand this disorder and how to address the needs of this population of students coming to their campuses. It is essential for colleges/universities to understand what students with an ASD need for successful navigation of the academic, social, and independent living demands of higher education.

Purpose of the Study

A multi-case study research design was used to identify critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD from the perceptions of students with ASD, their parents, and OA staff from the institution of higher education attended by the students. Current research supports the need to integrate students with disabilities into college life and offers a myriad of suggestions about student success and survival in college and the roles of higher education in helping nondisabled adolescents and those with milder disabilities (Anderson, 1988; Benson, 2007; Berger & Milem, 1999; Brooks & DuBois, 1995; Clark, 2005; Eckes & Ochoa, 2005; Hamblet, 2009; Harnett, 1965; Kregel, 1996; Madaus, 2005; Merchant & Gajar, 1997; Ryan, 1994; Yazedjian et al., 2008). Yet, with the growing number of students with ASD entering colleges and universities (also referred to as institutions of higher education or IHEs) across the country, there remains a very
limited amount of research specific to this population, especially from the perspectives of the individuals directly involved: students with ASD, their parents, and OA staff from IHEs attended by students with ASD.

The fundamental nature of this study was to use qualitative inquiry (Merriam, 1998) to understand and explore critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD from the perspective of the stakeholders: students with ASD, their parents, and OA staff from the IHEs. Data were analyzed with the goal of generating grounded theory (Merriam, 1998). Gaining greater understanding of the perceptions of the key stakeholders will augment the likelihood that institutions of higher education will be more proficient in meeting the needs of this growing population of students.

Research Questions

There were four research questions for this study.

1. What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

2. What do parents of students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

3. What do OA staff at IHEs identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?
4. What similarities and/or differences emerge in the perception of critical factors identified by students with ASD, their parents and IHE OA staff?

Assumptions

There were several assumptions believed to underlie this study. The researcher assumed that: (a) the responses of all participants were forthright and honest, (b) information gathered was reflective of the participants’ perceptions of the issues and challenges encountered and the supports and accommodations that students with autism need from IHEs, and (c) the participating IHEs were representative of diverse urban and suburban college or university settings of different sizes and locations in the Midwest.

Definition of Terms

This section provides definitions, abbreviation of terms used in this study.

*Accommodations.* Changes in materials or procedures that ensure equal access to all educational opportunities for students with disabilities (Getzel & Wehman, 2005; Shaw, Madaus, & Dukes, 2010). The term *accommodation* is sometimes used interchangeably with the term *modification*.


*Autism Spectrum Disorders (ASD).* A group of pervasive, developmental disabilities that cause significant social, communication, and behavioral challenges and manifest before the age of 3. ASDs are spectrum disorders meaning they affect each person in different ways and can range from very mild to severe. People with ASDs
have some common symptoms such as problems with social interaction, but there are
differences in when their onset, severity and nature of the symptoms. There are three
different types of ASDs: Autistic Disorder, Asperger Syndrome and Pervasive
Developmental Disorder-Not Otherwise Specified (PDD-NOS).

a. *Autistic Disorder* - characterized by significant language delays, social, and
communication challenges, and unusual behaviors and interests and often also
has some degree of intellectual impairment. This term is also called “classic
autism and is what most people think of when hearing the term Autism
(Diagnostic and Statistical Manual of Mental Disorders [DSM-IV], 1994;
Centers for Disease Control and Prevention [CDC], 2009).

b. *Asperger Syndrome (ASP)* - individuals with higher functioning autism who do
not display clinically significant delays in expressive or receptive language or
cognitive development; however, they present with restricted interests or
repetitive and stereotyped patterns of behavior, interests and abnormalities for
reciprocal social interaction common to individuals diagnosed with autism (APA,
1980; DSM-IV, 1994). Asperger’s Disorder, Asperger’s Syndrome, and
Asperger Syndrome are used interchangeably in the literature.

c. *Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS)* -
characterized by severe and persistent impairment in the areas of social, and
communication. May meet some of the criteria for autistic disorder or Asperger
Syndrome but not all, or have fewer or milder symptoms and a later age of onset
than those with autistic disorder (DSM-IV, 1994; CDC, 2009).
In this study, the literature review consisted of information gathered using the term Autism Spectrum Disorder (ASD). This included the diagnoses of autistic disorder, pervasive developmental disorder, not otherwise specified (PDD-NOS), and Asperger’s Disorder, based on the American Psychiatric Association’s Diagnostic and Statistical Manual, Fourth Edition (DSM-IV) criteria. The study did not include information on, or individuals with a diagnosis of Childhood Disintegrative Disorder or Rett Syndrome which can also develop features of autism but which are genetic in nature and involve neurological regression (Retrieved July 29, 2010, from http://www.cdc.gov).

Case study. An analytic focus on an individual, group, activity or event whose value lies in facilitating appreciation of those events and phenomena (Schram, 2006)

Case study research. An in-depth study of events or phenomenon in its natural context presented from the perspective of the informants (Gall et al., 2003).

Childhood disintegrative disorder. A disorder characterized by normal development for at least the first two years after birth followed by a clinically significant loss of previously acquired skills (before age 10 years) that may involve language, social skills or adaptive behavior, bowel or bladder control, play, and/or motor skills; includes abnormalities of functioning in the areas of social, communication and behavior, interests, and activities /DSM-IV, 1994; Centers for Disease Control and Prevention, 2009).


Executive functions. The “command and control” functions of the brain that involve daily organization and planning and future-oriented behaviors, and self-directed actions that humans use in self-regulation to modify behavior so as to change future outcomes (Barkley, 2001; Powell & Voeller, 2004).

High functioning autism. A term used to describe individuals who have many or all of the symptoms of Autism but did not develop language typically. High functioning autism is not an official diagnostic term; however, it is sometimes used as such (Retrieved July 26, 2010, from http://autism.about.com/od/whatisautism).

Institutions of higher education (IHEs). Post-high school education attendance at a two- or four-year college or university. In this study, the terms college and university were used interchangeably when referencing IHEs.

Modification. To change or alter methods, procedures, or equipment to allow participation (Shaw et al., 2010).

Netflix. A movie disc rental and streaming service from which, for a small fee, DVD and Blu-ray rentals are ordered online and shipped to the renter (retrieved February 14, 2011, from http://computer.yourdictionary.com/netflix).

Neurotypical. A person who is nondisabled; one who has typical, or “normal” neurological development as compared to the general population (Retrieved July 10, 2010, from http://www.merriam-webster.com/dictionary); a term used by individuals diagnosed with ASP when referencing individuals who do not have ASP (Prince-Hughes, 2002).
Pragmatic language skills. The ability to understand and interpret nonverbal social cues: personal space, facial expressions, intonation, gestures, and body language (Manning-Courtney et al., 2003).

Purposeful or purposive sampling. Assumption that the researcher wants to discover, understand, and gain knowledge and therefore must choose a sample in which the most can be learned about the issue under study (Merriam, 1998).

Office of Accessibility (OA). A term used in this study to identify the department at IHEs that serves students with disabilities.

Outcome-oriented (aka results-oriented). Focus is primarily on the end results or the benefits associated with goal attainment as compared to being focused on the process, or process-oriented (Retrieved June 19, 2010, from http://mba.tuck.dartmouth.edu).

Rett Syndrome. A disorder characterized by normal prenatal and perinatal development, normal head circumference, and normal psychomotor development through the first five months after birth, all of which result in deceleration of growth and loss of previous hand skills, subsequent development of stereotyped hand movements, loss of social engagement, poorly coordinated gait or trunk movements, and severely impaired language and motor skills (CDC, 2009; DSM-IV, 1994).

Self-advocacy. The process speaking out for oneself, thereby gaining or regaining control one’s life; an individual’s ability to effectively communicate, convey, negotiate or assert his or her own interests, desires, needs, and rights; making informed decisions and ownership for those decisions (Getzel & Thoma, 2008; VanReusen, 1994).

**Self-determination.** Having the degree of control one desires over those aspects of life that are important to himself or herself; understanding their disability and how it impacts their learning, and having self-confidence, being independent and adjusting their schedule to make sure things get done; asserting an individual's presence, making his or her needs known, evaluating progress toward meeting goals, adjusting performance and creating unique approaches to solve problems independently and without interference from others (Getzel & Wehman, 2005; Wehmeyer, 1996).

**Sensory issues.** Such as hypersensitivity or hyposensitivity to visual, auditory and/or olfactory stimuli, sometimes seen in individuals with ASD (Manning-Courtney et al., 2003).

**Sensory overload.** A condition in which an individual receives an excessive or intolerable amount of sensory stimuli, or an individual’s senses are strained thus causing the individual to be unable to concentrate on the task at hand. The term is commonly, but not exclusively, related to autism spectrum disorders (Retrieved December 12, 2010 from http://medical-dictionary.thefreedictionary.com).

**Social integration.** The ability and desire to interact with peers and to develop peer relationships appropriate to the individual’s developmental level (Attwood, 2000).

**SWD.** Student with a disability.

**Transition.** Change; passage from one state, stage, subject or place to another; the gradual adoption of new roles and modification of existing roles (King, Baldwin,
Currie, & Evans, 2005). In this study, transition refers to when a student leaves high school and goes on to attend an institution of higher education.

Summary

Understanding the perspectives of students, parents and OA staff at IHEs can be a viable tool in meeting the needs of students with ASD in higher education institutions. An explanatory, multi-case study research design was used for this inquiry in order to develop grounded theory and gain an understanding of the perceptions of critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education for students with Autism Spectrum Disorder from the perspectives of students, with ASD, their parents, and OA staff from the IHEs where the students attend. Subsequent chapters attempt to contribute to the body of knowledge on this topic.

Chapter II will present a comprehensive review of the literature that addressed three major areas: Special Education Laws, Autism Spectrum Disorder, and Postsecondary Transition. Chapter III will detail the methodology for this study. Chapter IV will provide the data analysis, and an in-depth review of the findings. Chapter V will summarize the study findings and included suggestions to assist high school counselors and administrators, parents, students with autism, and IHEs to prepare students with ASD to successfully navigate the academic, social, and independent living demands of higher education.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

This review constituted an analysis of the literature pertinent to the research problem, which was to understand how students with Autism Spectrum Disorder (ASD) successfully navigated the academic, social, and independent living demands of higher education. As there was a lack of research specific to these three aspects of college life for students with ASD, this study focused on the needs and experiences of students with Autism Spectrum Disorder from the perspectives of the students, their parents, and OA staff from the institutions of higher education (IHEs) attended by the student. In order to position the study within the framework of this topic, this chapter focused on the following subject areas: Special Education Laws, Autism Spectrum Disorder, and Postsecondary Transition.

Special Education Laws

In the past 20 years, much emphasis had been placed on expanding the postsecondary educational opportunities for students with disabilities and much had been learned about students with disabilities, due in part to the surge of students with disabilities entering higher education settings. This growing number of individuals with disabilities entering IHEs was the result of a combination of legislative, academic and
social changes and advancements (Gilson, 1996; NLTS2, 2005). Thus, there was a need for individuals working with students with disabilities, as well as for students themselves, to have an understanding of the laws and policies that impacted such students as they transitioned from high school to higher education.

In less than 20 years, Congress approved several laws that mandated equality for individuals with disabilities. Prior to 1973, states were not required to provide educational services to children with disabilities (Scott, 1996). In fact, schools could refuse to educate a child if he or she lacked the appropriate educational resources or services. In 1973, Congress approved the Vocational Rehabilitation Act, which emphasized equal treatment in federally mandated programs and established the precedence that any program receiving federal funding could not discriminate against individuals with disabilities (VanBergeijk et al., 2008).

In 1975, Congress passed Public Law 94-142 (P.L. 94-142), known as the Education of All Handicapped Children Act (EHA) which established the right of students with disabilities (SWDs) to be provided a public education that would help prepare them to leave school with a postsecondary plan and have equal chance to enter and compete with nondisabled peers if attending college (Gilson, 1996). In 1990, the EHA was reauthorized as the Individuals with Disabilities Education Act (IDEA) and the Vocational Rehabilitation Act was reauthorized and renamed the Americans with Disabilities Act (ADA). In 2004, IDEA was reauthorized as the Individuals with Disabilities Education Improvement Act (IDEIA). Finally, in 2008, ADA was reauthorized as the Americans with Disabilities Act Amendments Act (ADAAA) (PL 110-325, September 25, 2008, 42 USCA § 12101).
The IDEA required that states develop and implement policies that assured a free and appropriate public education (FAPE) to all SWDs, regardless of the nature or severity of the disability, in order to receive federal funds (Adreon & Durocher, 2007). FAPE guaranteed that all children receive an education and that the student’s placement meets his or her educational needs. As a result of IDEA, children with disabilities were entitled to supportive services to enable them to maintain their placement in public schools. IDEA provided funding for special education services to local educational agencies until the student graduated from high school or until the student reached the age of 22 (Ohio Department of Education, Office of Exceptional Children, 2008).

Once a student with a disability graduated from high school his or her education was no longer mandated by the laws under the IDEA umbrella. Instead, IHEs were governed by two civil rights laws—Section 504 of the Rehabilitation Act, commonly referenced as Section 504, and the Americans with Disabilities Act (ADA) of 1990 (Wolanin & Steele 2004; NLTS2, 2005), most currently referred to as the Americans with Disabilities Act Amendment Acts of 2008 (ADAAA). Title II of the ADA covered state funded schools such as universities, community colleges and vocational schools; and Title III of the ADA covered private colleges and vocational schools. If a school received federal dollars regardless of whether it was private or public it was also covered by the regulations of Section 504 of the Rehabilitation Act requiring schools to make their programs accessible to qualified students with disabilities (ADA, 1990).

The ADAAA was expanded in favor of broader coverage for individuals with disabilities and made it more likely that such individuals would qualify for reasonable accommodations under ADA’s protection. ADAAA broadened the definition of
“disability” to include individuals with less severe impairments, expanded the definition of “major life activities” and added “major bodily functions” as a new major life activity category. ADAAA was effective January 1, 2009 (Retrieved July 11, 2010, from http://www.ada.gov).

As IDEA only applied to Grades K-12 and its requirements were no longer enforceable in the higher education environment, once a student graduated he or she was no longer entitled to FAPE, and was no longer entitled to a mandatory Individualized Education Program (IEP) process to identify and provide supports for postsecondary success (U.S. Department of Education, Office of Civil Rights, 2006). According to Hamblet (2009), “This is because IDEA is an education law, and Section 504 and the ADA, the two laws that cover colleges, are anti-discrimination laws” (p. 9). Whereas in high school, IDEA required the school to find and serve the student with an IEP; in higher education the burden fell on the student, not the school, to find the appropriate services to navigate the higher education system (Wolanin & Steele, 2004).

The Office of Civil Rights (OCR) was responsible for supervision of Section 504 and ADAAA. Section 504 applied to recipients of federal financial assistance, and ADAAA applied to public entities, including public elementary and secondary schools and state colleges and universities. Both Section 504 and the ADA (Title II) required that IHEs provide “reasonable accommodations” for all qualified students. IHEs were not required to provide the best or most desirable accommodations but rather accommodations sufficient to enable SWDs to enjoy equal access and opportunities as their nondisabled peers and “reasonable accommodations” in the form of academic adjustments, auxiliary aids, or program modifications, necessary to ensure access to
instruction and assessments to enable students to show his or her knowledge and ability instead of the limitations of their disability (Gilson, 1996; Scott, 1996; Shaw et al., 2010). They did not require IHEs to produce the identical result or level of achievement between students with and without disabilities (Hamblet, 2009).

With the establishment of these laws, a growing number of individuals with disabilities were able to benefit from a college education (Scott, 1996). This shift from the focus on program access with Section 504 to facility wide access with ADAAA suggested that important changes on our campuses and within classrooms were taking place (Gilson, 1996). Virtually all IHEs in the country were accountable under these antidiscrimination statutes and stipulated that individuals with disabilities had to be provided with meaningful access (Scott, 1996).

Yet, while Section 504 and ADAAA called for equal access, they did not guarantee academic success; thus students needed an understanding of special education laws to understand the significance of self-advocacy (Eckes & Ochoa, 2005; McCarthy, 2007). Hence, if a college student needed and desired accommodations, auxiliary aids or services the student had to advocate on his or her own behalf and disclose such needs to the IHEs.

Just as students needed to understand special education laws, so did faculty and staff at IHEs. IHEs needed to understand what constitutes “equal access” for a student with a disability in order to avoid a violation of Section 504 or ADAAA (Eckes & Ochoa, 2005). As stated by VanBergeijk et al. (2008), the obvious rationale for the provision of academic supports appears to be that a university’s chief mission is the
education of its students and the failure to do so would severely limit a major life activity of disabled students.

In addition to ADA/ADAAA, the Family Educational Rights and Privacy Act (FERPA; 20 U.S.C. § 1232g; 34 CFR Part 99) was another law that impacted IHEs. FERPA, signed into law in 1974, was a federal law that protected the privacy of student education records and applied to any elementary and secondary school, college or university that received funds under an applicable program of the U.S. Department of Education. Rights under FERPA rested with the parents from kindergarten through high school; however once a student of any age enrolled at an IHE, those rights transferred to the student. Students who held these rights were called “eligible students.” Hence, IHEs were obligated to obtain written permission from the eligible student in order to release any information from a student’s educational record to the parent. In 1998, FERPA was revised to allow, but not to require, IHEs to notify parents when a student under the age of 21 violated campus alcohol, other drug abuse and violence (AODV) policies. This revision permitted IHEs the authority to establish their own parental notification policies (Retrieved August 15, 2010, from http://www.higheredcenter.org; retrieved August 16, 2010, from http://www.wrightslaw.com). Therefore, it was imperative that faculty and staff understand ASD and how such laws related to this population of students.

Asperger Syndrome

Historical Perspective

Swiss psychiatrist Eugene Bleuler first introduced the term “autism” into the psychiatric literature in 1906 when describing patients who referenced everything in the
world to themselves (Manning-Courtney et al., 2003). Yet, it wasn’t until 1943, when Dr. Leo Kanner, a psychiatrist at Johns Hopkins University, used the term when referencing children in his practice who demonstrated social inadequacy, abnormal language, and a fixation for consistency (Kanner, 1943; Kugler, 1998; Manning-Courtney et al., 2003; Phetrasuwan, Miles, Mesibov, & Robinson, 2009). Kanner (1943) later termed these children to have “infantile autism” (Lindsay, 2005; Manning-Courtney et al., 2003).

Shortly thereafter, Dr. Hans Asperger, an Austrian pediatrician, contributed to understanding children with autism through observations of a small group of his patients who appeared to have normal intelligence but lacked nonverbal communication skills, demonstrated impaired social interaction skills, were physically awkward, possessed intense and restrictive interests, and demonstrated disjointed or formal, adult-like speech involving preoccupation with particular topics (Kugler, 1998; Manning-Courtney, 2003; Wolff, 2004). Hans Asperger believed that individuals with ASD had the ability to be successful and be contributing members of society (Jamieson & Jamieson, 2007). Unfortunately, because Dr. Asperger’s definitions were viewed as somewhat unclear and often changing, they were considered difficult to use for diagnostic purposes (Kugler, 1998). Likewise, his observations, originally published in German, were not widely known until 1981, when an English doctor, Lorna Wing, termed the condition, “Asperger’s” Syndrome as a result of her expanding the concept to include children who did not meet available diagnostic criteria for autism, but clearly possessed social insufficiencies (Kugler, 1998; Wolff, 2004). According to Kugler (1998), Wing’s writings became widely accepted and published; consequently, in 1992 “Asperger
Syndrome” was included as a diagnosis in the diagnostic manual of the World Health Organization-Tenth Edition, International Classification of Diseases (ICD-10).

Prior to the 1990s, little was known about the disorder called autism. In fact, it was not until the early 1990s that autism was added as a special education category (Centers for Disease Control, 2009). In 1994, Asperger Syndrome was added to the American Psychiatric Association’s (1994) diagnostic reference book, Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV).

Presenting Characteristics

Autism Spectrum Disorder (ASD) was defined as a disorder that appeared on a continuum, and as the term “spectrum” implied, heterogeneity within the disorder was predictable (Bogte, Flamma, van der Meere, & van Engeland, 2007). Lord et al. (2000) acknowledged ASD as a lifelong and nonprogressive disorder and “one of the most heritable neuropsychiatric disorders (p. 1707).


Although individuals diagnosed with ASD were reported to exhibit considerable variation in the characteristics they manifested, and in the severity of their disorder, certain conditions had to be met for a diagnosis to be given (Eagle, Romanczyk, &
Lenzenweger, 2010; Kugler, 1998). Such criteria included an onset prior to three years of age, and existence of impairments in social interaction, communication, and behavior (American Psychiatric Association, DSM-IV, 1994; Graetz & Spampinato, 2008; Jobe, & White, 2007; Lindsay, 2005; Waterhouse, 2008; Wing, 1997; Wolf, 2009). The triad of deficits (social, communication, and behavior) became known as hallmark to the disorder (Adreon & Durocher, 2007; Lindsay, 2005).

In order to assure proper diagnosis, the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994), specified the eligibility criteria for autism. To be given a diagnosis of ASD, an individual had to have at least six developmental and behavioral characteristics, problems evident before age 3, and no evidence of other conditions that were similar. The DSM-IV (1994) defined autism as follows:

(I) A total of six (or more) items from (A), (B), and (C), with at least two from (A), and one each from (B) and (C). (A) qualitative impairment in social interaction, as manifested by at least two of the following: 1. marked impairments in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction; 2. failure to develop peer relationships appropriate to developmental level; 3. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest to other people), 4. lack of social or emotional reciprocity (note: in the description, it gives the following as examples: not actively participating in simple social play or games, preferring solitary activities, or involving others in activities only as tools or "mechanical" aids; (B) qualitative impairments in communication as manifested by at least one of the following: 1. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime), 2. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others, 3. stereotyped and repetitive use of language or idiosyncratic language, 4. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level; (C) restricted repetitive
and stereotyped patterns of behavior, interests and activities, as manifested by at least two of the following: 1. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus, 2. apparently inflexible adherence to specific, nonfunctional routines or rituals, 3. stereotyped and repetitive motor mannerisms (e.g.: hand or finger flapping or twisting, or complex whole-body movements), 4. persistent preoccupation with parts of objects. (II) Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (A) social interaction, (B) language as used in social communication, (C) symbolic or imaginative play. (III) The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder. (pp. 70-71)

While the core deficit of autism was noted to be that of social interaction, it was often the delayed speech and language skills that prompted concern (Lindsay, 2005). Barton and Volkmar (as cited in Steyn & LeCouteur, 2003) highlighted that approximately half of individuals with ASD lacked useful speech, and about one quarter had severe receptive and expressive language impairments.

Moreover, other research discovered that the brain of individuals with autism appeared dissimilar to that of nondisabled individuals. These differences appeared to have contributed to the cognitive, executive and social functioning deficits for the individual. Researchers proposed that an abnormal microstructure of the prefrontal cortex and insufficient limbic system resulted in said cognitive, executive and social insufficiencies (Bogte et al., 2007; Kugler, 1998; Lord et al., 2000). Barkley (2001) and Powell and Voeller (2004) emphasized the importance of executive functions when they described them as the “command and control” functions of the brain inherent to daily organization, planning, and future-oriented behaviors. Barkley (2001) added that executive functions (EFs) are “general forms or classes of self-directed actions that humans use in self-regulation” and serve to “modify one’s own behavior to change the
future outcomes for that individual” (p. 5). Others denoted that EFs were imperative to an individual’s ability to successfully engage in independent and purposive behavior (Powell & Voeller, 2004; Ozonoff, Pennington, & Rogers, 1991).

Lord et al. (2000) studied the genetics and neurobiology of autism and reported that all individuals with ASD possess some degree of abnormality in social behavior ranging from “subtle abnormalities in social reciprocity, particularly with peers, to much more obvious difficulties in the use of eye contact, facial expression, and social motivation” (p. 360). Charman (2008) added that along with impairments in social interaction and social communication all individuals with ASD demonstrate sensory issues and a restricted repertoire of interests, behaviors, and activities.

Furthermore, aptitudes of individuals with ASD were studied and a wide range of associated characteristics and abilities were discovered (Jobe & White, 2007; Lord, Cook, Leventhal, & Amaral, 2000; Manning-Courtney et al., 2003; Rutter, 2000; Waterhouse, 2008; Wolf, 2009). Prior (2003) revealed tremendous variability in the intelligence quotients of individuals with ASD which ranged from those who were severely intellectually impaired to individuals with average to superior intellect. Numerous studies cited a high percentage of individuals with ASD to have average or superior in intellect (Adreon & Durocher, 2007; Barnhill, Hauiwara, Myles, & Simpson, 2000). Adreon and Durocher (2007) noted that approximately one-half of individuals with ASD had cognitive abilities similar to nondisabled or gifted individuals; consequently those individuals were described as higher-functioning or diagnosed with Asperger’s Disorder (Adreon & Durocher, 2007; Barnhill, Hauiwara, Myles, & Simpson, 2000). Despite the possession of average to superior general intelligence,
those individuals also encountered distinct social, communication and behavior challenges (Graetz & Spampinato, 2008; VanBergeijk et al., 2008).

For the purposes of this study, the term Autism Spectrum Disorders (ASD) was used. The study included information on the diagnoses of Autistic Disorder, Pervasive Developmental Disorder--Not Otherwise Specified (PDD-NOS), and Asperger’s Syndrome (ASP). Moreover, the study included students with ASD who had at least average general intelligence. The study did not include information on individuals with a diagnosis of Childhood Disintegrative Disorder or Rett Syndrome that also develop features of autism but which are genetic in nature and involve neurological regression (Retrieved July 29, 2010, from http://www.cdc.gov).

Prevalence

In the last 20 years, there has become a heightened awareness because of the autism spectrum disorder (ASD) as a result of the vast number of individuals diagnosed with this disorder (VanBergeijk et al., 2008). While autism was considered a low-incidence disability, its prevalence had been reported as rapidly increasing. At one time, autism was considered a rare condition, but since the 1990s a growing number of children had been diagnosed with an ASD (Lindsay, 2005; Steyn & Le Couteur, 2003). In actuality, the Centers for Disease Control’s most recent estimate was that 1 in every 166 children in the United States had a diagnosis of ASD (Bertrand et al., 2001; Centers for Disease Control, 2007). Fombonne (2005) projected that in 2002 there were approximately between 284,000 and 486,000 individuals with ASD under the age of 20 preparing to enter college. ASD was reported as three to four times more common in
boys than in girls (Charman, 2008; Howlin, 2006; Manning-Courtney et al., 2003); however, some studies indicated that the number of girls with ASD may have been much higher (Bashe, Kirby, Baron-Cohen, & Attwood, 2005; Ernsperger, & Wendel, 2007). According to Ernsperger and Wendel (2007) the inaccuracy of these statistics may have been the result of males being used as the prime example when diagnosing individuals with ASD. Others suggested that this was more likely due to misdiagnosis of girls whereby girls were possibly more diagnosed with attention deficit disorder, depression, anxiety, or obsessive-compulsive disorder in lieu of ASD (Bashe, Kirby, Baron-Cohen, & Attwood, 2005). There were also reported to be a higher prevalence within families. According to Lindsay (2005), “in families with one child with autism, the risk of having a second child with the disorder is approximately 5%, or 1 in 20, which is significantly greater than the risk for the general population” (p. 194).

**Causes**

While it was generally agreed that there was no known single cause for autism, there was evidence of abnormalities in brain shape and structure or function in individuals with ASD (Manning-Courtney et al., 2003). As a result, researchers continued to evaluate the connection to heredity, genetics and medical problems (Lindsay, 2005; Manning-Courtney et al., 2003; Steyn & Le Couteur, 2003). To date, no single gene had been identified as causing autism; however, researchers have examined irregular segments of genetic code that autistic children may have inherited (Steyn & Le Couteur, 2003; Retrieved July 11, 2010, from http://www.autismawarenesscentre.org).
Some suggested that improvement in diagnosis of children at younger ages may have contributed to the increase in prevalence of this disorder (Adreon & Durocher, 2007; Fombonne, 1999; Lindsay, 2005). Yet, with its broad heterogeneity in characteristics and abilities and somewhat unclear demarcation of autism from other subtypes and diagnoses, there were concerns that this increase was a result of inconsistent diagnosis (Bristol, Cohen, Costello, Denckla, Eckberg, Kallen et al., 1996). Others speculated that the increase in prevalence may have been impacted by one or more of the following: the similarity of autism with other conditions; increased awareness and parent activism; increased services for individuals with ASD; changes in diagnostic practices; and, differences and methodology used in studies (Eaves & Ho, 2008; Fombonne, 1999; Lindsay, 2005; Lord et al., 2000; Steyn & Le Couteur, 2003; Waterhouse, 2008; Wolff, 2004). Prior (2003) credited the “differences in methodology as affecting estimates of incidence and prevalence, with higher rates found with smaller and more carefully screened populations” (p. 82).

Although there lacked clear evidence, some research suggested a link between autism and problems during pregnancy or delivery, immunizations (combined measles, mumps and rubella vaccines), medications, environmental agents or toxins, viral infections, metabolic imbalances, or exposure to environmental chemicals or toxins (Lindsay, 2005; Steyn & LeCouteur, 2003; Wolff, 2004; Retrieved July 11, 2010, from http://www.autismawarenesscentre.org).
Comorbid Conditions

Comorbid disorders, also referred to as co-morbidity, is a term used in medicine and psychiatry to reference the presence of other disorders or diseases in addition to a primary disease or disorder (Retrieved December 15, 2010 from http://autism.wikia.com). It was not unusual for a person with ASD to have also been diagnosed with a mental health disorder such as bipolar disorder, depression, schizophrenia, attention deficit disorder (ADD), attention deficit disorder with hyperactivity (ADHD), seizures, sensory processing disorder, or obsessive-compulsive disorder (OCD). Anxiety, depression, and anger were other conditions that were associated with autism and were more prevalent amongst individuals with ASP. Some experts attributed the presence of such mood disorders as caused by physiological differences in the autistic brain (Manning-Courtney et al., 2003). Some noted the presence of mood disorders as more common to individuals with Asperger’s as they tended to be more cognizant of their differences and more likely to feel the effects of being rejected by peers (Charman, 2008). In addition, there was evidence of the challenges associated with trying to distinguish between some of the mental health disorders and ASD. For example, perseveration, which was described as a reiteration of sounds, words, objects or ideas, was fairly common to autism, as it was to obsessive-compulsive disorder (Charman, 2008).

Evidence of heightened stress and anxiety is also associated with individuals with ASD (Lytle & Todd, 2009; Manning-Courtney, 2003). In a study by Bradley, Summers, Wood, and Bryson (as cited in Lytle & Todd, 2009) “as many as 84% of children with autism were reported to have an anxiety disorder” (p. 36). Some believed that stress
and anxiety may have been at the root of the behaviors that caused social withdrawal, nervous or repetitive activities, anger, frustration, difficulty calming, poor decision-making, or hyposensitivity or hypersensitivity to auditory, visual, or tactile sensations (Charman, 2008; Lytle & Todd, 2009).

**Interventions**

Since uncertainty remains in relation to the biology and cause of autism, treatment and intervention had generally focused on educational and behavioral interventions geared to address the social, communication and behavioral aspects of the disorder. It was reported that children do not outgrow autism, however there are those who affirm that it is treatable with early diagnosis and intervention, although intervention may be lifelong (Retrieved July 11, 2010, from http://www.autism-society.org; Manning-Courtney et al., 2003). As a result, educational programs structured to meet the unique and individualized needs of students with autism would be considered at the core of interventions (Steyn & Le Couteur, 2003).

Social deficits were also noted as paramount for individuals with ASD and cited to become more problematic as children enter adolescence largely because they become more aware of their social challenges (Attwood, 2000; Tse, Strulovitch, Tagalakis, Meng, & Fombonne, 2005; Williams White, Keonig, & Scahill, 2007). Numerous studies examined the outcomes of individuals with autism who participated in social skills training and had concluded that repetition, practice, and role modeling were effective interventions for individuals with ASD (Attwood, 2000; Barnhill, Cook,
Receptive and/or expressive language delays, atypical social interaction, and nonspecific behavioral concerns (i.e., repetitive or ritualistic behaviors, temper tantrums, noncompliance, high activity levels, sensory issues) were stated to be common presenting features of children with ASD (Manning-Courtney et al., 2003). Further research suggested that the social, communicative, and behavioral aspects of the disorder could also be addressed through speech and language therapy, or other interventions such as counseling, psychological, or psychiatric services (Manning-Courtney et al., 2003; Paul, Orlovski, Marcinki, & Volkmar, 2009). Some researchers suggested that speech and language therapists could help individuals develop or increase their receptive, expressive and pragmatic language skills through use of direct and indirect instruction using written language, visual supports, and visual clues (Manning-Courtney et al., 2003; Paul et al., 2009). In addition, Occupational Therapy supports were suggested as helpful to address fine motor difficulties and sensory issues such as hypersensitivity or hyposensitivity to visual, auditory and/or olfactory stimuli, sometimes seen in individuals with ASD (Manning-Courtney et al., 2003).

Although no one medical treatment for autism had been acknowledged in the research, medical management with a health care team of physicians, psychologists and/or psychiatrists was recommended to have an important role in determining the best treatments and interventions for individuals with ASD (Manning-Courtney et al., 2003). Others suggested that counseling was beneficial to address emotions such as anger, frustration, anxiety, fear, and noted that such support could positively impact
academic mastery, social relations, connectedness, and dropout rates (Albrecht, 2005; Jolivette, Stichter, Nelson, Scott, & Liaupsin, 2000). And while there was a lack of empirical data for recommending specific approaches in treatment of autism, Dawson and Osterling’s study (as cited in Manning-Courtney et al., 2003) found success in educational programs that provide structure, routine, and predictability; a functional approach to behavior management; a curriculum that included content to address attention, imitation, comprehension, language play, social skills; and involve families in educational planning.

For some, psychoactive drugs had been utilized to assist in treating symptoms, moods, and behaviors associated with ASD. These included: stress, anxiety, depression, attention difficulties, anger, frustration, obsessive-compulsive tendencies (Manning-Courtney et al., 2003; Steyn & Le Couteur, 2003). However, there were no medications that were deemed effective in treating autism per se (Howlin, 2006).

Beyond High School for Students with ASD

Current data suggested college enrollments to be reaching record highs (Ewell & Wellman, 2007). For youth with disabilities, 45% were reported to have continued on to postsecondary education within four years of leaving high school and more than half of those with autism (approximately 58%) were reported to have continued their education beyond high school (NLTS2, 2005).

Studies have been conducted to identify programs that were correlated with post-graduation outcomes for students with disabilities. The most recent of these studies was the Ohio Longitudinal Transition Study /OLTS (Baer, Daviso, McMahan Queen, &
This study, compatible with the National Longitudinal Study, measured post school outcomes and the services and goals of students with disabilities who exited high school. In relation to postsecondary education, the study found that of the 70% of students with disabilities who planned on attending a 2- or 4-year college or vocational/technical programs, only 36% were enrolled in such program 1 year after graduation, and of the nearly 60% of students who planned on living independently, only 20% were living autonomously a year subsequent to graduation (Baer et al., 2010). The OLTS (2010) determined that participation in inclusive or mainstream classrooms more than 80% of the time was the best predictor of positive post-high school outcomes for students with disabilities (Baer et al., 2010). In addition, other studies indicated that students in classroom-based programs had substantially more favorable outcomes, were more likely to engage in the targeted skills during the program, and showed a greater tendency to maintain changes in behaviors and to utilize these skills in other settings than students who received services in a pull-out setting (Barnhill et al., 2002; Ozonoff & Miller, 1995). Furthermore, in a study by Eaves and Ho (2008) it was found that during both childhood and adolescence, the best predictor of outcome was verbal IQ. This was noted as they reviewed and cited studies by Gillberg and Steffenberg (1987), and Howlin and Goode (1998) which indicated better outcomes being related to the presence of speech by about age 5 or 6 and measured IQ scores above 50 or 55.

The goals of education were the same for any student with or without disabilities, and that was to provide opportunities to learn and acquire skills and knowledge that increase personal independence; social responsibility; and also prepare students to successfully assume future adult roles and responsibilities (Kavale & Forness, 1999;
Whetstone & Browning, 2002). This process was referred to as “transition” and defined as a time when an individual adopted new roles and modified existing roles (King et al., 2005).

Postsecondary Transition

For All Students

Transitions take place throughout several critical periods of an individual’s life and in relation to various life domains such as family, friends, school, residency, employment and community. In the general sense, transition was a change or passage from one state, stage, subject or place to another (King et al., 2005).

For all young adults, the transition to adulthood is a critical stage in life as individuals are faced with opportunities and constraints that not only affect their life in the immediate, but would also have a considerable impact on their future. This transition occurs over a multi-year period in the lives of youth beginning in elementary school and continuing through a good part of their twenties as they continue to search for autonomy and independence and decide whether to attend college or seek employment after graduation from high school (Furstenberg, 2000; Stage & Hossler, 1989; Zarrett & Eccles, 2006).

Upon graduation from high school, it was expected that students would seek employment or postsecondary options and be prepared to enter the next phase of their life in pursuit of autonomy and independence. According to Holmstrom, Karp, and Gray (as cited in Kenyon & Koerner, 2009),

Qualitative descriptive research has found that high school seniors look forward to the independence of college, some perceiving the college
transition as a test of independence, a place where you can prove yourself, see what you are made of, and see if you can survive on your own. (p. 296)

College is noted as immensely different from high school as it is often the first place where young people are expected to be adults (Wells et al., 2003). The transition to an institution of higher education (IHE) had been described as a key time period as it was often the first time adolescents would not be residing in the same house with parents and would be responsible for much of their own day-to-day activities and choices. Such gains in responsibility or autonomy involve the freedom from childhood constraints and freedom to make choices, pursue goals and control one’s own behavior (Kenyon & Koerner, 2009). All of this happens when, for the first time, many young people are experiencing significant independence and the departure from their families’ experiences and support in order to become independent adults (Clark, 2005).

In addition to classroom demands, students are also faced with real-life independent, learning experiences such as money and time management, self-discipline, personal care of their physical and financial needs, and self-awareness through interactions with faculty and peers who had different values, goals and attitudes than theirs (Terenzini et al., 1994). Positive friendships and a strong social network are considered key to helping students adapt to college (Hays & Oxley, 1986). Oswald and Clark (2003) noted the importance of social relationships for successful transitions to college. Clark (2005) reported that a student’s perceived social integration as the most prominent challenge in the transition to college. It was no surprise that the transition from high school to college is regarded as one of the most difficult transitions that individuals experienced during their lifetime (Conley, 2008).
Unfortunately, the limited capacity of K-12 to prepare students with and without disabilities to traverse school to college resulted in too many students leaving college (Pritchard & Wilson, 2003). Postsecondary reports indicated that approximately 57% of nondisabled college students left their first college choice without a degree and another 43% drop out altogether (Tinto, 1987). For students with disabilities, the statistics were even more pronounced. According to the National Center on Secondary Education and Transition (NCSET), students with disabilities had a dropout rate twice as high as students without disabilities (NLTS2, 2005; Retrieved July 12, 2010, from http://www.ncset.org/publications/viewdesc.asp; OLTS, 2006). Although some students dropped out for reasons beyond the control of the institution, most left as a result of dissatisfaction with their college experience.

Consequently, there has been great interest in determining the preparedness of students as they made the transition from high school to college and factors that influenced a student’s ability to successfully complete college. A successful college transition was associated with integrating into the college environment, leaving college with a degree, and possibly securing employment (NLTS, 2005; OLTS, 2010; Pritchard, & Wilson, 2003). As such, it was understandable that the transition from high school to college presented an important phase for adolescents in learning how to navigate the academic, social, and independent living demands of higher education.

**Academic Adjustment**

In order for students to be academically successful, they must develop certain habits, attitudes and perform tasks and activities competently (Nist-Olejink & Holschuh,
2007). For all students, college success involves adjusting to a novel set of social and academic systems (Terenzini et al., 1994). Students who were academically successful developed organizational skills to learn how to cope with the demands of homework, studied for tests and exams, read a large amount of content, recalled what they read, and wrote numerous papers (Getzel & Wehman, 2005). They sought and utilized campus resources such as tutoring programs, learning centers, and study sessions (Pascarella & Terenzini, 1991). They learned to work not only independently, but also cooperatively with other students who had vastly different personalities, values, perspectives, and skills than themselves. Because students were most concerned about the academic transition to college, they tended to defer involvement in the nonacademic activities and campus life until they felt competent with their academic prowess (Terenzini et al., 1994).

The transition to college for youth involved not only experiencing academic success, but also social success, also coined social integration (Goldberg & Zwiebel, 2005; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Yazedjian et al., 2008). Students also needed to believe in their success, that they could accomplish college level work, that their ideas and opinions had value, and that they were worthy of the attention and respect of their peers and the college faculty and staff (Terenzini et al., 1994). Thus an academically successful student not only increased his or her potential for a good job, but also promoted that IHEs achievement statistics.
Social Integration

To be successful in college, researchers suggested that students needed to demonstrate not only academic skill, but also competence in a myriad of other areas such as social, communication, self-management, self-determination, independent living, community and employment skills (Fullerton, 1995; Halpern, 1985; Hendricks & Wehman, 2009; Will, 1984). Others suggested that most college freshman perceived social integration as both the most challenging and most beneficial aspect of their college transition (Benson, 2007; Clark, 2005). Social integration was defined as the ability and desire to interact with peers and develop relationships appropriate to the individual’s developmental level (Attwood, 2000).

When interacting, people used both expressive and receptive skills to sustain conversations and engage with one another. It was noted that individuals with ASD demonstrate impairments in speech, linguistic conventions, social pragmatics (e.g., turn-taking in conversation, and the ability to take the listener’s perspective), speech prosody (e.g.: rising and falling of voice pitch and inflection), fixation with certain topics, difficulty understanding emotions, and difficulty interpreting non-literal language (e.g.: sarcasm and metaphor) all of which impact social, and interpersonal interactions (Kerbel & Grunwell, 1998; Krasny, Williams, Provencal, & Ozonoff, 2003; Paul et al., 2009; Shaked & Yirmiya, 2003). In addition, it was also reported that individuals with ASD possessed “mind blindness,” an inability to understand the thoughts and feelings of others (Baron-Cohen, 1997; Prince-Hughes, 2002).

Research suggested that one of the many challenges college students confronted during their first year of college was finding a social niche within the campus
community, and it was recognized that students who participated in social affairs and who formed relationships with faculty and other students had a greater chance of persisting to complete their college education and obtain a college degree (Anderson, 1988; Astin, 1984; Benson, 2007; Berger & Milem, 1999; Oswald & Clark, 2003; Pascarella & Terenzini, 1991; Tinto, 1987).

In his model of social integration, Tinto (1987) suggested that students moved through a succession of stages which included separation from previous communities; transition into the college community, and immersion the college community (Benson, 2007). In order to develop a social niche and form strong bonds within the college community, students needed to live on campus away from previous friends (Benson, 2007). Benson reported that having at least one close friend in college increased the odds that a student would be socially integrated in college by over 60% and served to provide new developmental contexts, experiences, values, behaviors and routines congruent with college life. It is for this reason that social health was believed to be one of the most critical elements, if not the most important element, to success and retention in the first year (Upcraft & Gardner, 1989). In fact, some studies discovered that GPA and retention were predicted by an individual’s degree of social support (Brooks & DuBois, 1995; Upcraft & Gardner, 1989).

**Student Engagement**

While there was limited research on the topic of student engagement in relation to students with disabilities, it was suggested that college students who were involved in campus organizations transition adjusted to college more successfully than those who
were not involved (Terenzini et al., 1994). It was acknowledged that learning occurred through both in-class and out-of-class experiences and opportunities and that those experiences were essential to academic achievement (Astin, 1985; Terenzini et al., 1994).

Engagement in campus activities and clubs was noted to impact a student’s satisfaction with college (Cooper, Healy, & Simpson, 1994), their academic achievement (Hartnett, 1965) and college retention (Okun & Finch, 1998). Most importantly, it was reported that students had higher self-esteem and were more likely to stay in school when they felt supported and connected with others on campus (Day, 1989). As such, student engagement would appear to play a significant role in college success.

_Independent Living_

The transition to campus living affords students the opportunity to interact with other students and to form strong bonds within the college community (Benson, 2007). For students who reside on campus, the transition of living with others created a shared experience with others and provided the opportunity to explore and discover other people’s worlds and to have fun (Terenzini et al., 1994). Moreover, living away from home and in a community with others afforded students the opportunity to learn from others, help one another, and make new friends. As suggested by Terenzini et al. (1994), the transition to college provides the student with a redefinition of self and provides opportunities for students to experience “real learning.” Real learning was defined as taking the personal responsibility for learning how to survive, become more independent, self-sufficient, manage academics, money and time, set goals, exercise self-
discipline and self-awareness, and develop personal responsibility (Terenzini et al., 1994). It was cited that students who experienced authentic or real life learning were more likely to develop feelings of success and pride in their accomplishments and to develop a sense of competency and personal growth (Terenzini et al., 1994).

*Emotional Variables*

Brooks and DuBois (1995) found that emotional variables influenced a student’s transition to college and his or her academic success. Moreover, self-confidence, self-control, and having an achievement-oriented personality were also associated with greater academic success (Boyer & Sedlacek, 1988; Pritchard & Wilson, 2003; Wolfe & Johnson, 1995). Personality variables were considered useful predictors of long-term academic performance and persistence. In a study by Tobey (1997), students who were anxious were found to be more likely to depart college. In addition, students with heightened anxiety had more frequent academic difficulties and challenges which, in part, impacted their psychological health and college adjustment (Pritchard & Wilson, 2003).

Several studies denoted that, for all students, the transition to college involved adapting to a new set of academic and social systems. This transition necessitated that students made choices and were responsible for much of their own day-to-day activities without help from parents. The transition to college was a time for young adults to gain emotional and functional autonomy from their parents (Goossens, 2006; Getzel & Wehman, 2005; Kenyon & Koerner, 2009). Studies noted that emotional autonomy, associated with being less reliant on parents for approval and emotional support in order
to gain a sense of self (Hoffman, 1984; Lapsley, Rice, & Shadid, 1989), and functional autonomy, making personal choices and decisions and managing one’s own affairs devoid of parental input (Kenyon & Koerner, 2009; Wehmeyer, 1996) were considered essential to separating from parents and being more independent (Palmer, 2006). Nonetheless, it was evident that it was important to consider both academic and social integration as part of the college experience.

In the college environment, transition involves navigating unfamiliar territory with new social and academic demands. It involved the ability to transition between activities, classes and courses—a crucial skill for students (Getzel & Wehman, 2005; Palmer, 2006). Hence, students with disabilities not only faced the same challenges as their nondisabled peers, but because of the nature of their disability, they had to adapt to changes often with less well-developed skills than their nondisabled classmates.

**For Students with ASD**

Transitions, by their very nature, are difficult and necessitate time for adjustment and efforts to minimize the impact of the problems that could inevitably be confronted (Eckes & Ochoa, 2005). For students with ASD, such challenges are compounded because of the triad of deficits with impairments in social integration, communication and behavior (Adreon & Durocher, 2007; Charman, 2008).

Transition times tend to be significant in the lives of students with autism with the transition from high school to young adulthood considered a noteworthy juncture (VanBergeijk et al., 2008). Much like their typical peers, adolescents with disabilities face a number of life opportunities, and challenges as they traverse from secondary
education into the world of higher education. As such, ensuring that students with disabilities had equal opportunity to access and fully participated in postsecondary education had been identified as one of the key challenges in the future of secondary education and transition for such students (National Center on Secondary Education and Transition, 2003).

With the current school reform efforts, particularly the No Child Left Behind (NCLB) and IDEA and its improvements (Individuals with Disabilities Education Improvement Act, IDEIA), it would be anticipated that more youth with disabilities would graduate from high school and enter postsecondary education (National Center on Secondary Education and Transition, 2003). Therefore it was imperative that the transition from high school to higher education to be thoughtfully and purposefully planned in order to promote the chances that students with disabilities would remain in college and graduate with a degree (Katsiyannis, Zhang, Landmark, & Reber, 2009; Shaw et al., 2010; Yell, Katsiyannis, & Hazelkorn, 2007). As such, federal measures had been put into place to ensure high schools prepare students for postsecondary transition (Benson, 2007; Blackorby & Wagner, 1996; Cameto et al., 2004; Conley, 2008; Hendricks & Wehman, 2009). Federal and state mandates also dictated the need to understand the factors that influenced outcomes for students with and without disabilities beyond graduation (Office for Exceptional Children, 2004; The National Longitudinal Transition Study-2, 2005; The Ohio Longitudinal Transition Study, 2006).

*Transition* was defined as a coordinated set of activities for a child with a disability that was outcome-oriented and focused on improving the academic and functional achievement of the child and their movement from school to post-school
activities. It included postsecondary education, vocational education, integrated employment, continuing and adult education, adult services, independent living, or community participation, and included consideration of the students’ preferences, needs and interests (IDEA, 1990, Chapter 33, Section 140(a)(19); U.S. Department of Education, Office for Civil Rights, 2006). It was stated that the transition process for students with disabilities would begin in high school, no later than age 16, and continue through development of a transition plan to prepare students for the myriad of changes that would occur during the shift from high school to adult life (Goupil, Tasse, Garcin, & Dore, 2002).

For youth with disabilities, the transition from high school was a major focus that began with the arrival of the Individuals with Disabilities Education Improvement Act of 2004 (Part B of IDEA), which specified that “beginning no later than the first Individualized Education Plan (IEP), in effect by age 16 (or younger if the IEP team determined a need), transition services essential to the child reaching their goals must be listed in the child’s IEP” (Ohio Department of Education, Office of Exceptional Children, 2008).

According to Madaus (as cited in Shaw, Madaus, & Dukes, 2010), once a student graduated from high school the numerous formal and informal checks and balances and laws that once mandated a free and appropriate public education to all students no longer applied. This transfer of rights required the college-entry student to disclose his or her disability to a designated disability contact person on campus in a timely manner in order to receive accommodations (Shaw, Madaus, & Dukes, 2010; Wolanin & Steele, 2004). Such disclosure allowed confidential information about the student to be
carefully reviewed and for the adjustments or accommodations to be documented and
guardian for the adjustments or accommodations to be documented and
provided to the student’s instructors (NLTS2, 2005; Palmer, 2006).

Consequently, students with autism needed to demonstrate self-determination
and self-advocacy skills in college (McCarthy, 2007; Wehman & Yasuda, as cited in
Getzel & Wehman, 2005). These two skills are essential for success in higher education
as well as employment (Burgstahler, as cited in Getzel & Wehman, 2005). Self-
determination was defined as making one’s own decisions and choices without external
pressure of interference (Thoma & Wehmeyer, as cited in Getzel & Wehman, 2005).
Comparatively, self-advocacy was described as an important skill used by people who
are self-determined. Self-advocacy was defined as having sufficient knowledge and
understanding of one’s disability in order to make personal decisions, set personal goals
and problem-solve (Burgstahler, as cited in Getzel & Wehman, 2005; McCarthy, 2007).

As noted there were numerous factors that influenced outcomes for students with
disabilities, as such it was clearly documented that success in higher education required
early and adequate preparation in the areas of academic, social, independent living, and
self-advocacy skills (Getzel & Wehman, 2005; Palmer, 2006; Shaw, Madaus, & Dukes,
2010).

Academic Achievement

College is truly different from high school in that the pace of college courses is
much more rapid and professors expect students to demonstrate higher level thinking
and reasoning. In college, students are expected to read more in less time (Standards for
Success, 2003), produce well-written papers that are thoughtful, organized and supported
by evidence (National Survey of Student Engagement, 2006), and to use higher level thinking and reasoning skills to analyze, research, infer, deduce, explain, interpret and support data, problem-solve, collaborate, and think more profoundly (Conley, 2008; Conley, Aspengren, Stout, & Veach, 2006). College students were expected to be independent, self-reliant learners who recognized when they were having problems and knew when and how to ask for help from their instructors, peers or other support staff. They are expected to manage the *implicit curriculum*: “the variety of demands placed upon college students to control their own learning and participation” (deFur, Getzel, & Trossi, 1996, p. 233). For students with ASD, the responsibility of managing the *implicit curriculum* in combination with the social demands of college would be a considerable challenge because of the interpersonal deficits associated with this disorder (deFur et al., 1996).

Academic behaviors such as self-awareness, self-monitoring, and self-management were essential to academic success (Conley, 2008). Students needed to be able to recognize their own level of understanding and misunderstanding of material, how to persist, how to study, and how to generalize learning and strategies from various settings and situations (Conley, 2008; Terenzini et al., 1994). Essentially, college students needed to learn how to learn and how to study. Learning how to manage time, prioritize tasks, take notes, utilize resources, manage stress, and communicate with instructors and peers appeared to be essential study skills. Managing time to start and complete work within the timelines and balance work and social/recreation/leisure time was also imperative.
When compared to high school, college courses required more extensive reading and writing. They were more fast-paced and professors placed an emphasis on deeper thinking through use of inferences, analyzing, supporting, solving problems, explaining, researching, making interpretations, and reaching conclusions (Conley, 2008; National Survey of Student Engagement, 2006; Standards for Success, 2003). College students were expected to be self-sufficient learners who recognized when they were having problems and when and how to request help from professors, students, or other sources (Conley, 2008; Wolf et al., 2009). This could be a predicament for the student with autism who was unaware that he or she was having academic difficulties (Palmer, 2006).

Students with autism have problems with organization and time management which may impact their attendance, work completion and overall academic achievement (Palmer, 2006). Trouble communicating with instructors to request and obtain needed academic accommodations could be an additional challenge for students with ASD as this required adequate self-disclosure and self-advocacy skills (Shaw et al., 2010).

**Self-advocacy and Accommodations**

Self-advocacy skills were identified as necessary for students to feel comfortable and willing to disclose their disability to university officials, and to request and access academic adjustments or accommodations (Eckes & Ochoa, 2005). In college, a student with a disability would be required to initiate the process for academic accommodations through voluntary disclosure of their disability to a designated university official and documentation of their needs. When reviewing a student's documentation for course accommodations the primary consideration was based upon the impact of the disability
with the demands or requirements of the course or program (Eches & Ochoa, 2005; IDEA, 2004; Madaus, 2005).

Receiving appropriate supports and accommodations was related to school success and retention for students with disabilities at IHEs (National Center for Education Statistics, 2006). Yet, while IHEs were required to provide equal access so that a student was not discriminated against for having a disability, problems existed because not all students disclosed their disability and not all IHEs provided the type and degree of support the student requested (NLTS2, 2005; Office for Civil Rights, U.S. Department of Education, National Center for Education Statistics, 2006; VanBergeijk et al., 2008). Working with the college instructors was important so that students could receive the accommodation strategies that would provide them with the opportunity for both learning and demonstrating mastery. However, students needed to be aware that faculty had the right to reject accommodations that infringe on a course’s fundamental goals. They could also choose between equally effective strategies if one is less intrusive to the course goals.

Findings from the NLTS2 (2005) indicated that approximately one-third of students with disabilities who entered college disclosed their disability prior to enrollment; 3% waited to inform the IHE until after they enrolled; and an additional 8% reported that they had a disability but decided not to disclose once in college. Once disclosed, IHEs were expected to individually review and provide students with accommodations; however IHEs determined what to provide so long as the student with a disability had the same access and their nondisabled peers, that the accommodations were reasonable, and that the accommodations were not overly burdensome to the IHEs.
Some of the most commonly provided accommodations for students with disabilities at the college level included extended time on tests, tests taken in an alternative setting, tutoring, study center assistance, note-taking, remedial classes, technology aids, organizational strategies, time management and learning and study skills, and behavior management supports (NLTS2, 2005; OLTS, 2010). Less frequent types of help included modified assignments, early registration, independent-living supports, physical adaptations to classrooms, and large print or Braille materials, and books and/or lectures on tapes (NLTS2, 2005). Testing accommodations were reported as sometimes necessary to promote greater academic success in college for SWDs. “In accordance with ADAAA, students with a confirmed, registered disability are entitled to standard accommodations set by the law in each of his/her classes” (VanBergeijk et al., 2008).

Eches and Ochoa (2005) noted that while most instructors in higher education were aware of the laws for SWDs, they were less-informed about special education accommodations than K-12 teachers who had more training and coursework; thus they were often less astute to meet the educational and social needs of SWDs in their classes. As such, it was essential that SWDs needed to recall their former needs and evaluate how they might impact typical activities in college. SWDs needed to give consideration to their needs with various classes; assignments, tests, papers, reports, group presentations; class attendance; communication skills (in class or as part of a group); time management; organizational skills; participation in extracurricular activities; and living independently. In short, the literature clearly indicated that there are major differences between high school and college (Clark, 2005; Wells et al., 2003).
Therefore, for students with disabilities to be successful in college, they had to be prepared to use self-advocacy skills and employ a myriad of learning strategies and coping skills vastly different from those they developed and sharpened in high school (Palmer, 2006). While the definition of success was varied, success in college was clearly defined as persistence to graduation, and such persistence to graduation was predicted by a student’s academic and social integration in college (Yazedjian et al., 2008). Consequently, it was suggested that students with ASD required adequate preparation to be more successful in transitioning to higher education (Conley, 2008; Pritchard & Wilson, 2003).
CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

Introduction

This study used a multi-case qualitative research design aimed at developing grounded theory (Merriam, 1998). Grounded theory seeks to promote the development of themes or relationships across categories of the topic so that the theories almost appeared as features of the data, and not as features of the researcher (Gall et al., 2003; Sivensend, 1999; Yazedjian et al., 2008). The purpose of this chapter is to describe the research design and methodology of the study. The following will be presented: purpose of the study, design of the study, research questions, description of the setting, selection process, role of the researcher, methods of data collection, data analysis, and limitations of the study.

Purpose of the Study

The population of individuals diagnosed with an Autism Spectrum Disorder (ASD) who are entering into institutions of higher education (IHEs) is rapidly growing (Eckes & Ochoa, 2005; Katsiyannis et al., 2009; Wells et al., 2003). Today, children with ASD are of the age to enter higher education settings and while they arrive with many of the same needs as their nondisabled peers, the nature of their disorder results in more pronounced needs. Consequently, IHEs must develop a better understanding of the
unique needs of students with an ASD in order to provide them the necessary supports and accommodations to successfully navigate the academic, social, and independent living demands of higher education.

While it is known that the population of students with ASD is growing in number and that they are transitioning into institutions of higher education (IHEs); studies over the past twenty years have not sufficiently focused on their needs and experiences, or identified ways to support students with ASD in college (Adreon & Durocher, 2007; Camarena & Sarigiani, 2009). As such, there is a need to better understand how students with ASD successfully navigate the academic, social, and independent living demands of higher education through the lens of the students with ASD, their parents, and OA staff from institutions of higher education.

Design of the Study

As defined by Creswell (1998), qualitative research is a “process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem whereby the researcher builds a complex, holistic picture, analyzes words, and reports detailed views of informants” (p. 15). This study is based upon the principles of qualitative inquiry. Hence, it is guided by relatively broad questions, rather than specific hypotheses to be tested. Qualitative inquiry “is focused on discovery, insight, and understanding from the perspectives of those being studied” (Merriam, 1998, p. 1). It serves to represent human acts and utterances (Sivesind, 1999), causes the researcher to make an aspect of the social world “readable” to others (Schram, 2006), and thus contribute to the knowledge base and practice of education (Merriam, 1998).
Its aim is to interpret the understandings of the actors (Sivensind, 1999) and “to address questions concerned with developing an understanding of the meaning and experience dimensions of humans’ lives and social worlds” (Fossey, Harvey, McDermott, & Davidson, 2002).

Qualitative research conducted on the challenges among college students transitioning to college has spanned many years and has offered valuable insights into factors that influence college outcomes (Clark, 2005; Cuff, 1930; Nist-Olejink & Holschuh, 2007; Okun & Weir, 1990; Terenzini et al., 1994; Yazedjian et al., 2008). However, while a myriad of research exists on understanding the needs of students with lesser disabilities, such as learning and emotional disorders (Adreon & Durocher, 2007) much less research is available specific to understanding those factors that influence college success for students with ASD, let alone that which is based upon their lived experiences.

As more students with ASD are entering colleges, the higher education community is becoming very interested in understanding the needs of such students (Farrell, 2004). Use of a qualitative case study design allows the researcher to immerse in naturally occurring events, understand the lived experience of the participants, and share experiences and establish relationships with people through talking, listening, looking, reading and reflecting (Schram, 2006). Using a qualitative perspective, this study sought to make sense of the world and the experiences of those individuals from their personal perspectives (Merriam, 1998). Schram (2006) stated that qualitative research attempts to affirm the centrality of real-life human beings and serves to create connecting conversations or arguments among the various experiences, ideas, and
perspectives related to inquiry. These perceived experiences rely on the depth, richness, and detail of the perspectives of the informants to provide the basis for relevancy, meaning and significance for this study. As a result, an explanatory, multi-case study research design was used for this inquiry (Yin, 1997) in order to develop grounded theory and gain an understanding of the perceptions of critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with Autism Spectrum Disorder (ASD) from the lens of students with ASD, their parents, and OA staff from the IHE where the student attended.

Historically, case study research has attempted to respond to that which is complex by providing rich and thick descriptions of the lived experiences of the participants (Gummesson, 2007; Schram, 2006). As such, because of its in-depth approach, case study is capable of identifying what Flyvbjerg (2006) referred to as “black swans. . . . what appears to be ‘white’ often turns out on closer examination to be ‘black’” (p. 228). Moreover, case study is an ample methodology in the social sciences, and sustains when compared to other methods in the social sciences (Flyvbjerg, 2006).

Case studies typically contain a large amount of narrative which reveals the complexity of real life and exposes rich ambiguity (Flyvbjerg, 2006). “The case story is itself the result….like a virtual reality” (Flyvbjerg, 2006, p. 238). This research involved case study with the goal of developing grounded theory. “Grounded theory is an approach to theory development that involves deriving constructs and laws directly from the immediate data that the researcher has collected rather than drawing on prior
research and theory” (Gall, Gall, & Borg, 2003, p. 8). Grounded theory was sought to allow for greater understanding of those factors that students with ASD, their families and individuals from IHEs perceive help facilitates student success (Strauss & Corbin, 1998).

As is common to qualitative research, this study was characterized by

(1) making the focus understanding the phenomenon from the lens of the participants, (2) becoming intimately familiar with the phenomenon being studied, (3) having the researcher serve as the primary instrument for data collection and analysis, (4) using inductive reasoning to analyze data, and (5) focusing on constructing an understanding through the use of rich description to convey meaning” (Merriam, 1998, pp. 6-8).

Through this research study, it was the researcher’s intent to establish a generative body of evidence to draw inferences and foreshadow possibilities for enhancing the experience of higher education for students with ASD.

This study was multifaceted in that the results would ultimately be used for three purposes: to (a) present an accurate portrait of the shared experiences of the participants, (b) identify factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD, and (c) offer insights to the higher education community that will deepen its understanding of those factors identified by the stakeholders as influential in the success of students with ASD.

Research Questions

In the reporting of qualitative research, the initial domain of inquiry and aims of the study, or research questions, should be clearly and unequivocally articulated. The research questions for this study were:
1. What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

2. What do parents of students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

3. What do Office of Accessibility (OA) staff at IHEs identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

4. What similarities and/or differences emerge in the perception of critical factors identified by students with ASD, their parents, and OA staff?

Description of the Setting

This study was conducted in a large Midwestern state. All participants and IHEs were located in this state. The first of the three IHEs was a smaller, private university, located in a suburban setting. The second was a public university located in an urban setting. The third was a private college located in a rural setting. The three institutions were all founded in the mid 19th to early 20th centuries. The two smaller IHEs are of religious affiliation. All three claim to have a student body that is diverse in gender, race and ethnicity. The public university has an enrollment of over 25,000 students, and the two private IHEs have populations of less than 2,500 students. All three IHEs have campus housing available to students. Each IHE is located less than one hour from the home of the students’ parents.
Participant Selection

Qualitative sampling is concerned with information-richness. This requires locating participants who can best inform the study. Merriam (1998) recommended that when looking for the best cases to study, it is necessary to begin by establishing the essential criteria to guide the selection of the participants, and select cases based upon that criteria. The criteria set for establishing the sample was directly related to the study to lead to a rich body of knowledge.

“When the objective is to achieve the greatest possible amount of information on a given problem or phenomenon, a representative case or a random sample may not be the most appropriate strategy” (Flyvbjerg, 2006, p. 229). Consequently, it is more appropriate to select some few cases chosen with a purpose in mind, which is referred to as purposeful or purposive sampling. A purposive sampling strategy involves the selection of respondents based upon what they can contribute to the researcher’s understanding of the phenomenon under study to build rich description (Merriam, 1998). Accordingly, this study used nonrandom, purposive sampling and a small sample size on the basis that the researcher wanted to obtain, comprehend, and gain insight using a sample from which the most can be learned (Merriam, 1998). In support of a small sample, Beveridge (1951) claimed that more discoveries are made possible by case study than from statistics applied to large groups.

Schram (2006) purported that studies are either site specific, population specific or focused on a phenomenon. For this study, the selection of participants was population specific, based upon essential criteria predetermined by the researcher, and upon his or her willingness to participate in the entire study. The researcher sought potential student
and parent participants through professional contact with the parent of a student with ASD autism who suggested other parent and student participants that she believed would meet the criteria for participation and be agreeable to fully partake in the study.

The study began with four parent participants; however, one parent was unable to entirely commit to the study; thus, the participants were reduced to nine. The remaining participants included three male students with ASD, three female parents (mothers of the students), and three female OA staff members from the participating IHE currently attended by the student. The three OA staff all worked at the office on campus that served students with disabilities. Each participant was selected based upon predetermined essential criterion.

The essential criterion for all participants was set by the researcher. Each student was selected based upon possessing the following: (a) a diagnosis of ASD, (b) at least average general intelligence, validated by information provided by the parent, (c) a willingness and ability to independently respond to the survey questions in writing (e.g., using handwritten and/or computer responses), (d) participation by at least one of the student’s parents, (e) the willingness of a representative from the student’s institution of higher education to participate in the study, (f) the student’s enrollment in an IHE, and (g) the students’ availability for the entire study. Two of the three student participants lived on campus during the fall and spring semesters and lived at home with their parents during the summer months. One student lived on campus at his previous IHE, but currently resided at home with his biological parents.

To assure that the student participants had at least average general intelligence, the student’s IQ score or category (e.g., average, above average), diagnosis, and the
The name of the physician who diagnosed their child with ASD was requested on the parent survey and consent form. The researcher confirmed such information with each parent during the individual parent interviews.

The students were asked to complete two surveys in order to meet the participation requirement. Once consent was received, all three students fully participated in the study, although provisions were made that should any one of the participants declined to fully participate, his or her child, parent and/or the OA staff member would also be released from further participation in the study.

The three parent participants were selected based upon their child’s participation and their availability for the entire study. Each of the student’s mothers agreed to commit to the study. As a result, when referencing “parent” participants in this study, henceforth, parent participants were the mothers of the student participants.

Once consent was received, each parent fully participated by completing one survey, participated in a focus group session with the other parent participants, and took part in one personal interview. The focus group and individual interviews with parent participants were led by the researcher and were audio-taped, and conducted at a mutually agreed upon date, time, and place within the timeframe of the study.

The Office of Accessibility (OA) staff participant was selected based upon the student participant attending that IHE, their availability for the entire study, and having knowledge of law pertaining to accessibility for students with disabilities under the Americans with Disabilities Act Amendments Act (ADAAA). The three representatives from the IHEs were full-time employees at the IHE serving in administrative or supportive roles in the department within the IHE’s that serves students with disabilities.
To maintain anonymity, and because IHEs use different department names for the department that serves students with disabilities, the researcher selected to use Office of Accessibility (OA) as it is more commonly used and would not distinguish one IHE from another. To further maintain anonymity, the individuals who represented the IHEs were referenced henceforth as OA staff.

Interview data was collected from a higher education OA staff member via an audio-taped telephone conference at a mutually agreed upon date and time within the timeframe of the study. In order to participate in the study, the OA staff member was required to meet the participation criteria of completing one survey, and participating in an audio-taped telephone interview, conducted by the researcher. Due to availability and time constraints with data being collected over the summer months, the interviews were conducted over the telephone instead of face-to-face with the OA staff member from the participating IHEs. It was predetermined that should an OA staff member become unable to fully participate, an attempt would be made to locate another OA staff member who met the criteria for participation at the same IHE; however, all three OA staff participated fully in the study.

The study was originally planned with the intent of using four student participants and parents; however, one parent was unable to make the commitment to the study, thus, the study was reduced by one student, and one parent. The student attended the same institution of higher education as one of the other student participants, hence this did not impact the number of OA staff participants. Audio-tapings from interviews and the focus group are to be kept in a secure location in the home of the researcher and would be accessible only to the researcher for a reasonable amount of time. Parent and
OA staff participants were provided verbal and written documentation of the aforementioned issues of confidentiality as applicable, within the consent form, prior to beginning the focus group and interviews, and/or at the close of the audio-tapings.

Participants

Student Participants

Al. At the time of the study, Al was 21 years old and a senior who attended IHE1, a private, suburban university located in the Midwest. Al planned to graduate in the spring with a bachelor degree in the fine arts, continue his studies and seek and internship and a master’s degree. He lived in campus housing during the school year, and at home with his biological parents during the summer months when not attending college. Al was one of four children. His mother, Ann, reported that he was diagnosed with Asperger Syndrome, a form of ASD, in 1994 at the age of 4. She noted that Al had a measured intelligence quotient in the superior range as determined by an IQ test administered by a psychologist. Al attended a suburban high school in the Midwest, and attended the same school district for his entire elementary, middle and high school years. He had an Individualized Education Plan (IEP) in high school and received special education services and accommodations. He also received accommodations at IHE1. He was active in extracurricular activities in high school and the community. Al had many hobbies and was active in several clubs and groups at his IHE (focus group, August 11, 2010; interview August 26, 2010).

Rob. Rob was 22 years old, and a junior who attended IHE2, a large public institution located in an urban setting in the Midwest. Previously, he attended another
large, urban university before transferring to his current IHE over one year ago as a result of a change in his major and his desire to live at home. At the time of the study, Rob was pursuing a bachelor’s degree in a field within the education department, and was working and attending school on a part-time basis. He was the younger of two children. Rob lived at home with his biological parents, although he had lived in campus housing at the first IHE that he attended. Rob attended a suburban high school in the Midwest, and remained in the same school district for his entire elementary, middle and high school years. He was active in extracurricular activities while in high school and continued to participate in off-campus hobbies and clubs, although he did not participate in campus clubs or groups at his current IHE. Rob received special education services and accommodations while in high school. Although first tested at age 7, Rob was diagnosed at the age of 13, with Asperger Syndrome by a medical doctor. His mother, Dawn, noted that he had an intelligence quotient in the average to above average range as determined through an evaluation by a psychologist. Rob had an IEP in high school. He also received accommodations at IHE2 (focus group, August 11, 2010; interview, September 1, 2010).

Louis. At the time of the study, Louis was 20 years old. He was a junior and attended IHE3, a private institution located in a rural setting. He lived in campus housing during the school year, and at home with his biological parents during the summer months when not attending college. Louis was the youngest child, and had two older step-siblings. Louis was diagnosed with Asperger Syndrome by a pediatric neurologist in 1997 at the age of 7. He attended two different suburban high schools located in the Midwest during his high school years due to a family move. His mother,
Joy, noted that he had a 504 plan in high school which afforded him the opportunity for accommodations. During the study, Louis was pursuing a bachelor’s degree in a science-related field, and was involved in hobbies and campus groups. Louis was also actively involved in off-campus social activities (unorganized) and organized clubs. His mother stated that Louis had a measured intelligence quotient in the superior range as determined by an IQ test administered by a psychologist (focus group, August 11, 2010; interview August 26, 2010).

**Parent Participants**

*Ann.* Ann was the mother of Al. She was married to Al’s father and was the mother of four. She also helped raise her stepson and grandson. Ann obtained a bachelor of arts degree in speech pathology and a master of arts degree in school psychology. She retired about one year ago, but continued to work part-time. She worked in the field of education her entire career. Over the years, she has spoke to local groups and national organizations on topics related to autism and traumatic brain injury and led a parent support group for parents of students with ASD. Ann also provided in-services to her son’s teachers and staff during his elementary, middle and high school years.

*Dawn.* Dawn was the mother of Rob. She was married to Rob’s father and they had two sons. Dawn was employed full-time during the study. She obtained a bachelor’s degree in education and a master’s degree in counselor education. Over the years, she provided in-services to her son’s teachers and staff prior to his going to college. She was involved in a parent support group for parents of students with ASD.
Joy. Joy was the mother of Louis. Louis is the only child to Joy and her husband. She also has two grown stepchildren. Joy received a bachelor’s degree in education and is a retired educator. Prior to his going to college, Joy provided information as needed to Louis’ teachers and school staff about ASD.

Institution of Higher Education/Office of Accessibility Staff Member

IHE1/Sally. IHE1 was a 4-year private institution of religious affiliation. It was located in a suburban area within the Midwest. Its population was less than 3,000 undergraduate students. Sally participated in the study as a representative of IHE1. She had been employed at the university for over 10 years. While her primary role was to manage the resources available to students with disabilities, her position included many additional responsibilities. Sally was responsible for meeting with students and their parents prior to enrollment to determine the “fit” and how IHE1 could meet his or her needs. She coordinated the student’s visit to campus to meet various faculty, coaches, and department heads. Sally was required to gather written documentation from the student indicating his or her disability and to determine his or her eligibility for services on campus. She worked with the student to not only locate the documentation of the disability, but also to determine eligibility for services and coordinate the accommodations and resources for the student. Once the student disclosed his or her disability, she worked with the student to complete a university form to gather information about the student’s needs. Sally was also responsible to provide in-service for parents at orientation, and for the training and education of various constituents on campus (e.g., President of IHE1, faculty, staff, facilities, security, resident hall staff)
about the accommodations, needs and laws pertaining to students with disabilities. She also had regularly scheduled weekly meetings (aka “quick check-ins”) with some of her students to see how they were doing, and check on tests, organization and social issues. She worked to make sure that the student’s had other people they knew and felt comfortable and with whom they could connect. Sally helped tap into the students’ interests and tried to link them with a club or with other students. She also helped them balance their classes when scheduling so not to take too many classes on one day. In her position she was required to have knowledge of reasonable accommodations under the Americans with Disabilities Act Amendments Act (ADAAA). Sally has worked with over 10 students since she began at IHE1. At the time of the study, she had three students with ASD with whom she worked. At IHE1, support services were located throughout the campus although her office was located in a central location on campus.

**IHE2/ Lee.** IHE2 was a large, public institution with upwards of 30,000 undergraduate and graduate students. It was located in an urban setting in the Midwest. Lee participated in the study as a representative of IHE2. She had been employed in the field for 10 years although this was her first year at IHE2. She served as a disability specialist and was responsible for providing and managing the resources available to students with disabilities. At the time of the study, Lee had three students with ASD with whom she worked. At IHE1, support services were located throughout the campus although her office was located in a central location on campus. Lee was required to gather written documentation from the student indicating his or her disability and to determine his or her eligibility for services on campus. She developed an accommodation form each semester and the student was told to give that to each of their
professors and meet with the professor during office hours, or before or after class. Once the student disclosed his or her disability as per the IHE2’s verification form, she worked with the student to not only locate the documentation of the disability, but also to determine eligibility for services and coordinate the accommodations and resources for the student. Lee was also responsible to provide training and education to the different constituents on campus (e.g., faculty, staff, physical plant, President of IHE1) about the accommodations, needs and laws pertaining to students with disabilities. In her position she was required to have knowledge of accommodations and equal access requirements under the Americans with Disabilities Act Amendments Act (ADAAA).

IHE3/Jean. IHE3 was a 4-year private, religious, coed institution less than 2,000 undergraduate students. It was located in a rural setting in the Midwest. Jean participated in the study as a representative of IHE3. At the time of the study, she had just begun her 28th year at the university. Her position evolved over the years to include students with disabilities. Prior to about five or six years ago, she was unaware of any students who were diagnosed with ASD or demonstrated behaviors consistent with that diagnosis. She stated that she recalled seven students over the past five or six years with ASD and had worked with approximately two or three students each year. At the time of the study she indicated she was working with three students with autism. Jean’s responsibilities began by meeting with students and their parents to determine if IHE3 could fit the needs of the student and would be the place where the student would feel comfortable. She presented information to the parents and student on what the university could provide and what they had available. Once the student disclosed, then Jean gave the student forms that needed completed (e.g., disclosure form, release forms)
in order to gather the information needed to determine accommodations). Jean reviewed the student’s high school accommodations and translated that into what would provide equal access for that student based upon their documented needs and that which was available at IHE3. Jean was also responsible for sending letters to the faculty and staff (e.g., resident assistants/RAs) each term with an outline of what the student needs. She sent letters to the student to inform him or her of her role and their role and where to locate academic supports throughout the campus. Jean was the “communicator” between faculty and students who had documented needs. She was responsible for finding alternative materials, connecting students with academic support services such as getting a note-taker, help with studies and help with time management, as examples. She also worked with students and their families before they made an application to the college. Her position required her to have knowledge of accommodations under the Americans with Disabilities Act Amendments Act (ADAAA).

Theoretical Framework

Excellence in case study research requires the researcher to use a constructive yet critical lens to gather meaning and understanding by accessing, analyzing and interpreting data offered by the sources (Gummesson, 2007). Meaning is not just the facts, but rather the understanding gained by encouraging people to describe their worlds using their own terms through both the spoken and unspoken word (Rubin, & Rubin, 1995).

This study employed a constructivist framework because such a framework utilizes complex, multidimensional interactions within social contexts to determine the
lived experiences of the participants (Schram, 2003). “This approach grants greater significance to the mutual construction of data by researcher and participant in the process-framing interview materials more as ‘views’ than hard facts” (Schram, 2003, p. 102). Through their deep, rich and detailed experiences, informants provided a perspective that brought relevancy, meaning and significance to this study.

Data Collection

While the researcher was the primary instrument for data collection, multiple data gathering techniques from multiple sources were frequently used in qualitative studies in order to develop a more complex portrayal of the phenomena being studied (Merriam, 1998). Information gathered during data collection needed to be accounted for in a manner that enabled the researcher to analyze the data, and extract meaning and context from the data. Overall, the methods have to be logically linked to the topic and must be justified (Morse, 2003)

In this study, three major data sources were used to gain information related to the research questions: (a) surveys, (b) focus groups interviews, and (c) individual interviews with the parent participants and OA staff from the IHE attended by the student participant. Individually and collectively, these methods of data gathering provided insight into the participants’ beliefs, impressions, experiences, and ideas about a specific topic. Moreover, the selection of data collection methods were based upon their ability to elicit information specific to the research questions and their value as reported in the research. Data collection took place over an 8- to 10-week period.
Surveys

Surveys were used to collect data from the nine participants: three students, three parents of the students with ASD, and three OA staff members from the IHEs attended by the student participants. “The survey is a research technique in which data are gathered by asking questions of a group of individuals called respondents” (Ary, Jacobs, & Razavieth, 1996, p. 22). It is a commonly used method of research in education as it is a cost-efficient way of collecting primary quantitative data from a representative sample of respondents, and has been shown to effectively measure key targets for school reform” (Desimone & Le Floch, 2004; McColl, et al., 2001).

All of the participant surveys contained open and closed ended questions which were specific to the areas of academic, social, and independent living needs for students with ASD attending IHEs. Surveys were selected as the technique of data collection for the students because research on characteristics of students with ASD suggest that such individuals have difficulty with social interactions and interpreting social language, such as interpreting inflections, facial expressions, and emotions, and also have pragmatic language deficits (Wolf, Brown, & Bork, 2009). According to Merriam (1998), email interviews lack inflection, body language, and reduce "emoticons" (p. 129). It is for this reason that the researcher utilized written responses in lieu of interviews as the mode of gathering data from the students with ASD. Moreover, it was the intent of the researcher to provide the students with the most comfortable modality and the least amount of stress or anxiety in order to allow the student participants to freely respond to questions and allow the researcher to explore emerging ideas and themes and build theory as data analysis progresses.
Survey questions focused on the academic, social, and independent living demands of higher education institutions. Survey questions appeared in several formats. Some questions were open-ended, others required the respondent to circle a response, reply using short answer, or respond using lengthier answers that may be several paragraphs in length. The initial survey asked more general questions. The second survey asked more specific questions in order to clarify and/or gather additional information specific to the research questions.

A consent form and survey were mailed to each participant with directions on how completion and a due date for its return. A self-addressed, stamped envelope was provided the participant for returning the consent and survey(s) to the researcher. The participants were offered both an electronic and hard copy of the same survey which will allow each participant to complete the survey either electronically or through handwritten responses which can be mailed back to the researcher.

Parents were asked to complete one survey. The survey questions appeared in several formats. Some questions were open-ended, others required the respondent to circle a response, reply using short answer, or respond using lengthier answers that may be several paragraphs in length. The survey was a blend of specific and general questions all designed to clarify and/or gather additional information specific to the research questions. The survey was followed by a focus group with the parent participants and individual interviews. The focus group and interviews were led by the researcher and were audio-taped.

OA staff from the IHE where the students attend also completed one survey. The survey questions appeared in several formats. Some questions were open-ended, others
required the respondent to circle a response, reply using short answer, or respond using lengthier answers that were several paragraphs in length. The survey contained both general and specific questions designed to clarify and/or gather additional information specific to the research questions. The survey was followed by an audio-taped telephone interview.

*Focus Groups*

Focus groups are facilitated group discussions that are flexible, cost-efficient and a means by which to address a specific topic with discussions centered on the research topic and used to gain a greater understanding of the shared social or cultural experiences or concerns of the participants (Kevern & Webb, 2001; Morse, 2003; Rice & Ezzy, 1999). A focus group is made up of a small, non-random sample of individuals who possess certain characteristics (Krueger, 1994) who are linked together for a purpose, which is to explore their perceptions, attitudes, feelings or ideas about a given issue or experience (Kevern & Webb, 2001; Sofaer, 2002). While focus groups provide valuable information, they “should not be used as a substitute for survey or one-to-one interviews” (Barbour, 2005, p. 746).

In this study, all three parents participated in a focus group as well as an individual interview. Both the focus group and interviews were led by the researcher. The focus group was audio-taped and lasted about an hour and a half. Open-ended, informal, formal, and semi-structured interview questions were used with questions specific to the research questions. Any conflicting information or disputed information shared during the focus group was questioned in greater detail by the researcher during
the individual parent interviews in order to further understand the parent perspective and gather information specific to the research questions.

*Interviews*

Individual interviews were the final method of data collection for this study. They were conducted strictly by the researcher in person or on the telephone with the parent participants and via telephone with the OA staff from the IHEs. Merriam (1998) states that the goal for interviews is to obtain specific information that is often not attainable through direct observation. “Interviews are one important way to understand people, particularly the meanings they bring to bear on the places where they live and work” (Zussman, 2004, p. 359). Regardless of whether the interview is conducted in person or by telephone, the interviewer must ask the questions in such a way as to obtain valid responses and must record the responses accurately and completely (Ary, et al., 1996).

The telephone interviews consisted of informal, formal, and semi-structured interview questions used as a follow-up to gather additional information or clarify responses from the written survey and specific to the research questions. All interviews were audio-taped with handwritten notes taken during the telephone conversation. “Note-taking and tape recording is a useful combination that enables analysis of the material as a whole, while more specific components of interviews can be transcribed in full for detailed analysis” (Fossey et al., 2007, p. 28). Audio-taped interviews were transcribed within a week of the interviews in order to review the shared information and begin to identify any possible themes and/or patterns.
As recommended by Ary et al. (1996), the interviewer/researcher tried to put the respondent at ease by stating the purpose of the interview and starting the interview with fairly simple, nonthreatening questions. The interviews conducted in this study consisted of questions that focused on the research questions and yet allowed participants to share and elaborate on their lived experiences. The questions were posed using both a closed-ended, highly structured format, and an open-ended, less structured format, depending on the information that needed to be elicited. Highly structured questions were used when necessary to gather demographic or specific information from the participants. Less structured, open-ended questions were also utilized and they permit the respondent to freely answer questions without restriction (Ary et al., 1996; Merriam, 1998).

Audio-taped telephone interviews were used to collect data from the OA staff from the participating IHEs. Telephone interviews are a cost-effective and suitable means of eliciting respondent perceptions, particularly when topics are of a sensitive nature (Greenfield, Midanik, & Rogers, as cited in Sturges & Hanrahan, 2004) or when participants are difficult to access or reluctant to participate in face-to-face interviews (Sturges & Hanrahan, 2004). Thus, interviewing by telephone may increase data quality (Sturges & Hanrahan, 2004). Furthermore, since data was collected during the summer months, it was somewhat more difficult to schedule in-person interviews with higher education OA staff.

The focus group and individual interviews served as methods for gathering as well as clarifying additional information specific to the student’s disability and were used to clarify or elaborate on survey responses directed at the research questions. The
focus group and individual interviews were scheduled at a mutually agreed upon place, time and date. The focus group and individual parent interviews were audio-taped and transcribed within two weeks of their occurrence.

Provisions were made to maintain anonymity and/or confidentiality. All identifying information and data collected was kept in a secure location in the home of the researcher where only the researcher had access. Participants were not individually identified in any publication or presentation of the research results and only aggregate data was used. Signed consent forms were kept separate from participant's data, to eliminate the chance of linking participant’s responses to them.

Prior to beginning the focus group, which included three parents (one parent per student participant); the researcher requested that all participants maintain confidentiality of information shared, and that they not discuss what was said outside of the focus group/research project. In addition, participants were assigned a pseudonym of their choosing which was used during the focus group and individual interviews. On a few occasions, two of the parent participants who were familiar with one another, used each other’s "real"/actual name during discussions. During transcription of the tapes, which were completed by the researcher within 2 weeks of the audio-tapings, the individual’s real name was replaced with an assigned pseudonym. The audiotapes will be kept for three months after the research is complete, in a secure location within the home of the researcher where only the researcher would have access to the data. After three months the audiotapes will be erased and destroyed by the researcher.

In order to maintain anonymity and/or confidentiality of data and records, coding of data was used and pseudonyms were applied to identify the human subjects. The
participating institutions of higher education (IHEs) were denoted by a letter (e.g., IHE 1, IHE 2, IHE 3) and only the broad demographic region, Midwest, was used to denote the area of the institution of higher education.

After data was collected and analyzed, results were emailed to the participants to the email address they provided the researcher in order to elicit their feedback about the accuracy of the findings. Upon completion of all units of this study, and within thirty days, the researcher provided all participants a gift card to a local restaurant.

Data Analysis

Data analysis is a systematic search for meaning that is ongoing, and requires the researcher to simultaneously review, synthesize and interpret data to describe and explain the phenomena or social worlds being studied (Fossey et al., 2002; Merriam, 1998). According to Spickard Prettyman (2008), “Data analysis is the search for patterns, identification of themes, discovery of relationships, and development of explanations and is a means of processing qualitative data so that what has been learned can be communicated to others” (p. 1).

To accomplish this task, this study utilized multiple data gathering techniques and multiple levels of analysis in order to illuminate different facets of the phenomena and portray them in their complexity. As Zussman (2004) stated, “Multiple levels of analysis and multiple data gathering techniques make for good qualitative research” (p. 361).

Data was analyzed with the goal of generating grounded theory. Grounded theory, first introduced by Glaser and Strauss in 1967, is a specific research
methodology that uses constant comparison among cases to develop theory based upon data, or from the ground up (Merriam, 1999; Zussman, 2004). Constant comparison therefore refers to the continual, and repeated process of comparing and revising segments within and across categories repeatedly until satisfactory closure is achieved (Gall et al., 2003). Consequently, comparisons allow for themes and categories to develop which result in grounded theory. It involves discovery as one unfolds the data. “Discovery-focused techniques aim to establish patterns and connections among elements of data…which are coded, sorted and organized to look for patterns, or connections between them” (Fossey et al., 2002, p. 728).

The researcher began the data analysis process by reading all the surveys before beginning to reduce some of the data by coding it into topics specific to the research questions. Because the research questions are the guide for what to code, those questions were the focus with data coded for each of the three data sources. Coding enables the researcher to locate and bring together similarly labeled data for further examination and to look for patterns, such as similarities or differences among the data which will allow the researcher to explore their underlying and implicit meanings, patterns or connections.

Data were viewed by the researcher as “co-creating a story with the data and not from it” (Spickard Prettyman, 2008). The researcher used coding and recoding of the data until there was evidence of the development of relationships, patterns or themes. This analysis of themes is called thematic analysis and used a constant comparative method, “a process of classifying, comparing, grouping, and refining groupings of test segments to create and clarify the definition of categories, or themes within the data”
(Fossey et al., 2002, pp. 278-279). Merriam (1998) suggested that “categories should be reflective of the research, exhaustive, mutually exclusive, sensitizing and conceptually congruent” (p. 183-184). Consequently, constant comparisons of data help the researcher understand the data, and gives credibility to the research (Merriam, 1998). This method allowed the researcher to note where similarities and differences existed in the data, thus fostering the development of grounded theory.

As more data were gathered through the use of focus groups and interviews, the researcher explored, compared and contrasted different parts of the data, to progress toward a more sophisticated understanding of the research. The researcher coded themes that emerged as data was progressively explored and continued this process until the data reached saturation. Saturation was defined as “when no new data are emerging relevant to an established coding category, no additional categories appear to be necessary to account for the phenomena of interest, and the relationships among categories appear to be well-established” (Gall et al., 2003, p. 456).

Reliability and Validity

It is imperative that research is found to be trustworthy; therefore it is necessary to ensure validity and reliability in qualitative research. As such, there are well-established guidelines for the ethical conduct of research data (Merriam, 1998). Kirk and Miller (1986) define reliability as the degree to which results are the same and remain consistently stable over time in accurately representing the participants being studied. Yin and Campbell (as cited in Gall et al., 2003) defined reliability as “the extent to which other researchers would arrive at similar results if they studied the same case
using exactly the same procedures as the first researcher” (p. 460). When working with human subjects, this seems to be an impossible feat. However, if reliability is evaluated with the focus on discovering causal relationships among variables, and describing and explaining the world thorough the eye of the participant (Merriam, 1998), then it is possible through qualitative case study research.

Merriam (1998) suggested that the reliability of the data can be judged through various techniques of analysis and triangulation and by the investigator clearly explaining the particulars of the research study (i.e., purpose, research questions, research setting, participant selection process). Gall et al. (2003) defined triangulation as a “process of using multiple data-collection methods, data sources, analysts, or theories to check the validity of case study findings” (p. 464). The main benefit of triangulation and integration of multiple data sources is increased internal validity of the study. As case study researchers tend to use triangulation by seeking corroboration from other types of data that they have collected (Gall et al., 2003), this study utilized triangulation to validate data. This was accomplished through member checking, outlier analysis and coding checks. As suggested by Merriam (1998), the researcher should have colleagues comment on the findings in the study. Member checking was done by having colleagues as well as parent participants review researcher statements for accuracy, completeness, and clarity of information by the reader.

Outlier analysis contributed to the validity of the study. In case studies an outlier is an individual, situation or response that stands apart because it differs greatly. In this study, when an unexpected answer or negative response was given, the researcher
probed to seek disconfirmation of what the researcher believes to be correct (Gall et al., 2003).

Coding checks were used to enhance the validity of the study. This was done by having colleagues review the researcher’s category system from which the surveys, interview transcripts, and focus group notes and transcripts have been divided (Gall et al., 2003).

As such, validity refers to whether results are accurate and are actually measuring what they are intended to measure. Validity is of critical importance in case study research. Validity refers to the power of our conclusions, inferences or statements based upon the researcher asking a series of questions (Patton, 2002). More formally it had been defined as the "best available approximation to the truth or falsity of a given inference, proposition or conclusion” (Cook & Campbell, 1979, p. 121).

To question the validity of this study, this researcher continued to ask herself, “Did I capture the phenomenon that I was pursuing or was something else inadvertently revealed?” The researcher’s interpretations were built on factual claims of what the researcher and others perceived and selected as important and meaningful. The credibility of interpretations rested on others seeing and accepting the relationship between the researcher’s factual claims and reasoning, which was based upon persuasion and not proof (Peshkin, as cited in Schram, 2006). As mentioned previously, once data was collected and analyzed, results were shared with colleagues and participants to elicit their feedback. As Schram (2006) noted, “small aspects of experience, conveyed in sufficient depth and detail, can speak to large issues” (p. 10). Interpretation
demonstrates its worth through how effectively it explains things and whether it impacts or inspires the practice of others (Peshkin, 2000).

In addition, interviews are one essential element of testing the reliability and validity of survey instruments, in particular to determine whether or not items and response options are understood and consistently interpreted by the respondents and intended by the researcher (Sofaer, 2002). They were used in this study as a means of gathering data specific to the research questions as well as to test the validity of the surveys.

In summary, assessing validity and reliability of a qualitative study involved examining its component parts critically yet constructively with careful attention to data collection, analysis and interpretation. As the aforementioned processes of data analysis were employed with this study, it is the researcher’s belief that this contributed to the validity and reliability of this study.

Limitations of the Study

As Merriam (1998) stated: “The special features of case study research that provide the rationale for its selection also present certain limitations in its usage” (p. 42). One limitation of this study was its generalizability. Generalizability suggests that findings can be applied to individuals or situations other than those in which the findings were obtained (Gall et al., 2003). This study involved a somewhat limited representation as it contained a small sample size of nine total participants including students, parents and OA staff from IHEs. All students were male and had a diagnosis of Asperger Syndrome; all parent participants were female and each was the mother to the student;
all OA staff were female and held positions at the IHE attended by the student. The OA staff also had knowledge of higher education laws pertaining to SWDs and an understanding of access and accommodations under the Americans with Disabilities Act Amendments Act (ADAAA).

Furthermore, all participants resided in the Midwest. Hence, had the study been conducted with different participants or IHE’s, data analysis might yield another set of findings. Because this study was bounded by the researcher as the primary instrument of data gathering and analysis, the richness in the data collection was influenced by the skills of the researcher when interviewing and facilitating the focus group. When using grounded theory, replicable and generalizable findings are less likely since such theory depends on the interaction between the data and the skills and perceptions from the lens of the researcher conducting the research. This may have resulted in bias, inherent to qualitative research, because it involved data shared subjectively, through the perspectives, experiences and interpretations of the investigator and informant (Merriam, 1998). In order to enhance the reliability and validity of this study, the researcher referenced the literature review.

Although a thorough review of the literature revealed a limited amount of research addressing this topic from the perspectives of students with ASD, their parents and OA staff from IHEs, it was the intent of the researcher to break new ground and contribute to the research base. It was also the intent of the researcher to provide the participants with the results of the study with the hope that IHEs would utilize such information to better understand the population of students with ASD transitioning into higher education settings.
Summary

An explanatory, multi-case study research design was used for this inquiry (Yin, 1997) in order to develop grounded theory. This study sought to gain an understanding of the perceptions of critical factors needed by students with Autism Spectrum Disorder (ASD) to successfully navigate the academic, social, and independent living demands of institutions of higher education (IHEs). This study explored these factors through the reflective lens of students ASD, their parents, and OA staff from the IHE where the students attend.

This study was conducted across three institutions of higher education, diverse in population, and located in the Midwest. One of the three IHEs is public, has a population of over 25,000 students, and is located in an urban setting. The remaining two IHEs are private and smaller in student population having less than 2,500 students each. One IHE is located in a suburban setting, one is located in an urban setting, and the other is situated in a rural setting.

This study used qualitative inquiry to develop categories of meaning. It entailed nonrandom, purposive sampling and involved use of a limited sample size on the basis that the researcher wanted to obtain, comprehend, and gain insight using a sample from which the most could be learned (Merriam, 1998). The researcher used multiple data collection methods to gain information specific to the research questions through surveys, focus group interviews, and individual interviews with the parent participants and OA staff members from the IHE attended by the student. Data was analyzed using the constant-comparative method, with the goal of generating grounded theory about the
research questions. To increase the reliability and validity of the study, the researcher used triangulation, member checking, outlier analysis and coding check. Results of the study were reported using rich description and a narrative format.
CHAPTER IV

RESULTS

The purpose of this study was to identify critical factors in the successful navigation of higher education institutions for students with Autism Spectrum Disorder (ASD). The research involved qualitative inquiry and a multi-case study research design using nine participants: three students with ASD, their mothers, and three staff from the Office of Accessibility (OA), one from each of the three institutions of higher education (IHEs) currently attended by the student participants. Data analysis focused on the participants’ perception of the factors necessary for successful navigation of higher education for students with ASD. The findings presented in this chapter were derived from analysis of the data collected in relation to four research questions:

1. What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

2. What do parents of students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

3. What do Office of Accessibility (OA) staff at IHEs identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?
4. What similarities and/or differences emerge in the perception of critical factors identified by these students with ASD, their parents, and OA staff?

For this study, data was collected using multiple sources including surveys, interviews, and a focus group. Data from the three students, using two different student survey forms, was used to answer the first research question, “What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?” Data from parent surveys, interviews, and a focus group were used to answer the second research question, “What do parents of students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD? Through comparison of findings across cases, data from all participants and all methods, including surveys, interviews and a focus group was used to answer the fourth research question, “What similarities and/or differences emerge in the perception of critical factors identified by these students with ASD, their parents and OA staff? Consequently, the fourth research question is addressed in a cross-case analysis presented at the end of the chapter.

Data analysis was conceptualized as a systematic and continuous search for meaning, requiring the researcher to simultaneously review, synthesize and interpret data to describe and explain the phenomena or social worlds being studied (Fossey et al., 2002; Merriam, 1998). Such data gathering techniques and levels of analysis were employed to illuminate different facets of the phenomena and accurately portray them. Findings were not organized in any hierarchical order.
The researcher began the data analysis process by reading the participant’s surveys and reducing the data, coding it into topics specific to the research questions. After reading and coding the surveys, the transcribed focus group and interviews were read and this data was also coded, reduced and organized according to the three data sources (students, parents and OA staff). Next, data was sorted according to the three broad domains (academic, social, and independent living) identified in the research questions. Coding enabled the researcher to locate and bring together similarly labeled data for further examination and to look for patterns or connections between the data, as well as any similarities or differences among the data. The strategy used to understand the data was the constant comparative method (Merriam, 1998). The constant comparative method allowed the researcher to continually identify patterns and themes of similarities and/or differences in the data and place data into categories as the data were being collected (Fossey et al., 2002; Merriam, 1999; Zussman, 2004). Rich description was used to report data connected to these themes (Merriam, 1998).

In this chapter, each research question will be addressed separately. Common themes will be presented and accompanied by vignettes specific to each question. A summary of the findings and a cross-case comparison of the participants’ perceptions across the three domains conclude the study. The goal of this study was the generation of grounded theory about the research questions.
Critical Factors for the Successful Navigation of the Academic, Social, and Independent Living Demands of IHEs for Students with ASD

*Student Perceptions*

Data analysis indicated student’s identified 10 factors they deemed critical to their successful navigation of higher education. For *academic* factors, students identified the following themes: (a) proximity to home, (b) campus support services, (c) faculty and staff understand ASD, and (d) advanced preparation. For *social factors*, students identified the following: (a) a support system, (b) advanced preparation, and (c) social involvement. For *independent living factors*, students identified the following: (a) advanced preparation, (b) daily living skills, and (c) individualized housing accommodations.

*Parent Perceptions*

Data analysis indicated parents identified 11 factors they deemed as critical to the successful navigation of higher education for their children. For *academic factors*, parents identified the following themes: (a) intellectual aptitude, (b) parental involvement, (c) advanced preparation, and (d) campus support services. For *social factors*, parents identified the following: (a) a support system, (b) social involvement, and (c) advanced preparation. For *independent living factors*, parents identified the following themes: (a) daily living skills, (b) possessions to engage others, and (c) individualized housing accommodations.
OA Staff

Data analysis indicated OA staff identified 12 factors they deemed critical to the successful navigation of higher education for students with ASD. For academic factors, OA staff identified the following themes: (a) advanced preparation, (b) student adaptability, (c) behavior management skills, (d) campus support services, and (e) technology skills. For social factors OA staff identified the following: (a) behavior management skills, (b) support system, (c) advanced preparation, and (d) social involvement. For independent living factors, OA staff identified the following themes: (a) advanced preparation, (b) behavior management skills, and (c) individualized housing accommodations.

In order to understand the impact of academic, social, and independent living factors fully, results of data analysis are reported by domain, with the perceptions of each group of participants presented separately. The results are presented in order of the student’s perceptions, parent’s perceptions, and OA staff perceptions.

Student Perceptions

Academic

Students identified the following as critical factors for the successful navigation of the academic demands of IHEs for students with ASD: (a) proximity to home, (b) campus support services, (c) faculty and staff understand ASD, and (d) advanced preparation.

Proximity to home. The three students reported that being close to home impacted their college choice. They all cited that they selected their IHE because of its
location to home which allowed them to keep in contact with family who provided academic support when needed.

Rob, the only student participant who rated himself as somewhat weak academically, noted that that his parents “remain very involved” in his college life and stated that his mother has tutored him and helped him “organize and complete work on time” (student survey, September 7, 2010).

Al’s surveys indicated that while the professors, available programs, and campus quality had an influence on his college choice, the most significant factor was its proximity to home. He indicated that autism had impacted his academics “during group work” and “in high stimuli situations” that had resulted in sensory overload, necessitating support from home and from professional support services at home. He stated, “Even after college started, my parents were there if I ever needed help. My parents continue their support, help with difficult classes, like philosophy, and provide money when it’s needed” (student survey, July 28, 2010). Al noted that his parents are “very involved”, especially his first three years when he had fewer friends and was “pretty lonely” (student survey, August 12, 2010).

Louis noted that his parents helped him academically because they directed him to be focused and responsible in college. However, Louis commented that being close to home had become less desirable: “Being close to home was an important factor initially, but I have come to view IHE3 as too small and too close to home, thus negatively impacting my ability to be as independent as I want or as socially diverse as I want” (student survey, August 19, 2010).
Campus support services. While varied in their individual needs for academic support services, all three students indicated that they had disclosed their disability to the OA staff at their IHE in order to receive some academic accommodations. The two students who reported the most satisfaction with their IHE reported having at least one person who was instrumental in providing them with support.

Both Al and Louis rated their IHE as meeting their academic needs “very well.” Al’s surveys conveyed many statements of the positive relationship he had with individuals on campus, and particularly Mrs. Pasquale, a staff member at the OA. He shared, “She knew my needs since day one. She works as an advocate between me and my professors to help them understand me, and supports me in times of crises or everyday social needs” (student survey, August 12, 2010). He elaborated on the importance of the supportive relationship he had with her saying, “Connecting with Mrs. Pasquale has provided a treasured mentor who is there to help me problem solve and grow socially and academically” (student survey, July 28, 2010).

Similarly, Louis indicated that he sought campus support. He noted that while he did not require tutoring, he had needed some help with organization, study skills, and time management. He indicated that whenever he desired the help, he was able to receive assistance from Mr. Forester, a staff member who specifically helped students with their learning needs. He also noted that his IHE had helped him continue his success, because “it [the college] offers small classes, has a tight-knit student community, and they reach out to offer assistance in any way possible” (student survey, July 28, 2010).
In contrast, Rob noted that he was dissatisfied with campus supports and stated that his IHE had done a “poor” job meeting his academic needs. He wrote, “So far, college hasn’t done much more than disappoint me” (student survey, September 7, 2010). Rob believed he needed academic support and disclosed his disability in order to receive accommodations arranged by the OA. He wrote, “I try to use the tutoring services, but they don’t always have a tutor for me. When I have a tutor, I don’t get a tutor for subjects; instead, I get a peer mentor to help me with organization. When tutors are available, you still only get 50 minutes per week and that is not enough” (student survey, July 26, 2010).

*Faculty and staff understand ASD.* Two of the three students indicated the need for faculty and staff to understand the needs of students with ASD.

When asked, “Is there anything else your college/university can do to help you continue to succeed in college?” Rob noted that the college/university needs to provide the services they say they will and the OA must understand the needs of students with Asperger’s disorder. In his survey, he wrote that he believed that many people on campus, including those employed by the OA, did not understand the needs of a student with Asperger’s disorder. Moreover, he indicated that autism has impacted his college experience: “I don’t understand teachers sometimes; don’t always understand assignments; get frustrated easily; have trouble dealing with long-term or big assignments; sometimes have a hard time understanding professors with accents; and, need help with comprehension, writing, and study skills” (student survey, July 26, 2010; student survey, September 7, 2010). Rob stated that in the past some professors gave him notes and some offered extra help and their time to work with him; however he felt
they could have been more helpful in getting note-takers. Rob also noted that he needed support on campus with “long-term or big assignments” (student survey, September 7, 2010).

Al emphasized his positive experience with faculty and staff at his IHE. He indicated that certain faculty and staff had been prominent throughout his college experience and understood ASD. He wrote, “I haven’t needed tutoring yet, so far, the only thing I have required is extra time to complete homework, assignments, and tests if I need it” (student survey, August 12, 2010). He reported that his college professors helped him by “providing individual conferencing and alternate opportunities” (student survey, August 12, 2010). One semester, for example, he took a required wellness course with a lab that required him to complete a fitness routine in a group setting. Because the professor was aware of Al’s disability and angst over working in a large group, he arranged for Al to complete an alternative activity to meet the criteria stated in the course syllabus. Instead of working out with the class, the professor arranged for him to work out independently at the campus recreation center during off hours with a lab instructor. Al noted that this was one of many times faculty worked with him. Al rated his college as meeting his academic needs very well (student survey, July 28, 2010).

Advanced preparation. All three student participants noted that advanced preparation had contributed to their college achievement. Data analysis indicated that students believed past experiences and opportunities provided by their high school teachers and parents contributed to their preparation. Although students shared that past school and/or community opportunities helped prepare them, they all agreed that their
parents provided the utmost support. In addition, students noted that their continual practice with self-advocacy had served them well in college.

Al wrote:

Besides teaching me basic life skills beforehand, my parents went with me to each college campus I visited to make sure it was right for me. He noted that his prior music and theater participation in high school and his community had helped him become a stronger person, develop relationships with people who had helped him with whatever challenges he faced, and pointed him toward involvement in the theater in college, which he referred to as an “invaluable experience.” (student survey, July 28, 2010)

Rob indicated that high school mathematics classes provided him a strong foundation to develop essential skills to gain employment at a bank while attending college. He reported that his high school teachers and his parents, especially his mother, had helped him with the college transition. He wrote, “High school helped me learn how to study on my own and make new friends. My parents tried to walk me thorough everything to prepare for college” (student survey, September 1, 2010).

Louis indicated that his parents were primarily responsible for helping him prepare him for college: “They motivated me, pushed me, and directed me to be responsible and focused in college” (survey, July 26, 2010). He also noted that they were very involved in his college review and selection process.

The three students noted that their self-advocacy skills had been vital to their college success, rating them as “very important” for college students. Al and Rob shared that their parents had taught them how to talk to others about their disability and needs.

Al described self-advocacy as “safe disclosure of learning needs to peers and professors.” He stated that his parents helped him determine when and with whom to disclose his Asperger’s and how to cope with social events that had challenged him...
(student survey, July 28, 2010). He rated self-advocacy skills as “very important” for college students.

In his survey, Louis indicated that while he believed self-advocacy an essential skill, he felt less comfortable talking with others about his disability. He described “self-advocacy” as “being self-sufficient,” and rated this skill as “very important” for college students (student survey, August 19, 2010).

Social

Students identified the following as critical factors for the successful navigation of the social demands of IHEs for students with ASD: (a) support system, (b) advanced preparation, and (c) social involvement.

Support system. The need for a support system was noted by all three student participants. Data analysis indicated that while social support came from a variety of sources, parents provided the greatest amount of support. Two of the participants noted that behaviors associated with ASD impacted them socially.

Al wrote,

Asperger’s Syndrome has continued to present social challenges at the college level for me. Going to a campus alone with lots of new people, new expectations, new teachers, and no known support system was exciting in some respects, but very challenging in others. Identifying my high interest in music definitely led to developing a support system of professors and classmates who have grown in numbers and strength of relationships across the last three years. (student survey, August 12, 2010)

Al said that he continued to need support from others to “overcome ‘mind blindness’ and read people correctly, and to learn to manage overstimulation before a meltdown” (student survey, August 12, 2010). He pointed out, “Close friends understand me and as
long as I communicate, we do fine. However it [Asperger’s] interferes with group work and high stimuli situations; affects comfort in everyday social situations, less than before; however, it prevents me from having a larger circle of friends” (student survey, July 28, 2010; student survey, August 12, 2010).

In his survey Rob wrote, “When I was younger, I did not have any friends but now it doesn’t seem to affect my friends or friendships at all” (student survey, September 7, 2010). He added that his parents support and encouragement helped him overcome some social difficulties.

Louis’ needs included “solid support and good friends.” He repeatedly talked about his involvement with friends and in activities, claiming a typical day involved “hanging out with friends, going to concerts, dancing, talking, etc.” (student survey, August 19, 2010).

*Advanced preparation.* Also identified as a primary factor under the academic domain, advanced preparation was again noted by all three students as critical to their successful navigation of the social demands of college. Data analysis revealed that the three students believed their parents and high school experiences had helped prepare them. They shared that high school activities helped them develop interests which carried over into college and created opportunities for social interactions. Al wrote, “High school prepared me for social interaction most of all. Other than that, high school was where I fell in love with music, theatre and production. My high school and community theater success also pointed me toward involvement in the theatre at IHE1” (student survey, August 12, 2010).
Rob believed that previous sports opportunities and training provided throughout high school by his coaches and parents helped him develop interests and talents that had become a passion and hobby for him as an adult. Rob noted that his social involvement had been increased because of his golf and bowling skills. He also shared that high school also helped prepare him to learn how to “make new friends” (survey, July 26, 2010).

Louis attributed his social self-confidence to opportunities provided through high school activities and by his parents. He identified his numerous interests, including participation in student senate, his role in establishing an astronomy club, and his service as president of a religious organization.

Social involvement. Data analysis revealed the importance of social involvement and the students’ desire to be “connected” with others. The two students who resided on campus and reported being very satisfied with their IHE were both extremely involved in activities, or organizations, often with friends they had met at college.

Al had participated in a variety of campus activities including choir, jazz concert band, and theatre. He worked for the school newspaper and radio station. He was also a member of a religion-based fraternity on campus. Al noted that there were “still sensory issues during certain social outings, such as dances or parties; and prior to my junior year, I was pretty lonely and felt isolated” (student survey, September 12, 2010), but believed involvement was invaluable. He used his experience in choir as an example: “Choir has allowed me to become a stronger person socially and to make connections with people that help me with whatever challenges come my way” (student survey, September 12, 2010). Al indicated that college met his social needs “very well.”

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Louis noted that he was involved in many campus activities. He reported he had strengths in his social and leadership skills, preferring courses that involved a significant amount of discussion and group work. Data analysis of Louis’ surveys indicated extensive involvement and participation in activities and organizations both on and off-campus.

Rob indicated that while he did not live on campus, he was involved in a variety of sports activities and spent time with friends on a daily basis. He described himself as “friendly and outgoing” (student survey, July 26, 2010). When asked to evaluate how the college/university met his social needs, Rob wrote “very well, although at the time of this study he was not participating in any campus activities. Rob shared that while he was not currently active with campus activities, since he did not reside on campus, his social involvement had been increased because of his sports participation (survey, July 26, 2010).

Independent Living

Students identified the following as critical factors for the successful navigation of the independent living demands of IHEs for students with ASD: (a) advanced preparation, (b) daily living skills, and (c) individualized housing accommodations.

Advanced preparation. Data analysis revealed that all three students had started college with some essential skills for living independently. The three students identified time management and organizational skills as essential for independent living, although all reported some ongoing struggles with these skills.
Al and Louis lived on campus. Both rated their independent living skills as “very strong.” Both believed they had begun college with some self-help skills learned from their parents. Moreover, both wrote of the positive experience of living independently.

Al noted that advanced preparation was vital for students with ASD in order to reduce anxiety and better prepare them for new situations. He wrote, “My parents went with me to each college campus I ever visited and continue to teach me anything that I may need to know for the future. They taught me basic life skills beforehand” (student survey, July 28, 2010). He stated that his organizational skills were a challenge for him, saying that management of his dorm room “wasn’t a pretty picture.” Al added that since living away from home, “I have developed much improved time management and personal organization” (student survey, July 28, 2010).

Similarly, Louis noted strengths with his independent living skills: “I am a neat freak in my dorm room and have a strength with cleanliness.” However, Louis believed he needed to improve his cooking and time management skills (student survey, July 28, 2010). He summarized his thoughts on independent living stating, “Personally, I just see the pros of living independently. I build responsibility and I have the opportunity to define myself on my own. I also have learned and continue to learn much about myself” (student survey, July 28, 2010).

Rob currently lived at home with his parents, although he had resided on campus for three years at his former IHE. Rob had a negative experience when living in the dorm during the first half of his freshman year of college and had relocated to a private, single room across campus for the second semester where he resided until the end of his junior year. After three years at his previous IHE, Rob moved home and transferred to
IHE2. At the time of the study, he had no plans to live independently. He rated himself as having “very weak” independent living skills.

Daily living skills. Two of the three students believed it was important to be able to take care of their own needs. They noted that they had personal hygiene routines, kept their living space clean and organized, and could prepare some meals independently if needed. Two students thought their daily living skills had improved since they began college, and attributed this to the experience of living independently.

Al stated that he began college with some basic cooking and cleaning skills. He could use a washer and dryer before he went to college. Although Al had experienced some homesickness, he reported feeling proud of his abilities to do for himself. He also noted that he had a daily routine.

Louis rated his independent living skills as “very strong” (student survey, August 19, 2010). Similar to Al, Louis reported that he had a daily routine that included going to class, “hanging out” with friends, and studying.

Rob rated his independent living skills as very weak, but saw both positive and negative aspects to independence. He noted the advantage of “being by yourself and doing what you want when you want;” but saw not being around family as a disadvantage (student survey, September 7, 2010).

Individualized housing accommodations. At the time of the survey both Al and Louis resided on-campus. Neither student had a roommate. Data analysis indicated they believed their individualized housing accommodations helped them live successfully on campus.
According to Al, “overcoming the challenge of living together with others” was a goal he had set for himself. He shared that Asperger’s Syndrome had presented him with social challenges which led him to prefer to live alone. He also noted that his current living situation had worked well for him because of sensory issues and the need for occasional privacy.

Louis noted that IHE3 had met his independent living needs “somewhat.” He stated that he was most satisfied with a private suite and thought that living independently had afforded him the opportunity to be more responsible and to learn more about himself (student survey, August 19, 2010).

**Summary of Student Perspectives**

Through analysis of the data, 10 factors emerged as critical to the successful navigation of higher education from the perspective of students with ASD. These factors included three themes for the academic domain; four themes for the social domain; and three themes for independent living. For academic, students identified the following: (a) proximity to home, (b) campus support services, (c) faculty and staff understand ASD, and (d) advanced preparation. For social, students identified the following: (a) a support system, (b) advanced preparation, and (c) social involvement. For independent living, students identified the following: (a) advanced preparation, (b) daily living skills, and (c) individualized housing accommodations. The students perceived advanced preparation as a critical factor to successful navigation for all three domains: academic, social and independent living. They perceived the need for support as a critical factor to successful navigation for the academic and social domains. While
“Parents” did not emerge as an independent category, parental advocacy and support was integrally embedded in each theme.

Parent Perceptions

Academic

Parents identified the following as critical factors for the successful navigation of the academic demands of IHEs for students with ASD: (a) intellectual aptitude, (b) parental involvement, (c) advanced preparation, and (d) campus support services.

Intellectual aptitude. All three parents reported that to have successfully completed their high school curricula, their sons had to possess various academic strengths and talents. Two of the three parents indicated that their child had superior intellect and little need for academic support from their teachers during high school or in college. The third parent noted that her son had at least average to above average intellect but did have some learning challenges. Two parents shared that their sons had received academic scholarships to attend college.

Joy, Louis’ mother, observed “Academically, Louis is gifted. He scores very high on any of the standardized testing, and scored very high on the ACT, so apparently, he is absorbing in the classrooms even though he can be disorganized and may not have things done on time” (focus group, August 11, 2010). She added that the first year of college had been a big adjustment and with a little help from her, he had done very well.

Ann, Al’s mother, noted that he had graduated from high school with an honors diploma. She said, “Al, academically, has always been pretty superior, just a real wiz with science and math and has just always been a very good student” (focus group,
August 11, 2010). Ann noted that Al was talented in the arts, particularly music and theatre: “He is amazing and really gets into his characters” (interview, August 26, 2010).

Dawn, Rob’s mother stated that Rob had “applied to five schools and got into all five, fortunately none of them required an essay. He is exceptional with math computation (not story problems), but has more difficulty with comprehension” (focus group, August 11, 2010; interview September 1, 2010). Unlike the other two parents, Dawn reported that her son had greater academic difficulties and needed some accommodations/academic supports such as tutoring in college. Dawn also indicated that Rob had a talent with more independent types of sports such as bowling and golf.

**Parental involvement.** Data analysis indicated that all three parents were very involved in their son’s education and believed their involvement was critical to their sons’ success. The data indicated that while the students had a variety of support available to them in the past and present, the mothers were the primary support and advocate for their son. Furthermore all three mothers also indicated that they helped monitor their son’s medications.

Data analysis further indicated that two of the three parents visited a variety of IHEs with their son, evaluating each institution’s size, programs, proximity to home and supports available to students with ASD. These parents reported that they helped their son’s choose a college based upon evaluation of how well they could support the student’s unique needs, talents and interests.

Joy said, “We needed a small private school and it had to be close. We needed it close enough that we could continue to give him the support from home; yet he was
close enough that he could live on campus. We looked at another place and it was too big, and we got lost” (focus group, August 11, 2010; interview August 26, 2010).

Like Joy, Ann indicated that she and her husband helped Al with the college selection process. She said they narrowed the field and selected an IHE close to home despite having looked at many different colleges and universities which were several hours away from home. She said that while several of the IHEs they visited would have been a good match because of their accommodations or their specialized programming for students with Asperger’s, she, Al’s dad, and Al collectively decided that those schools were too far from home and Al recognized that he still needed their support. They were interested in one particular IHE but later ruled it out because “it was too much stimuli and Al couldn’t handle that” (focus group, August 11, 2010).

Dawn revealed that she and her husband had not explored IHEs and she expressed some regret. She stated, “We knew that for Rob it [IHE] had to be close. Maybe we should have looked at smaller, private schools. I think that would have been better for him because he could have gotten the help he needed” (focus group, August 11, 2010).

Additional data analysis indicated that while all the parents had been involved, the depth of involvement varied. All three participants voiced the belief, however, that parental involvement was vital to their child’s college success.

Joy shared that she worked effortlessly with Louis throughout his schooling and into his first year of college. She stated, “When he was younger, I used to help him study for tests. He did not know how to study for exams. He has gotten much better over the years, but I still offer help when he needs it” (parent survey, July 29, 2010;
interview August 26, 2010). Joy pointed out that she and her husband have remained in frequent contact with Louis. She noted, “He calls us multiple times per day to share whatever happens in his day that is interesting or that he doesn’t know how to handle. He also sends home big papers via email for me to proofread and edit and then they make the changes over the phone” (interview August 26, 2010).

Much like Joy, Ann indicated that she had early and extensive involvement in Al’s education. She said, “We have presented together for three different audiences about his school experiences” (focus group, August 11, 2010). Ann noted that her involvement in Al’s education continued at his request and noted that at the time of his college admission, he signed a release so that an individual at the OA could contact her for support and advice. Ann noted that she had many meetings with the OA who described that support as “invaluable.” Despite the help of others at college, Ann declared, “I continue to be Al’s life coach and am available by phone, text, and half way meetings; however they are less necessary as he advances in school and life” (interview, August 26, 2010; parent survey, July 28, 2010).

Of the three students, data analysis indicated that Rob’s academic needs were the greatest. His mother, Dawn said, “Rob has serious academic issues and has greater academic than social needs. While he is smart, anything that involves comprehension or abstract thought is difficult. He can read like crazy, but I still have to read for him a lot. If he had to read on his own, he would probably get Cs and Ds.” (interview September 1, 2010). As a result, Dawn noted that she had to remain involved in helping him and encouraging him to get the academic supports he needed in college. She believed that Rob did not receive the accommodations he needed at either of the IHEs he attended,
and noted that when he received them they were provided inconsistently, were not available at times that worked with his schedule, and/or were not provided by trained individuals; hence she had to start tutoring him (focus group, August 11, 2010; interview September 1, 2010).

Dawn elaborated about what Rob needed to be successful in college. She said, “He needs someone to guide him way more than he did before college. I ask him if he has homework, and he will tell me ‘it’s all done’, but if I look at it, it wasn’t all done. Rob still needs help organizing the big things” (interview, September 1, 2010). Similar to Ann, Dawn described her prominent role in supporting Rob. She said, “I am his tutor, advocate, and calmer-downer” (interview, September 1, 2010).

Advanced preparation. All parent participants noted that it was essential to prepare students with ASD for new situations and disclosed that their child had received additional training and support to be better-equipped for college. Analysis of the data indicated that all three parent participants worked diligently to help their sons understand their disorder(s) and to educate school staff about Asperger’s disorder. Data also revealed that while the parent participants viewed their role as most vital to grooming their child for college, they believed their continual efforts throughout middle and high school had contributed to their son’s college readiness.

Joy stated that she frequently practiced with Louis to help him get ready for college, developing self-advocacy skills to use with professors. To promote greater responsibility, she assisted him in developing a list of emergency phone numbers so he could contact people and schedule appointments when needed. She also dialogued with him on how to arrange for someone to sit with in the dining hall. Joy noted that she
worked with him in high school to help him learn to budget his time so he could get his homework and assignments done promptly. She reported, “He could not judge how long it was going to take him to do something. He would be up all night long getting something done that was given to him two weeks ahead because he waited until the last minute. He needed to have intermediary checking time on papers and the teachers were mostly very cooperative” (focus group, August 11, 2010). She said students need to take courses in high school like Consumer Science, Living Independently, and Child Development so they are better-prepared to go to college and be self-sufficient. Joy noted that Louis took some of the aforementioned courses and they seemed helpful (focus group, August 11, 2010).

Dawn shared that Rob was on an Individualized Education Plan (IEP) in high school which had documented his academic needs, assured accommodations, and contained a plan for the transition from high school to college. She noted Rob had a tutor in high school that “did almost everything for him” and “served a liaison between the teachers and him, so if there was an issue it could involve her and the teacher” (interview, September 1, 2010). Dawn noted that she believed high school helped “socially prepare Rob” for college but added, she “was not sure how much it prepared him academically” (parent survey, July 26, 2010). She pointed out that she worked with Rob over the years to act on his own behalf. As a result Rob had learned strong self-advocacy skills and always communicated his learning needs to his teachers. She shared, “He will disclose to his professors on the first day of class but chooses who, among his classmates, he will divulge his disability when needed, and as he feels comfortable” (parent survey, July 26, 2010).
Ann also noted that she frequently worked with Al over the years to learn to manage difficult situations and to prepare him for “the next step”. She shared that since he was young enough to start asking questions about his feelings and sensory issues, she had helped him understand his disorder. Ann noted that as a result of the teaching and support he received from family, doctor, counselor and some friends Al was very open about Asperger’s. She acknowledged that while he was always a very good student, “it took a lot of training at home and a lot of visual supports to help him develop his organization and time management skills” (interview, August 26, 2010). Ann awarded some credit to Al’s high school for having helped prepare him for postsecondary education. She noted that his counselor made sure he had all the courses he needed to graduate and helped him with the college application and the application for the ACT. Moreover, Ann shared that during his high school years Al participated in choir, drama/theater, and band and that it was because of those past experiences and preparation that he gained the skills and self-confidence to pursue membership in the performing arts in college.

Campus support services. Data analysis indicated that all three parent participants felt it imperative that IHEs understood both the general as well as specific characteristics and needs of students with ASD, so that they could provide the needed supports. Although the academic needs of the three students varied, data analysis revealed that overall parents were more satisfied with the smaller IHEs, in part because of the supports they provided. Two parents, one whose child attended a small school and one whose child attended a large school, noted that sometimes supports were not available, were offered at conflicting times, or were provided by individuals who were
not experienced or trained to work with students with disabilities. Furthermore, two of the three parents shared that there were times when their sons were aware of available supports and accommodations, but elected not to disclose or pursue them.

Ann stated that Al only needed minor accommodations such as extended time and occasional feedback from professors:

> It can be complicated when trying to separate the academic from the social issues for students with autism because their social needs can impact their academics and vice versa. Al’s needs necessitate support during discussions when the social interaction affects him; when the mind-blindness comes into play, and he can’t understand another’s perspective. This ‘Theory of Mind’ is common with people with autism. It is where he believes that everyone has the same belief about a topic or situation that he does (interview, August 26, 2010)

She elaborated:

> He has difficulty dealing with people that verbally put him on the spot in discussions, like other students at the university. Al goes from 0 to 10 quickly, then he usually takes the stress and rejection internally and that is when he needs the support of his professors or from the OA. He has been lucky because many individuals at IHE1 have been great about coming to him at those times and opening their doors. (focus group, August 11, 2010; interview, August 26, 2010)

Joy noted that IHE3 had provided Louis with adequate academic support although initially he did not think he needed it and did not utilize it. She said, “He finally started study sessions with Mr. Forester during his second year of college” (parent survey, July 29, 2010; interview, August 26, 2010). She indicated that Mr. Forester was Louis’ support person at IHE3. Mr. Forester was instrumental in teaching him how to contact the professors. Joy also noted that IHE3 offered study sessions three nights per week and had a writing center where papers could get reviewed and edited.
Joy voiced the need for individuals at IHEs to understand students with ASD. She said, “Mostly, I would like to see the colleges educate professors so that when there is a kid with a problem and they go to a professor, they kind of know what they are dealing with. This is critical” (interview, August 26, 2010).

Joy expressed positive feelings about the support that had been afforded Louis at IHE3 and noted that they had exceeded her expectations. She said, “The feeling at IHE3 is that they are partners in education” (focus group, August 11, 2010). She said at IHE3, They are on a first name basis and know if a student is not in class. There are things you can teach us and things we can teach you. You don’t have to worry about thinking out of the box, because there is not box. If you want to try a project for credit, they will let you do it. Even if it doesn’t work and if you can tell them what you learned by it not working, they will still give you credit. I mean they will stand on their heads to do things. It is an incredible school, so we kind of pushed that. (focus group, August 11, 2010; interview August 26, 2010)

She shared that professors have been known to go to a student’s dorm room to get the student up and to class.

In contrast, Dawn voiced less positive experiences with Rob’s college experience. She said that the teachers were “pretty good” but she was dissatisfied with those individuals who were supposed to arrange the accommodations. During the focus group meeting she shared, “After listening to you guys on all of the positive experiences, for us it has been a joke. Maybe we should have looked at smaller, private schools, but…. not to change the subject, but it is a joke!” (focus group, August 11, 2010).

Dawn noted that Rob had a lot of difficulty understanding course expectations, had difficulty with group work and needed help with his assignments. She said, “Rob struggles with a lot of the academics. He has a lot of trouble with essay tests and class
discussions and may say things that are strange during conversations because he gets overwhelmed” (interview, September 1, 2010).

He gets a syllabus at the beginning of the semester, and then that is it. When he looks at it as a whole, it causes him stress. He needs it broken down, and I did not see many of Rob’s professors take the time to explain the syllabus or assignments in a way that a student with ASD would understand. That is overwhelming for a kid who has Asperger’s so he just puts it aside and doesn’t want to deal with it. It is part of the disorder and they need to learn about what kids with autism need. It is just too much at once. The worst is when he had an assignment and did not understand it and I did not understand it enough either to help him. (focus group, August 11, 2010)

Dawn discussed Rob’s academic needs. She shared:

He is allowed time and a half for tests. If he uses it, he has to take it [the test] in a central location with a monitor. Most of the time he chooses not to because then he doesn’t have the opportunity to go to the teacher if he needs help or has a question. He is guaranteed a note-taker which he rarely gets and allowed to tape lectures if he needs to, but he rarely does because I think he is uncomfortable doing that. He has been in some very small classes and doesn’t want people to know he is not taking notes. I don’t think he wants to stand out. In some situations, he will disclose to the teachers and some students, if he is comfortable, but not the whole class. Some of Rob’s teachers invited him to email, provided class notes for him to use as an outline, and offered study time in their offices.”

She added, “Then there are the others who really don’t understand what he needs and do not have the time for him. It’s the luck of the draw” (focus group, August 11, 2010; interview September 1, 2010; parent survey, July 26, 2010).

Dawn reported that after Rob’s freshman year of high school she had to take a more active role in his education and provided an in-service with a team of teachers that include handouts so they would understand Rob’s needs “as a student with Asperger’s disorder” (parent survey, July 26, 2010). She shared that many people at IHE2,
including Rob’s advisor, did not know how to work with students with special needs, did not understand ASD, and needed additional training.

**Social**

Parents identified the following as critical factors for the successful navigation of the social demands of IHEs for students with ASD: (a) support system, (b) social involvement, and (c) advanced preparation.

*Support system.* Analysis of data indicated that parents believed that for successful navigation of the social demands of college, students with ASD needed to have a myriad of supportive people available to the student to intervene in times of distress. The parent participants believed that home support was still needed because of ongoing social struggles faced by their child; however they also noted that IHEs needed to have people on campus who could serve as a support or resource to them in the event that a problem occurred on campus. Parents indicated that anyone who was familiar with the student or skilled to address the behavior such as a professor, an OA staff member, an advisor, a resident assistant, or someone from campus security would be adequate.

Ann shared that kids with autism lack the social skills needed to work through some social situations independently:

*He [Al] does not pick up on innuendos from other kids who are about to do something that may involve breaking the rules and he is a real rule-follower so when something happens he gets real upset. He can’t always understand the body language of others nor does he pick up on subtle conversations so he can get pretty confused and upset and needs to escape to a safe place or call someone to talk him through it.* (focus group, August 11, 2010)
She noted that Al received support from a myriad of individuals on campus, including faculty, advisors, the theater director, Dean of IHE1, Director of Safety. She shared that for the last 3 years, Al had a standard appointment every week (more often when needed) with Mrs. Pasquale from the OA. She had provided him with “social coaching” to process social situations (interview, August 26, 2010).

Similarly, Dawn voiced that Rob needed a support system to help regulate his emotions. She stated, “He has too many meltdowns and gets upset too easily now to not have that support close by” (focus group, August 11, 2010). Dawn noted that she served as Rob’s primary support outside of college. She said that she wished he had at least one person at the university who knew him and would be his support person on campus, similar to the individuals the other two parents noted their sons had been provided at the smaller IHEs (focus group, August 11, 2010).

Joy noted that Louis possessed strong social skills; however “he doesn’t always have the best judgment and sometimes puts himself in situations that aren’t the best situations” (focus group, August 11, 2010). She said she realized that the campus community needed to learn more about students with ASD because there are times that their behaviors could be misunderstood. When interviewed, Joy shared that an incident occurred at IHE3 when a former girlfriend of Louis’ reported him to police because he was repeatedly calling and checking on her because he was worried about her, but the situation had been misinterpreted as stalking. Her example demonstrated why students with ASD need a variety of individuals who understand them available and recognize that social difficulties are commonplace to the disorder (focus group, August 11, 2010; interview, August 26, 2010).
Social involvement. All three parents noted the need for students with ASD to have involvement with others to navigate the social demands of college. They all noted that their child was “connected” with others when they resided on campus and participated in extracurricular activities such as sports, clubs, religious or social organizations. They also indicated that their son’s had interests, talents and hobbies going into college that helped promote social relationships both on and off campus. Two parents reported that they believed their son’s well-being and satisfaction with college was significantly impacted by his social connections. Additional data analysis indicated that some opportunities had been facilitated by purposefully identifying an IHE with extracurricular activities that were of interest, and where the student felt the “best fit” (focus group, August 11, 2010).

Ann noted that they looked at many colleges and stated that when Al got to IHE1 he told her, “Mom there are enough geeky people here that I will fit in, and it has turned out that way because people in the arts seem to be a lot more accepting and recognize his talents” (focus group, August 11, 2010). She shared, “Until last year, Al was alone too much and his depression was pretty high. Fortunately, he has established actual friendships and has a good circle of friends with whom he is able to disclose his needs” (parent survey, July 28, 2010).

Joy noted that Louis was very social and had a large circle of friends with whom he interacted at school and at home. She noted that at college he had many friends, in part because of a variety of opportunities to participate in social and religious based clubs, organizations, and activities that had been longstanding interests. From these
experiences, he had developed the leadership skills and social confidence to help him connect with others at IHE3 (focus group, August 11, 2010).

Two of the three parents reported that their child continued to be involved in campus activities and emphasized the positive benefits of their social involvement. The third student had moved home and no longer participated in campus activities.

Ann stated that Al had been in a number of theatre performances and was in three different choirs and in the jazz band at IHE1. She indicated, “This is a thrill for him and has provided him with group participation, structured social activities and experiences which have furthered his adaptive skills and social skills beyond any hopes I had prior to entering college” (parent survey, July 28, 2010). Ann shared that Al told her that he didn’t know how to hang out and didn’t understand small talk. But, she noted, “He feels a sense of affiliation which is critical, and he is contributing, is involved in activities, and participates in work study at the college. And he is successful there” (focus group, August 11, 2010; interview, August 26, 2010).

Joy noted that Louis “is doing very well in college” and has a wide variety of friends and interests (focus group, August 11, 2010). She shared that he always enjoyed social events, although he needed to be informed and invited for him to participate as he was usually unaware of what special activities were going on at IHE3. Joy stated that she and Louis’ father made it a point to help him get kids to his room. She said she would tell him to have a pizza party or get his coffee machines going to get the kids to come to his room and socialize. She specified, “We provided him with anything and everything to draw kids to his room in college. He had all the gadgets and gizmos and
technology so the kids would naturally ‘hang out’ there” and he did not need to seek them out” (parent survey, July 29, 2010).

Dawn noted that involvement in extra-curricular activities was important to Rob, even though he did not participate in any activities or clubs at his current IHE. She said that when he attended his former IHE and lived on campus, he participated in a religion-based, social club; however because he was living at home, he did not participate in extracurricular activities at his IHE (focus group, August 11, 2010).

**Advanced preparation.** Data analysis indicated that all of the parent participants spent time preparing their sons for the social aspect of college by teaching those interpersonal skills that would help them be successful. Two of the three parents stated that for several years their sons had worked with a counselor or psychologist on social and/or behavior issues. This sometimes included using prescription medication to address behaviors related to their disorder(s). Data analysis indicated that a variety of interventions and supports over the years had helped prepare the students with ASD for the social aspect of college.

Ann noted that when situations occurred that Al did not understand, “because of his mind blindness and difficulty reading others,” she had to use social stories and talk him through the situations and help him understand the reality of what happened. Ann further noted that she worked with Al for many years to understand social boundaries and friendships, using visuals and mock scenarios to help him prepare him for situations that might occur in the classroom, dormitory or over-stimulating situations. Ann said that over the years she and Al had created many lists that he used to develop life skills and routines.
Dawn noted, “We started working with the Office of Accessibility during his [Rob’s] senior year of high school. We also signed him up for everything he could participate in to prepare him for college, at least socially” (interview, September 1, 2010). Dawn shared, “I have worked hard to teach him to advocate for himself when he is having an issue with something at college. I coach him on who to talk to and what to say so he can take care of it himself (parent survey, July 26, 2010).

Joy, Louis’ mother, attributed his strong social skills to training with a psychologist when he was in middle and high school. She also noted that she and Louis’ father got him very involved in religious-based activities which provided him with many opportunities to develop leadership skills, discover and live in different places, meet and learn about different people, and be more independent.

Independent Living

Parents identified the following as critical factors for the successful navigation of the independent living demands of IHEs for students with ASD: (a) daily living skills, (b) possessions to engage others, and (c) individualized housing accommodations.

Daily living skills. Data analysis indicated that parents believed that having daily living skills was essential for students with ASD. They noted that they needed to be able to manage themselves as well as their surroundings. They indicated that students needed to know how to do chores like cleaning, emptying the trash, cooking, and to manage their personal hygiene and take their medications as directed. Two of the three parents noted that their sons had strong enough daily living skills to live independently and thought it significant that their sons had learned some of these skills before going to
college. They also noted that their sons had become more independent as a result of the experience of living on campus.

Ann explained:

Of course when he went off to college I had concerns about how he would manage on his own, but this summer I noticed that Al’s independent living skills are pretty good. He can prepare food when he needs to and is really good with his personal hygiene. We had to use a lot of visual supports to get him to remember to do things like put things away. (interview, August 26, 2010)

Joy noted that she helped Louis develop his independent living skills through practice. She said they worked on doing laundry, talked about how to ask for help from professors, and developed a list of contacts/phone numbers for him to make his own appointments. She noted that she worked with Louis so that he learned how to make brownies, heat up things for lunch, make mozzarella sticks, use the microwave and follow some cooking directions (interview, August 26, 2010; focus group, August 10, 2010).

Dawn noted that although Rob functioned well when he resided in the dorm, she felt he was not yet “emotionally” ready to live on his own. She indicated that Rob could do his own laundry and perform some basic cooking, but did not properly manage his medication (focus group, August 11, 2010).

Possessions to engage others. The parents of the students who lived on campus noted that their sons had a variety of possessions which they believed encouraged social interaction. Their sons also had their own cars. All three parents indicated that their child desired friendships and social opportunities, but lacked some of the basic skills needed to initiate interactions and friendships. Because of this, the parents had provided
them with possessions and then suggested ways to use the possessions to help attract and interact with other college students.

Ann noted that for the first two years of college Al was very lonely and depressed. She stated that his two game systems, Netflix, keyboard and guitar helped him interact with kids without the “small talk.” Ann indicated,

He has just about everything to attract others which helps because he doesn’t know how to engage other kids and does not pick up on innuendos from other students that are about to do something. He doesn’t know how to say, ‘Where are you guys going?’ You know, kids don’t say, ‘Hi my name is ________, and I am going to do _______ tonight’, and ‘Is there anyone that would like to do this with me?’ That is what Al is listening for. He can’t get the body language and is not picking up on subtle conversations where he can join in so we had to find things that would get other kids to want to interact. (interview, August 26, 2010)

Joy stated that Louis has a large studio apartment at the dorm. She described his room as “the party room.” Joy said she encouraged Louis to find ways to get students to “hang out” in his room: “He thought up some ideas and a couple of times he bought pizza and brought it in and would put a sign on his door that would say, ‘Pizza Party’, and kids would come in and stop and play computer games and have music going.” She said she bought him all kinds of beverage and coffee machines, electronics, DVDs and music to engage others. Joy said,

This allowed the kids to get to know him. That is why I indulged him with these things in his room. His is the ‘neat’ room to hang out in and having all those things brings the kids to him. It has been well worth the investment because it is important for kids with ASD to be around other kids and not always be alone because that causes loneliness and depression. (focus group, August 11, 2010)

*Individualized housing accommodations.* Two of the individualized accommodations involved living independently and the other involved living at home.
Parents indicated that their sons needed individualized housing accommodations that involved their own room or a “safe place” where they could go when they were “over-stimulated,” or when they had a “meltdown.” Both parents noted that while their sons were now successfully living away from home, they initially were very concerned about how they would manage, because residing in a dorm required understanding social situations and the rules of living with others. All three parents indicated that because of previous bullying experiences and situations where their son’s behavior was misjudged, individualized housing accommodations were critical for students with ASD.

Ann stated that Al had his own room on campus for the past three years to avoid roommate issues. She said that he wanted a roommate, but she was fearful of this because of the need to understand social rules and boundaries and his history of struggles in those areas. This school year, Al planned to change his living arrangements and move into a house where all the students majored in music. The house was co-ed and he had to share a bedroom. There was a common living room and kitchen area. She said she worried about how it would work because he needed his space when he had meltdowns or sometimes just wanted to be alone. She shared, “I am concerned about his disorganization and because he is such a ‘rule minder’ and would be the only student over twenty-one years of age living in the house which is a whole other issue that we had to discuss” (interview, August 26, 2010).

Dawn noted that Rob had adequate independent living skills and could do his own laundry, manage his own money, keep his room clean, handle his day-to-day living, and function adequately; however, she shared that Rob was not at a point where he wanted to live alone because he required emotional support. She said “He has a hard
time when others do not follow the rules and while that doesn’t mean that he always follows the rules, he can’t handle it when someone else doesn’t” (parent survey, July 26, 2010). Dawn noted that Rob had an unfavorable experience at his former IHE which may have impacted his desire to remain at home. Dawn added, “Rob will always need a safe place. Home is his safe place; therefore, the place he feels most free to freak out and have meltdowns” (focus group, August 11, 2010).

Joy noted that Louis lived in a suite and each suite had four individual bedrooms with a common lounge and kitchen. Joy stated, “Louis needs a single room. He does not work well in a group because it has to be his way or no way. It is the black and white concrete thinking of Asperger’s. It has got to be this way, and he was very inflexible” (focus group, August 11, 2010). She added, “He has a studio apartment at the dorm. He could not function in an apartment or in one of these situations where they have a central kitchen. Even though he has the basic self-care skills, he would not be able to plan meals-like go shopping, know what he needs to buy, and know how much. He would end up just going out for fast food. Really, the big issue is that more than anything, he needs his own space” (interview, August 26, 2010).

Summary of Parent Perspectives

Through analysis of the data, 10 themes emerged as critical to successful navigation of higher education from the parent perspectives for students with ASD. These factors included four themes for the academic domain; three themes for the social domain; and three themes for independent living. For academic, parents identified the following: intellectual aptitude, parental involvement, advanced preparation, and campus
support services. For social, parents identified the following: support system, social involvement, and advanced preparation. For independent living, parents identified the following: daily living skills, possessions to engage others, and individualized housing accommodations. The parents perceived advanced preparation and support as critical to successful navigation for two domains: academic and social. In addition, data analysis revealed that embedded in each theme was the parents’ implicit or explicit belief that their active participation as their child’s support or advocate was integral to the successful navigation of all the critical factors they identified.

Office of Accessibility (OA) Staff Perceptions

**Academic**

OA staff identified the following as critical factors for the successful navigation of the academic demands of IHEs for students with ASD: (a) advanced preparation, (b) student adaptability, (c) behavior management skills, (d) campus support services, and (e) technology skills.

*Advanced preparation.* Analysis of the data from the OA staff indicated they believed it essential that students receive advanced preparation from both their educational systems and their parents about the vast differences between high schools and institutions of higher education. Specifically, they stated that students needed to understand changes in the provision of academic accommodations, the transfer of rights from the parent to the student, and the importance of self-advocacy.

Furthermore, the three participants indicated that students were better prepared for college when they had experienced greater independence, personal responsibility and
decision-making before coming to college. The three OA staff members noted that students fared better in college when they had been involved in their educational planning, college selection, and had opportunities for independent decision making prior to college.

Lee, from IHE2, asserted that high schools had an obligation to prepare students with autism for the differences between high school and college, because colleges expect students to advocate on their own behalf:

Students need to learn to self-advocate early on, and do that throughout high school so that it is not such a shock when they get to college. That is the biggest transition issue we are seeing for sure at IHE2. Students are used to having people do for them in high school and when they come to college, they do not know what to do when it is up to them. (interview, August 26, 2010)

Jean commented that in high school extended time for in-class work was reasonable and sometimes written into student’s IEPs; but in college that was uncommon. She noted that students could very quickly become “hopelessly behind” in assignments if they all had either an extended deadline or no deadline. She said that students needed to remember to keep track of all the little day to day tasks that go into living independently without an adult. She shared,

I know that there are additional campus supports available to help with organization, time management and studying, and in my experience these seem to be what students with ASD need the most, but I wonder why not make them more responsible early on so that college is not such a drastic change. (interview, August 23, 2010)

Sally added,

Students with ASD need to be trained as adults. High school and parents have to collaborate. It is important that students sit in on their own IEP meetings, and that IEP goals and transition plans are realistic. Students need to be aware of what they will need in college, when to ask, and who to ask.
They need to disclose so that they start out with success. (interview, August 11, 2010)

Lee also added that parents have a responsibility to prepare students, especially those with ASD who are going to attend a large IHE. She noted,

I always recommend to parents that they start early. I recommend coming before the beginning of the semester and seeing the residence hall rooms and walking through campus and going to each of the classrooms to know where they are going to be so they can get comfortable. It is overwhelming for anyone, especially at the bigger IHEs and I think it would be extremely overwhelming for students with Asperger’s and autism. (interview, August 26, 2010)

The three participants all shared that many students with autism needed help to understand assignments or directions, to budget and manage their time (e.g., starting assignments, completing assignments on time), and understand course and faculty expectations. Sally stated, “These students need to know where to go for help, how you take care of this or that, and where is that person I need to help me with whatever it is that I need help with” (interview, August 11, 2010).

Jean added that students needed to understand “what to do and who to get help from” when they did not understand the course expectations outlined in the syllabus or the requirements for a particular assignment. She said, “Students with ASD seem to have a lot of trouble with the syllabus; budgeting their time and organizing tasks and assignments. They need to know when and how to get help with a course because everything moves much more quickly in college” (interview, August 23, 2010).

Data analysis indicated that all three OA staff agreed that for students to be better prepared, high schools needed to have a better understanding of the differences in the roles and responsibilities in high school and college.
Sally declared,

To start, high school personnel need to first educate themselves about transition to college: that IEPS are no longer in effect in college, that being excused from assignments won’t work, and that being able to retake a test for a better grade won’t happen. College requires a lot of writing and students need to be able to work effectively with big assignments and complete assignments on time. (survey, August 4, 2010; interview, August 23, 2010)

She also thought that high school personnel should “team” with parents and students to help them understand that accommodations mandated by law for high school students do not automatically continue in higher education.

Sally explained that students and parents needed to understand that in college accommodations only needed to be “reasonable,” were wholly dependent on what was available at the IHE to provide the student with a disability “equal access.” Sally stated,

Probably the one thing that I find the most is that high school will say that it is reasonable to allow different deadlines for work and that does not happen in college. High schools need to prepare kids for the ambiguity of college. Students cannot expect the same accommodations and modifications they received in high school because IEPs do not exist in college. (interview, August 23, 2010)

She elaborated:

I still think there is a lack of communication between high school personnel and college disability service providers. I am not sure that high school personnel understand the transition to college so naturally they are not preparing SWDs like they should. I see that the IEPs and the Summary of Performance were written without consideration to colleges, and with some unrealistic expectations of what college could provide. We are getting less and less documentation and information, and that is a little frustrating for us because it impacts our ability to do our best job. (interview, August 11, 2010)
Her thoughts reflected that high schools needed to involve students in their IEPs meetings so that they would understand their academic needs and be prepared to explain those needs to the appropriate individuals at college.

Jean said that it was important for students to be knowledgeable of accommodations they needed and how to obtain them in college. She indicated that she had some students who returned a request for accommodations with a note saying they are a student with ASD but they had never had any accommodations so they didn’t know what they could request or what might be helpful. Jean shared,

Students need to have self-advocacy skills. They need to understand what they need and what makes them tick and be willing to share it appropriately. You know, everybody in the world does not need to know. They need to learn how to screen what you might share with a faculty member versus something you would share with a club advisor. Some of the basic things you would share in a classroom. (interview, August 23, 2010)

Jean also indicated that high schools needed to help students with ASD develop a transition plan that would “realistically” carry over to college and include accommodations that were reasonable:

High schools often tell students that they will receive the same accommodations in college and that is not necessarily true. Extended time for in-class work doesn’t happen so you need to figure out a way to arrange your time to get it done. Other things like reduced assignments, extended or no deadlines to complete assignments, and minimal levels of expectation for the quality of work are not going to happen in college, and I am not sure high school personnel get that.

She pointed out:

The legal focus at the K-12 level is that of success for the student; whereas, in higher education this changes to providing access to students with disabilities, but success or lack of it is dependent on the student. I think high schools could help both students and their families understand the differences they are likely to encounter and that “reasonable
accommodations” may well be different in college. Parents legally can be much more involved at the high school level. (survey, August 20, 2010)

All three participants had advice for parents about how to prepare students with ASD for college. Sally noted, “Parents could help students by not doing their homework for them; be realistic in their students’ abilities; and teach them strategies for getting organized” (survey, August 4, 2010). Lee iterated that parents needed to plan in advance. She suggested they research colleges to find “the best fit” for students with ASD, send documentation early, and schedule meetings with OA office to find out what accommodations were available (survey, August 17, 2010). Jean agreed that parents needed to help prepare students by teaching them strategies for managing their assignments and deadlines without close, constant supervision (survey, August 20, 2010). She added, “They need to teach the student ways to handle frustration and ways to cope when they have reached peak frustration without removing that which is causing the frustration” (survey, August 20, 2010).

Student adaptability. Data analysis demonstrated that, while OA staff believed most college students with ASD were academically strong, they needed to adapt to the changes in the overall structure and routine of college. Jean shared,

All of the students I have seen at IHE3 have been academically able, so the problem lies in the ambiguity of the college classroom that impacts their academics. Kids need to be prepared for the uncertainty of college, that there is going to be a lot of things that are not structured, a lot of things that will change and change rapidly for no apparent reason. For some people it is very hard to adapt to college because it is less structured. (interview, August 23, 2010)

She noted that individuals with ASD had a need for sameness and exactness and tended to be routine-oriented. Consequently, it was imperative that they learned to handle
changes frequently and randomly made by professors, such as when professors did not follow the syllabus, did not clearly explain the syllabus, changed test dates, or altered due dates or lessons.

Sally restated the importance of adaptability when she shared,

I have worked with ten students with Asperger’s, Pervasive Developmental Disorder, or who were somewhere on the autism spectrum, and we have had varying degrees of success. It ranged from the students who graduated, to the ones who did not make it past week one because everything was so overwhelming for them and everything was new. They weren’t prepared and didn’t know how to react to any of the new things. (interview, August 11, 2010)

Similarly, Lee noted that students with ASD needed additional support to acclimate to college. She indicated that at IHE2 a course was developed and made available to any student with a disability who registered with the OA. Such a course provided students the opportunity to meet every week for one hour with a peer assistant, hired and trained by the OA to help them academically with study skills, time management and organization (survey, August 17, 2010).

Behavior management skills. Data analysis revealed that participants viewed behavior management skills as essential to college success for students with ASD. All three participants reported that students with ASD needed to understand, manage and demonstrate acceptable classroom behaviors. All three indicated that of the students with ASD that they worked, those that were the most successful had learned to manage their classroom behaviors through use of a variety of supports.

Sally noted that students with ASD have “invisible disabilities,” since their disability is not something a person can identify by looking at them. If a student with ASD did not want anyone to know he or she had a disability, faculty may have to “figure
it out” based upon atypical classroom behavior. Sally elaborated, “Some students with ASD haven’t learned how to manage their behavior and it presents some problems in the classroom. They can be pretty rigid and this can be an issue in class and with group projects or discussions” (interview, August 11, 2010). She added,

Students with ASD need more help to meet deadlines, understand assignments and teacher expectations, and to balance their time between studying and getting sidetracked with videos, Facebook and email. They need social support to talk through and understand social situations which they may have misread or mishandled. (survey, August 4, 2010)

Jean shared that of the students with ASD with whom she had worked, “those that were willing to get the help and not be left alone to struggle” fared the best in college (interview, August 26, 2010). She noted that sometimes when students started at IHE3, they did not want to disclose their disability because “they wanted a fresh start and want to try it on their own.” However, she reported that many times by the second semester or the second year, if the student needed the accommodations, he or she would self-advocate and disclose to either her office or to a professor.

Lee also stressed the importance of behavior management skills. She commented,

The students that I have seen to be the most successful have learned to manage their classroom behaviors. I just got off the phone with a faculty member this morning who is worried about whether or not a student will pass her class. This student has Asperger’s and is having difficulty because he gets really excited and answers questions without raising his hand and the other students are laughing at him and he gets really upset. He does not work well with the other students and needs to learn what is expected in the way of classroom rules and behaviors. (interview, August 26, 2010)

Campus support services. Data analysis revealed that all three participants thought campus support services were essential. In addition, they shared the belief that
while the OA was primarily responsible for arranging academic accommodations, faculty were responsible for implementing those accommodations, and managing their classes so that students with ASD would be successful. They indicated that in order to best meet the needs of their students, faculty and staff required information and training on the subject of ASD.

All three believed there was greater opportunity for faculty and staff to work with, and get to know students at the smaller IHEs. Jean, who worked at a small IHE, noted,

Faculty, for the most part, want to help our students do well and will do a lot of outreach, particularly for first year students. Our faculty welcome students, have regular office hours, and are available to meet with students individually. Because we offer smaller classes, there is greater opportunity to get to know students personally. We are very small, and it is a pretty warm, fuzzy place. You can’t get lost if you wanted to. With new students, we tell them, you are not going to be invisible. We know when someone has dropped off someone’s radar. I have had faculty notify me when a student was struggling, hadn’t been to class and needed to be checked in on. (interview, August 23, 2010)

Sally shared a similar experience: “As a smaller IHE, we offer that personal touch. Students are not going to get lost, like on a public campus, and we all work together. What I found that I think helps is the intentional linking of these students with services because sometimes they don’t even know what they need” (interview, August 11, 2010).

Lee, who worked at a large IHE, commented:

At IHE2, we offer some very strong programs and our location is good for commuters. I would think that one of the strengths of a smaller school is that there is more one-on-one attention; more availability of faculty members, administrators, and staff; more assistance; more time, and more resources at the private schools. I would think one of the downfalls is that
with a large campus of students, it is sometimes hard to navigate and can be overwhelming for students with ASD. (interview, August 26, 2010)

The three participants noted that faculty needed to identify and support the academic needs of students with ASD in the classroom. Lee noted that, at IHE2, faculty sometimes struggled to understand classroom management strategies and how to differentiate between a disability and a behavior. Jean added that her experiences had been that while faculty were trained to teach a subject, they lacked the knowledge and experience in behavior management of SWDs:

I think the majority of our faculty is very available to work individually with students, reframe information and help students; however, they are less able to know how to respond to behaviors that appear to be odd, unusual or rude. They need to know, “Who are these students? What are their needs? How do we teach them?” It takes a lot of discussion and open communication to figure out how to help them. (interview, August 23, 2010)

Sally noted that professors needed to be more purposeful when working with students with ASD; needed to integrate students with ASD into their classes, especially with group projects; needed to communicate clear expectations; invite students to meet with them regularly; give specific feedback; and, find common ground/interests to get to know the student beyond the disability” (survey, August 4, 2010).

*Technology skills.* Two of the three OA staff reported that technology skills were critical to academic success at IHEs for students with ASD. While all three participants acknowledged that time management and organization were two of the more significant challenges that impacted students with ASD, two of the participants noted specifically that technology helped improve time management and organization skills for students with ASD. They also reported that use of technology could promote greater
independence for students with ASD and that those skills needed to be developed in high school and reinforced by parents.

Jean commented: “Students need to be prepared for tests, assignments and to meet deadlines. I think learning to use technology, especially to help them with reminders, would be a good thing” (interview, August 23, 2010). She stated, students needed to know “when to take the medication, what it does, and the interactions with alcohol, certain foods, etc.” (interview, August 23, 2010).

Sally reiterated the importance of technology. She indicated that one of the greatest needs of students with ASD is to learn to budget their time and meet deadlines. She suggested that through use of technology students with ASD could be more successful both academically and in their independent living skills. Sally noted that technology could help students manage their medications, get up on time, get to class on time and be more independent.

Lee added, “Students need to use things like online reminders, a cell phone programmed to give reminders, or a watch that can be programmed to beep (survey, August 20, 2010).

Social

OA staff identified the following as critical factors for the successful navigation of the social demands of IHEs for students with ASD: (a) behavior management skills, (b) support system, (c) advanced preparation, and (d) social involvement.
Behavior management skills. Analysis of the data revealed that the three participants believed that students with ASD who were the most successful had learned to manage their classroom and social behaviors and to follow social rules.

Sally observed, “Because college is a new experience, students’ with ASD have not had a chance to practice social skills appropriate to this setting. Several experiences will be a first for the student and there is no way to anticipate or prepare for it all” (survey, August 4, 2010). Sally explained how she worked with some students on rules and social boundaries and how to define and differentiate “friends.” She noted, “Students with ASD can be easily misunderstood by others, can sometimes be seen as selfish, and immature, and tend to feel isolated” (survey, August 4, 2010).

Jean agreed:

For some it was the social part that had caused them to be unsuccessful. Intellectually they get it, but there can be some social situations that are going to occur…I have seen students with ASD experience some communication kinds of things, like not knowing how to blend in to people sitting around in a room or in a lounge having just a typical teenage conversation and how to intermingle. (interview, August 23, 2010)

Lee noted, “Social skills are definitely something that we maybe want to try to start a program for the students with ASD because they need support and they are coming in increasing numbers. They need to learn appropriate classroom and social behaviors to be more successful in college” (interview, August 23, 2010).

Support system. The perceptions of the OA staff were that the students who were the most successful were those who had a wide range of individuals available to them during times of crisis, and those who had more frequent contacts with the OA. Two of the OA participants reported that their roles had shifted from academic to more social
support because of the increased demands in this area. The three participants suggested that it was necessary for students to become more autonomous and less dependent on their parents for emotional support in college. While the three participants acknowledged the value of parental support and support from the OA, they indicated that students needed to expand their support system to include more people on campus that they could seek for social support.

Sally stated,

To be successful, students need a variety of people on campus and they need to get to know them and feel comfortable with them so that they have a broad level of support. Students can get support from friends, advisors, administrators, staff or whoever; they can get it through the OA and through other opportunities such as clubs, sports, or work study.

She added, “Work study can give the student interaction with other students and a connection; it helps integrate students into campus; it is something that puts some structure in their day and provides another relationship they can build “ (interview, August 11, 2010).

Lee noted that the OA helped provide students with additional support by linking them up with people, activities and organizations on campus; however she stated that it should be the responsibility of the entire campus community, not just the OA, to help students with ASD. She stated, “It is everyone’s responsibility to create a welcoming environment and to provide a supportive environment for students with ASD” (interview, August 26, 2010).

Sally explained,

I have a couple of students that I meet with on a regular basis every week which has been something I have seen as beneficial to them because it doesn’t leave large gaps of time when we connect or see each other or check
Sometimes these are quick “check-ins”, like: ‘How are you doing?’, ‘I know you took a test last week, how did you do?’ , ‘Do you know how you did?’ Because I am not here 24/7 I make sure they have other people that they know and feel comfortable with, so I help them build a support system, whether it is counseling services, the staff at the residence halls, the Dean of Students, and/or security. It is helping students get to know those people. (interview, August 11, 2010)

Sally added, “The students who have been successful, really do stay in close contact with this office, really stay in contact with their primary advocate support, and they don’t shy away from working with me” (interview, August 11, 2010).

*Advanced preparation.* All three OA staff from the IHEs noted that students with ASD needed advanced preparation for the social demands of college. They noted that the groundwork for college should be initiated by parents and teachers during the middle and high school years. Two of the IHEs noted the importance of talking with students ahead of time about social issues that they could encounter in college.

Sally commented,

Navigating college is challenging for any student. For the student with autism all the changes at once can be overwhelming, so they need to be as prepared as possible; they need their high schools and parents to help them with the transition. College is a highly social environment and students must learn to navigate an environment where they are now responsible for themselves. If they live on-campus then mom and dad are not there to tell them what to do. Parents need to learn not to be afraid to let a student make a mistake or sometimes even fail, and learn from it, and not always be there to catch them. It is not a good life lesson. (interview, August 11, 2010)

Jean noted that parents needed to talk with students about the social aspect of college such as how they were going to make new friends and strategies to employ to cope with social nuances that might be particularly difficult for them in social and residential settings. She elaborated, “Unfortunately, there are students who will deliberately attempt to involve someone who is ‘different’ in situations that could make
them stand out in not a good way. I think families of all college bound students need to have the alcohol, drug, and sex talk” (survey, August 20, 2010).

Sally said, “Parents need to prepare and encourage students to join groups centered on the interests; encourage them to leave their room and be social; reinforce the significance of a few good friends versus thinking everyone should be their friend; and reinforce acceptable behavior like no hugging, staring, etc.” (survey, August 4, 2010).

Social involvement. The three participants reported that, like any student, those with ASD desired social interactions; however, because of the nature of their disability they often had difficulty developing relationships. As a result, they stated that it was necessary to intentionally link students with ASD with extracurricular activities and individuals with common interests with whom they might make a social connection. The OA staff also noted that high schools and parents could encourage greater social involvement in college by introducing students to activities, hobbies and interests that they could pursue in college.

Jean noted,

Some students come to college with some talents and interests that they can share with others and some students just don’t connect. We try to encourage students to come to different floor or building related functions and to get involved. We try to offer a lot of activities. We have floor activities in the dorms, such as dances and comedians, and we have off-campus entertainment. Affiliation is real important. I would put it at the top quarter of things to think about because peer pressure, wanting to fit in, it is all new and I don’t know the norm, and I don’t think it happens a lot, but I think it does happen that some students prey on people who appear less able or less with it socially. (interview, August 23, 2010)

Sally noted that she tried to tap into the student’s interests and talents and link them with like students. She shared,
I would ask, ‘Do you know that we have an animation club or theatre club? or whatever the case may be. Sometimes I worked behind the scenes and found out who is in these different clubs, and I would say, ‘I have a student who might not come on their own, would you want to contact them and invite them?’ So it is a little more intentional. What I have found out is if they find a niche, a group of students they feel comfortable with, that is another social support naturally built-in. (survey, August 4, 2010; interview, August 11, 2010)

Sally also shared that work study had helped students with ASD connect with others. She explained that at IHE1 students were purposely placed into on-campus jobs where they could be successful based on their interests, skills and personality. Sally said students with ASD have worked in the music department, at the radio station, in the library, in offices and at the physical plant and noted that these opportunities helped integrate the students and introduce them to others.

Lee noted that most of her students with ASD were commuters. She verbalized, “They are not really on campus to be involved. If a student lives on campus, he might isolate himself and find it difficult to even initiate going to activities on campus” (interview, August 26, 2010). Lee shared that at large IHEs there are many opportunities to get involved; but, faculty do not typically encourage students to get involved. Lee did, however, voice that finding ways to get involved on campus and connected with students through activities and organizations was critical to the college experience (survey, August 17, 2010).

Jean echoed the need for being connected and indicated that at IHE3 there were many opportunities for students to feel connected. Jean described her IHE as smaller and diverse, thus noted that students had various options for affiliation. She observed, “The small size of our campus can be both a positive and a negative. It can be difficult
to have privacy or to be invisible. There are a variety of interest groups and intramural programs in which students can be involved or they can simply ‘be there.’ Even though we’re small, there’s not [a] ‘typical’ student here so it’s relatively easy to find a niche and it’s possible to be involved with several different groups. There’s a concerted effort to help new students find their way in the social life of the campus” (survey, August 20, 2010). Jean further elaborated about the importance of friendships saying, “Friends are the greatest social needs of students with ASD (survey, August 20, 2010).

When asked, “What do you believe are the greatest social needs of students with ASD?” Lee’s response reflected that of the three participants, “Social, social, social—definitely, feeling connected to others” (survey, August 17, 2010).

The three IHEs shared some suggestions on how to improve their capacity to meet the social needs of students with ASD: develop a mentor/buddy system; introduce students with ASD to several key people on campus to build more support; provide a list of resources for student involvement and facilitate the process with students with ASD.

Independent Living

OA staff identified the following as critical factors for the successful navigation of the independent living demands of IHEs for students with ASD: (a) advanced preparation, (b) behavior management skills, and (c) individualized housing accommodations.

Advanced preparation. All three OA staff stated that students needed to have advanced preparation to be successful living independently. They shared similar views that most students with ASD appeared to enter college with adequate daily living skills;
however, issues related to time management and organization presented challenges for students with ASD that required some advanced planning and training.

Jean noted that the daily living skills of time management and organization were the most problematic for students with ASD. She said, “Completing tasks, turning them in on time, figuring out how to get to class or how to get to class on time, and how to sit through class the whole time and not interrupt the instructor” were troublesome for students with ASD (interview, August 26, 2010). Sally added,

If they haven’t mastered some of those basic living skills, such as doing their laundry, making their beds, changing their sheets, taking out the garbage, those things like that, it can be problematic. They have to learn they are living within a community and where, if you aren’t emptying your garbage, that tends to be a problem. . . . The students who have ASD are the ones that will read the student handbook and want to know what the rules are and if you tell them what the rules are they can function themselves. They just need to know ahead of time so they are prepared. (interview, August 11, 2010)

Sally indicated that students with ASD need to learn how to live in a “society of many,” noting that, even if they had a single room, they had a community bathroom. Sally emphasized the need to prepare students with ASD for living independently:

I had a student once who wasn’t showering until three in the morning because he didn’t want to take a shower when someone else was in there. There is so much you cannot anticipate, so you have to try to plan ahead and teach what you can ahead of time. (interview, August 11, 2010)

Jean agreed that most students do well with some advanced preparation. She noted,

Most of our students have been fine with living on campus. We are a fairly diverse campus and so we look at maybe a more diverse housing situation. There have been struggles, but there are struggles for everyone. We had a couple of situations where you sort of wonder what went through their families’ heads, and they knew things about the student that they did not fully disclose such as the student was in no way ready to live independently.
They did not have the skills for independence like the day-to-day care: cleanliness, taking care of yourself, getting up….We do have RAs [resident assistants] but they aren’t going to tell someone it is time to get up or to go to bed. Getting up, getting ready, starting your day by going to class and going to where your class is, and following a schedule: knowing what day of the week it is and what I do today. (interview, August 23, 2010)

Data analysis revealed that the participants found the need to plan ahead by visiting campus and evaluating housing options.

Lee suggested that, to facilitate the college transition for students with ASD, parents and students needed to visit the residence halls and consider housing options before the semester began. She recommended that because of the large size of IHE2, she encouraged students to register early, walk the campus, and walk their schedule so that they would know where they were located and where they are supposed to go so that they would not get overwhelmed (interview, August 26, 2010).

Lee noted that students and parents needed to have discussions about the things that the student would encounter when living independently and parents needed to ensure that the student was ready to live independently. They needed to evaluate if the student needed to commute at least the first year because of the many transitions in the beginning.

Jean noted that living in a residence hall required advanced preparation because of the lack of structure and supervision. She said,

Students need to be prepared to live in a residence hall where there is no adult supervision; there is not close daily supervision and there are no ‘hours.’ Students need to understand the responsibility of coming and going as they please, and learn to manage this. Sometimes the combination of the academic and independent living demands is too much to do all at the same time. Parents need to prepare kids because they cannot think that something magic will happen when their students start college and all of the issues that
may go with their student with ASD will somehow vanish. (survey, August 20, 2010)

Two of the three OA staff also shared the need for parents to make sure that students understand they are not exempt from judicial consequences for misconduct because they have a disability. Lee noted that parents needed to determine whether or not a student was ready to reside on campus and that understanding the rules and following the rules was essential to living independently.

*Behavior management skills.* The three participants noted that behavior management skills were critical to independent living at IHEs. The participants noted that most students who lived on campus had been able to manage their behaviors adequately. If not, they eventually changed their campus residence or moved home and commuted.

Jean noted, “I think some of the struggles are a question of whether the student is less socially able because of the autism, or because that is simply part of their personality, and some of the ASD characteristics make it even more definitive” (interview, August 23, 2010). She added that she had seen the greatest independent living needs of students with ASD to be “remembering and keeping track of all the little day-to-day tasks that go with living independently without adult supervision…..living as part of a large community on a 24/7 basis” (survey, August 20, 2010). She noted that there was a need for the residence hall staff to improve their knowledge of residents on their floor and their attentiveness to how individuals are doing.

Sally observed that students with ASD do very well with visuals like checklists (interview, August 11, 2010). Sally also noted, food had been an issue with one of her
students with ASD and he had to learn how to limit his eating so that he could use his
meal plan throughout the day (interview, August 11, 2010).

*Individualized housing accommodations.* Data analysis revealed that OA staff
believed students with ASD required additional planning and forethought in order for
them to successfully navigate the independent living demands of IHEs. Furthermore,
information from the OA staff revealed that it was essential to consider the behaviors
and daily living skills and needs of students with ASD when evaluating housing options.
Consequently, they worked closely with students and parents to weigh the various
housing options of a private room versus having a roommate versus living at home and
commuting.

The three OA staff members noted that careful planning was necessary to meet
the individualized housing needs of students with ASD; therefore, they worked closely
with students and parents to weigh the various housing options of a private room versus
having a roommate versus living at home and commuting.

Jean indicated that, at IHE3, they worked diligently to meet the individualized
housing needs of students with ASD. She said,

> We have a few single rooms that kids get through a lottery in the spring;
however, if we have a brand new student coming in and they think needs a
single room, then they apply through me. Typically the student will select
where they want to live. We have kids on the spectrum [ASD] that have
roommates and it has worked out great, and there have been a couple of
situations where we knew it would not be a good match. (interview, August
23, 2010)

Similarly, Sally discussed the need to work with students to meet their
individualized housing needs. She stated,
Each student I am currently working with has their own room, they have a single room, and we have found that to be very beneficial because they have their space they can go back and diffuse if they need to and they have their own way of organizing their space which may not work with a roommate. (interview, August 11, 2010)

Sally also noted that living on campus was not for every student, with or without a disability; however she suggested that students and families needed to decide whether living on campus or commuting from home was a better option, especially for the first year. She said, “Maybe all the changes of going away to school, in an unfamiliar environment and living away from home, on their own, is too much for them to take all at once; it is important to be realistic with them” (interview, August 11, 2010).

Lee agreed that some students needed to live at home their first year because of the many transitions at the onset of college, but added that each student with ASD was looked at “on a case-by-case basis” (survey, August 17, 2010).

Three OA staff members noted that in order to live in a community with others, students needed to have basic personal and housekeeping skills and needed to understand the rules and nuances of living with others. Data revealed that students with ASD developed problems with community living as a result of their behaviors and challenges with living in a community of many. The OA staff indicated that they worked closely with students with ASD to carefully plan their individualized housing.

Lee stated, most students with ASD had basic daily life skills to live independently, but it was the behaviors that ultimately determined their need for individualized housing. She elaborated that problems primarily occurred when a student did not disclose his or her disability to the roommate and the roommate did not
understand the behaviors. As a result, she stated that she worked closely with the students to determine their individualized housing accommodations:

Typically the student will select sort of where they want to live. Some of our housing is pretty noisy and some are pretty quiet and then there are sort of somewhere in-between. They decide and indicate three choices of where they want to live. Some students want to have a roommate and others do not. Then the whole single room thing would come up and there might be some discussion about living alone and I know that it is not good for some students with ASD to live alone because they go into their rooms, shut the door and spend their time isolated. (interview, August 26, 2010)

Summary of OA Staff Perceptions

Twelve themes were identified as critical for the successful navigation of higher education for students with ASD by OA staff. These included five themes for the academic domain; four themes for the social domain; and three themes for independent living. For academic, OA staff identified the following: advanced preparation, student adaptability, behavior management skills, campus support services, and technology skills. For social, OA staff identified the following: behavior management skills, support system, advanced preparation, and social involvement. For independent living, OA staff identified the following: advanced preparation, behavior management skills, and individualized housing accommodations. The OA participants perceived behavior management skills and advanced preparation as critical factors to successful navigation for all three domains: academic, social and independent living. In addition, data analysis revealed that embedded in each of these factors was the OA staff’s continual observation that the ability to assume more personal responsibility was a critical factor in their successful navigation of the academic, social and independent living needs integral to higher education for students with ASD.
Cross-case Analysis

The purpose of this descriptive case study was to capture student, parent, and OA staff views of critical factors in the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD. The ultimate goal of the study was to generate grounded theory (Merriam, 1998) about the research questions. To that end, data analysis began by looking for themes in the data that had been generated within each case. (Appendix I provided a matrix of the critical factors identified within each case.) Cross-case analysis was then used to answer the final research question, “What similarities and/or differences emerge in the perception of critical factors identified by students with ASD, their parents, and the OA staff?” While such information was embedded in the analysis of the first three research questions, comparison of results across the three groups and three domains (academic, social, and independent living) revealed a number of similarities and/or differences.

Academic

Analysis of the data identified both similarities and differences in the perceptions of the three groups for the academic area. All three groups noted that campus support and advanced preparation were critical factors for the successful navigation of the academic demands of IHEs for students with ASD. The need for parental support was identified throughout the data by all the participants; however, only the parents noted parental involvement to be critical to the academic success of students with ASD. All students reported that their parents were involved; however, their data indicated variability in their interest and degree of need for parental involvement. OA staff
indicated that parents needed to take a less involved role and allow the student to develop greater self-advocacy and independent thinking and decision making skills.

For the academic area, students indicated the desire for support from home and their IHE. While parents as a support was not identified as a critical factor for students, the need for ongoing parental advocacy and support was embedded throughout the student data. Student’s reported the need to be close to home and to have parental and IHE support with academics, to manage the demands of various classes, organize larger assignments, and budget their time. Students also suggested that there is a need for faculty and staff to have a better understanding of their needs in order for them to be more successful. The students who reported having a supportive person on campus who understood them verbalized a positive experience and opinion of their IHE.

For the academic area, parents noted that intellectual aptitude and advanced preparation were critical in helping their child navigate the academic demands of their IHE; however, they noted that parental support and support from the campus community were vital to ongoing academic success. The parents believed their role to be paramount in helping their child prepare for college by assisting them to select an IHE that would meet their needs, and be in close proximity to home for ongoing contact and support from parents. They also noted that the campus community had a responsibility to understand ASD and to support their child’s academic needs. Parents and OA staff noted that sometimes students did not disclose and therefore did not receive the supports that may have benefitted them academically. Lastly, while intellectual aptitude was identified as a critical factor for academic success by the parents; OA staff noted that the students with ASD who attended college generally did well academically and
intellectually and did not identify it as a critical factor. Nonetheless, of the three students, those with greater aptitude and less academic struggles were reported by their parents as having better potential for graduation from college.

OA staff believed students needed to adapt and be prepared for the changes in the structure and routine and ambiguity of the new and unfamiliar environment of college; to adjust to the transfer of rights; and adjust their behavior to the demands of the college classroom. OA staff noted that students needed to be aware of the differences in expectations between high school and college and for students to be more self-reliant and less dependent on their parents and more willing to self-advocate and seek help from individuals on campus. OA staff believed that high school (HS) personnel needed to be more aware of the differences between HS and IHEs and needed to prepare students for the changes. They noted that the students who were more successful in college had been provided greater independence and more opportunities and responsibility for personal decision making by being involved in their educational planning, IEP meetings, conferences, and college selection processes during high school.

While three of the four factors cited by OA staff placed the responsibility for navigating the academic demands of college on the student, they also cited ways that parents and faculty and staff from the IHE could assist students with ASD to be more academically successful. OA staff noted that faculty needed to identify and support the academic needs of students with ASD, and learn how to address their classroom behaviors. They suggested that faculty and staff needed to be more purposeful when working with students with ASD to integrate them in their classes with group projects, communicate clear expectations, give feedback and find common ground/interests to get
to know the student beyond the disability. OA staff believed that parents could better prepare students for college by teaching them how to be more independent and self-sufficient.

**Social**

Analysis of the data identified both similarities and differences in the perceptions of the three groups for the *social* area. All three groups noted that advanced preparation, support system, and social involvement were critical to the successful navigation of the social demands of IHEs for students with ASD. In addition, OA staff cited behavior management skills as a critical factor. A significant amount of information from the participants addressed the social needs, a recognized area of concern for students with ASD. All three groups believed that students with ASD needed both home and campus-based support to be successful socially. They all agreed that home support was still necessary although the three groups expressed differences of opinion about how much support parents needed to provide.

Students stated that support from parents and at least one person at their IHE helped them manage their social challenges. The students noted that support needed to be readily available from a variety of people who could assist them through behavior or social challenges that may have resulted because of a misunderstanding over their behavior.

While parents acknowledged that their child’s former teacher and coursework in high school had contributed to their college preparation, they verbalized the significant amount of advanced training they provided their child to address their social needs.
They noted that they spent time helping their child role play and talk through social situations. They also attributed counseling or psychological support as assisting the student in managing social-behavioral challenges. Parents believed that there was a need to continue such services from a variety of individuals on campus. They further suggested that it was imperative for the campus community to understand the behaviors of students with ASD, and be available to support them through social challenges. Implicit in these statements was a belief that parents expected IHEs to provide supports similar to those that were afforded by the students in Grades K-12.

In contrast, OA staff believed that students were most successful when they had more frequent contacts with their campus support systems and less dependence on their parents. OA staff noted that to make the transition to college easier, students with ASD needed to learn behavior management at school and at home and not wait until college. The OA staff believed that students who were most socially successful in college had learned to manage their behaviors through prior preparation by their secondary schools and parents. They suggested that advanced preparation needed to include discussions about possible social issues that could arise in college, e.g., how to interact and mingle with others, self-advocate, and work in a group.

The three groups believed that “social involvement” or finding a niche through participation in campus organizations, clubs, and activities was an essential component to social navigation of IHEs. Parents, students and OA staff explicitly stated that students with ASD needed friends and social opportunities for students to be more satisfied with their IHE and to lessen the chances of feeling lonely and isolated. OA participants believed that social opportunities for students with ASD could be prompted
through high school and parental exposure to a variety of activities prior to college; and promoted during college through purposeful linking of students with similar interests, talents and hobbies by faculty and staff.

**Independent Living**

While there were minor differences in the perception of each group, individualized housing accommodations were identified by all three groups as a critical factor for the successful navigation of the independent living demands of IHEs for students with ASD.

The students shared that while they desired social interactions and the camaraderie of others, they also needed their own personal space. Parents noted that individualized housing accommodations were critical to their child’s ability to navigate the independent living demands of their IHE, because their child needed a “safe place” to go if “over-stimulated” or avoid a “meltdown.” Parents found that their child desired social opportunities and friendships, but lacked some of the basic skills needed to initiate social interactions; therefore they took the initiative to provide their child with a variety of possessions to engage and attract others, to increase social opportunities, and prevent their child from being lonely and isolated. Parents further believed that visual supports and checklists helped teach their child how to maintain their personal hygiene, prepare foods, do laundry, use the microwave, manage their medications, and do some light housekeeping and cleaning. OA staff believed that adaptability was a critical factor for independent living. They observed that students who had advanced preparation by their parents and the K-12 educational system, who had individualized housing
accommodations and who had learned to manage their behavior were most successful with independent living because they could successfully adjust to changes in the overall structure and routine of college that require living independently without adult supervision.

Summary of Findings

Overall findings of this study revealed that embedded in each theme was the parents’ implicit and explicit belief that their active participation as their child’s support or advocate was integral to the successful navigation of all the critical factors they identified.

In addition, further analysis revealed that embedded in each of these factors was the OA staff’s continual observation that the ability to assume more personal responsibility was a critical factor in their successful navigation of the academic, social and independent living needs integral to higher education for students with ASD. It was the perception of students that they needed advanced preparation for successful navigation of the demands of all areas: academic, social, and independent living at IHEs. They required support from home as well as from the campus community to help them navigate the academic and social demands of IHEs. Students with ASD needed a variety of people to have knowledge and training to understand their academic, social, and independent living needs in order for them to be successful when navigating college. The perceptions of parents were that students with ASD needed their continued support as well as the support of individuals at the IHE to navigate the academic and social demands of their IHE. They also needed advanced preparation to help with the academic and social demands of college. Parents also noted the importance of social
connections and affiliation for navigation of the social and independent living demands of IHEs for students with ASD. Finally, the perceptions of OA staff were that students with ASD needed advanced preparation, behavior management skills to navigate the academic and independent living demands of IHEs. They noted they also needed support to be successful in navigation the academic and social demands.

Findings of this study further demonstrate that students and faculty placed less emphasis on the role of parental support than did the parents. Students and OA staff noted the need for students to have advanced preparation by high schools and their parents in order to be better-prepared for the changes when transitioning from high school to college. OA staff placed greater emphasis on the need for students with ASD to be more independent as is this the expectation when any student transitions to college. OA staff noted that students needed to be involved in their educational planning, decision-making starting in high school so that they develop greater self confidence in their skills, greater awareness of their needs, greater self-advocacy skills essential to college success. They also noted the need to learn to organize and manage their time and balance demands through use of personal resources of people, technology, and visuals.

Toward a Grounded Theory

“Grounded theory is an approach to theory development that involves deriving constructs and laws directly from the immediate data that the researcher has collected rather than drawing on prior research and theory” (Gall, Gall, & Borg, 2003, p. 8). Grounded theory seeks to promote the development of themes or relationships across
categories of the topic so that the theories almost appeared as features of the data, and not as features of the researcher (Gall et al., 2003; Sivensend, 1999; Yazedjian et al., 2008).

Analysis of student and parent data revealed that embedded in each area (academic, social, independent living) was a belief that the parents’ continual active participation was central to the student’s successful navigation of higher education. Surprisingly, while the parents explicitly identified this belief, the students did not. Yet parental involvement was repeatedly apparent in examples they cited of successful academic, social and independent living experiences.

By contrast, data analysis revealed that OA staff repeatedly observed that students’ ability to assume more personal responsibility, with less parental dependence, was a critical factor in their successful navigation of the academic, social and independent living needs integral to higher education. Essentially, OA staff implied that while parents continued to be protective of their child well into college, they should be cognizant of the need for students’ to assume more personal responsibility.

Moreover, all three groups noted the importance of a campus “support system” to help students navigate the academic and social demands of higher education. Similarly, all three groups identified the importance of “individualized housing accommodations” as providing additional campus “support” by creating a “safe” and “flexible” environment for students. Yet there was a significant difference in the way students, parents and OA staff viewed the primary role of such supports. Students and parents wanted them to accommodate students with ASD while also “educating” the campus community so it could be more efficient and sensitive to the unique needs of these
students. Although OA staff noted the need to educate faculty, they emphasized the importance of a support system to help students with “behavior management” so they could respond to the demands of higher education.

In addition, the three groups believed that “social involvement” or finding a niche through participation in campus organizations, clubs, and activities was an essential component to social navigation of IHEs. They agreed that students with ASD needed friends and social opportunities for them to be more satisfied with their IHE and to lessen the chances of feeling lonely and isolated. Parents and students attributed high school and parental exposure to a variety of activities prior to college as contributing to social opportunities in college. OA staff found it sometimes necessary for faculty and staff at IHEs to purposely linking students with ASD to other students with similar interests, talents and hobbies.

Furthermore, while students, parents and OA staff all agreed on the importance of “advanced preparation,” there was a significant difference in how they understood the goal of this preparation. Both students and parents indicated that support from others, especially parents, was central to the successful navigation of students with ASD in college. For them, such support appeared to be an extension of the kind of academic and social assistance these students had received during the K-12 years. However, for the OA staff “advanced preparation” meant that students had been prepared to understand both the legal transfer of rights upon entry to college, and the increased independence required of college students. OA staff noted, for example, that IEPs do not exist in college, and that students would enjoy less flexibility in terms of course requirements.
As a result, students needed to be less reliant on parents and school personnel and more responsible for themselves.

Ultimately, findings of this study suggest that while students, parents and OA staff perceived similar factors as central to the successful navigation of higher education, they viewed the factors differently. Parents and students believed the main purpose of advanced preparation and campus supports was to arbitrate or mitigate academic and social impediments faced by students with ASD. OA staff believed the main purpose of advanced preparation and campus supports was to scaffold academic and social demands of higher education required of all students. Therefore, while parents and students appeared to believe success was primarily the result of shared responsibility in which students, parents and higher education each had a role, OA staff appeared to believe the primary locus of responsibility for success in higher education was in the students themselves,

Summary of the Chapter

This chapter analyzed data from three cases: three students with ASD, three parents (mothers) of students with ASD, and three OA staff members from the IHE attended by one of the students. Case study research was used to investigate a contemporary phenomenon within its real-life context in which multiple sources of evidence were used. Data was collected using surveys, interviews and a focus group to answer four research questions. The data were analyzed using the constant comparative method for the purpose of generating grounded theory.
In conclusion, the roles and responsibilities of parents and students were viewed differently by the groups of participants; whereas students and parents continued to view the parent as having a significant role providing advocacy and support to the student for their successful navigation of the social and academic demands of IHEs as was their role during K-12; OA staff suggested that successful navigation was primarily the responsibility of the student.
CHAPTER V

CONCLUSIONS

This study examined critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with Autism Spectrum Disorder (ASD) from the perceptions of students with ASD, their parents, and Office of Accessibility (OA) staff from the institutions of higher education (IHEs) attended by the students.

This chapter is composed of four major sections. First, a summary of the study which includes the purpose of the study, research questions, and research methods. Second, the findings of this study are presented with conclusions. Third, implications are discussed relative to students with Autism Spectrum Disorder (ASD), parents of children with ASD, and institutions of higher education (IHEs). Lastly, recommendations for future research are shared.

Summary of the Study

Problem

It is well-accepted that the transition to college is one of the most stressful adjustment phases in the lives of young people (Benson, 2007; Eckes, & Ochoa, 2005; Kerr et al., 2004; Merchant, & Gajar, 1997; Oswald, & Clark, 2003). For individuals with ASD, such transition is complicated by the very nature of their disorder, a disorder
whose hallmark is one of social, behavioral, and communication deficits (Adreon, & Durocher, 2007). Because the population of individuals diagnosed with autism who are entering colleges and universities is rapidly growing, IHEs must be prepared to understand this disorder and how to address the needs of this population of students coming to their campuses. It is essential to understand what factors enable students with ASD to successfully navigate the academic, social, and independent living demands of higher education settings.

**Purpose**

Current research supports the need to integrate students with disabilities into college life and offers a myriad of suggestions about student success and survival in college and the roles of higher education in helping nondisabled adolescents and those with milder disabilities (Anderson, 1988; Benson, 2007; Berger, & Milem, 1999; Brooks & DuBois, 1995; Clark, 2005; Eckes & Ochoa, 2005; Hamblet, 2009; Harnett, 1965; Kregel, 1996; Madaus, 2005; Merchant & Gajar, 1997; Ryan, 1994; Yazedjian et al., 2008). Yet, with the growing number of students with ASD entering colleges and universities (also referred to as institutions of higher education or IHEs) across the country, there remains a very limited amount of research specific to this population, especially from the perspectives of the individuals directly involved: students with ASD, their parents, and OA staff from IHEs attended by students with ASD. The purpose of this study, then, was to identify what students with ASD, their parents, and Office of Accessibility (OA) staff from the IHEs attended by the students believe to be
critical factors for the successful navigation of the academic, social, and independent living demands of IHEs.

Research Questions

Four research questions guided this study:

1. What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

2. What do parents of students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

3. What do OA staff at IHEs identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?

4. What similarities and/or differences emerge in the perception of critical factors identified by students with ASD, their parents, and OA staff?

Methods

In order to answer the research questions, this study used a multi-case qualitative research design aimed at developing grounded theory (Merriam, 1998). The study took place in a large Midwestern state. All participants are residents of this state. The first of the three IHEs is a smaller, private university, located in a suburban setting; the second is a public university located in an urban setting; and the third is a private college located in a rural setting. All three IHE have a student body that is diverse in gender, race and
ethnicity. The public university has an enrollment of over 25,000 students, and the two private IHEs have populations of less than 2,500 students.

The researcher used nonrandom, purposeful sampling techniques (Merriam, 1998) and predetermined essential criterion to select the nine participants. The participants included three students with ASD, three parents (all mothers of these students), and three OA staff from the participating IHE currently attended by the student. The three OA staff all worked at the office on campus that served students with disabilities.

Multiple data gathering techniques and multiple levels of analysis were used in order to illuminate different facets of the phenomena and portray them in their complexity. As Zussman (2004) states, “Multiple levels of analysis and multiple data gathering techniques make for good qualitative research” (p. 361). For this study, the researcher used multiple sources to gather data from each group: two surveys with the three students; surveys, a focus group, and face-to-face individual interviews with the three parents; and surveys and individual telephone interviews with each of the three OA staff participants. Triangulation of data was used to establish validity, as were peer examination and member checking.

Data was analyzed with the goal of generating grounded theory. Grounded theory, first introduced by Glaser and Strauss in 1967, is a specific research methodology that uses constant comparison among cases to develop theory based upon data, or from the ground up (Merriam, 1999; Zussman, 2004). Constant comparison involves the continual, and repeated process of comparing and revising segments within and across categories until satisfactory closure is achieved (Gall et al., 2003).
Consequently, comparisons allow for themes and categories to develop which result in grounded theory. It involves discovery as one unfolds the data. Data was coded, sorted and organized using a “discovery-focused” procedure to identify patterns and connections among elements of the data (Fossey et al., 2002).

### Results of the Study

The following is an overview of the general findings of this study related to the four research questions. For the first three research questions, critical factors identified by each of the three groups (students with ASD, their parents, OA staff from the IHEs attended by the students) are presented across the three areas (academic, social, independent living). For the fourth research question, similarities and/or differences in the perception of critical factors identified by the three groups are presented for each of the three areas.

For the first research question, “What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social, and independent living demands of institutions of higher education (IHEs) for students with ASD?,” analysis of student data revealed ten critical factors for successful navigation of higher education for students with ASD. For academic factors, students identified the following themes: (a) proximity to home, (b) campus support services, (c) faculty and staff understand ASD, and (d) advanced preparation. For social factors, students identified the following: (a) a support system, (b) advanced preparation, and (c) social involvement. For independent living factors, students identified the following:
(a) advanced preparation, (b) daily living skills, and (c) individualized housing accommodations.

For the second research question, “What do parents of students with ASD identify as critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD?,” analysis of data from parents unveiled eleven factors as critical to the successful navigation of higher education for students with ASD. For academic factors, parents identified the following themes: (a) intellectual aptitude, (b) parental involvement, (c) advanced preparation, and (d) campus support services. For social factors, parents identified the following: (a) a support system, (b) social involvement, and (c) advanced preparation. For independent living factors, parents identified the following themes: (a) daily living skills, (b) possessions to engage others, and (c) individualized housing accommodations.

For the third research question, “What do OA staff at IHEs identify as critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD?,” analysis of data from OA staff revealed twelve critical factors for the successful navigation of higher education for students with ASD. For academic factors, OA staff identified the following themes: (a) advanced preparation, (b) student adaptability, (c) behavior management skills, (d) campus support services, and (e) technology skills. For social factors OA staff identified the following: (a) behavior management skills, (b) support system, (c) advanced preparation, and (d) social involvement. For independent living factors, OA staff identified the following themes: (a) advanced preparation, (b) behavior management skills, and (c) individualized housing accommodations.
Cross-case analysis was used to answer the fourth research question, “What similarities and/or differences emerge in the perception of critical factors identified by students with ASD, their parents, and the OA staff?” While such information was embedded in the analysis of the first three research questions, comparison of results across the three groups and three domains (academic, social, and independent living) revealed a number of similarities and/or differences. Overall findings of this study revealed that embedded in each theme was the parents’ implicit and explicit belief that their active participation as their child’s support or advocate was integral to the successful navigation of all the critical factors they identified. Further analysis revealed that embedded in each of these factors was the OA staff’s continual observation that the ability to assume more personal responsibility was a critical factor in their successful navigation of the academic, social and independent living needs integral to higher education for students with ASD.

The perceptions of OA staff were that students with ASD needed advanced preparation, behavior management skills to navigate the academic and independent living demands of IHEs. They further noted students needed campus support to be successful in navigating academic and social demands.

In comparison, it was the perception of students that they needed advanced preparation for successful navigation of the demands of all areas: academic, social, and independent living at IHEs. They required support from home as well as from the campus community to help them navigate the academic and social demands of IHEs. Students and OA staff noted the need for students to have advanced preparation by high
schools and their parents in order to be better-prepared for the changes when transitioning from high school to college.

OA staff placed greater emphasis on the need for students with ASD to be more independent as this is the institutional expectation for every student who transitions to college. OA staff noted that students needed to be involved in their educational planning and decision-making, starting in high school, so that they develop greater self confidence in their skills, greater awareness of their needs, and greater self-advocacy skills essential to college success. They also noted the need to learn to organize and manage their time and balance demands through use of personal resources of people, technology, and visuals.

Students with ASD believed they needed a variety of people with knowledge and training to understand their academic, social, and independent living needs in order for them to be successful when navigating college. The perceptions of parents were that students with ASD needed their continued support as well as the support of individuals at the IHE to navigate the academic and social demands of their IHE. Parents also noted the importance of social connections and affiliation for navigation of the social and independent living demands of IHEs for students with ASD.

Conclusions

Analysis of data across the three groups and three domains (academic, social, and independent living) found common themes; however the roles and responsibilities of parents and students were viewed differently by the groups of participants. Findings of this study revealed students and parents belief that parents’ continual active participation
was central to the student’s successful navigation of higher education; however OA staff
placed greater emphasis on the need for students with ASD to be more independent as is
this the expectation when any student transitions to college. Outcomes of this study are
consistent with research that confirms the need for students with ASD to be autonomous
from their parents in order to gain a sense of identify and develop self-governing
behaviors such as independent decision making (Hoffman, 1984; Kenyon & Koerner,
2009; Lapsley et al., 1989; Palmer, 2006). Moreover, findings are also consistent with
additional research (Fullerton, 1995; Halpern, 1985; Hendricks & Wehman, 2009; Will,
1984) validates the need for students to demonstrate not only academic skill, but also
competence in a myriad of other areas such as social, communication, self-management,
self-determination, independent living, community, and employment skills to be
successful in college.

Results of this study indicate that both students and their parents agreed about the
benefits of students with ASD living away from home, and all three groups cited
“individualized housing accommodations” as a critical factor for successful navigation
of independent living for students with ASD. This finding supports earlier research by
Terenzini et al. (1994) who found that for students who reside on campus, the transition
of living with others created a shared experience and provided the opportunity to explore
and discover other people’s worlds, learn from others, help one another, and make new
friends. Research has observed that students with ASD demonstrate impairments in
social interaction, communication, and behavior (Adreon & Durocher, 2007; APA,
DSM-IV, 1994; Graetz & Spampinato, 2008; Lindsay, 2005). Moreover, all individuals
with ASD demonstrate sensory issues, a restricted repertoire of interests, behaviors, and
activities (Charman, 2008), and heightened stress and anxiety (Lytle & Todd, 2009; Manning-Courtney, 2003). It can be inferred, then, that the need for individualized housing accommodations deemed critical by these three groups are consistent with the findings of this study. Studies by Lytle and Todd (2009) and Charman (2008) found stress and anxiety at the root of the behaviors that caused social withdrawal, nervous or repetitive activities, anger, frustration, difficulty calming, poor decision-making, or hyposensitivity or hypersensitivity to auditory, visual, or tactile sensations which could be inferred as impacting the ability to live with others, and the need for a “safe” place and individualized housing accommodations for students with ASD. Benson (2007) also supported the need for students to live on campus away from previous friends in order to develop a social niche and form strong bonds within the campus community.

Consistent with conclusions of the National Center for Education Statistics (2006) that receiving appropriate supports and accommodations was related to school success and retention for students with disabilities at IHEs, findings of this study indicated that all three groups identified a campus “support system” as critical to helping students navigate the academic and social demands of higher education. Students and parents wanted OAs to accommodate students with ASD while simultaneously “educating” the campus community, so IHEs would be more efficient and sensitive to the unique needs of these students. Some studies, however, have determined that it was the responsibility of the student with ASD to educate faculty about their needs. Wolanin and Steele (2004), for example, noted that the burden fell on the student, not the IHE, observing that some problems occurred because not all students disclosed their disability
Eckes and Ochoa (2005) supported the need for faculty and staff at IHEs to understand what constitutes “equal access” for a student with a disability in order to provide students with the reasonable accommodations and avoid a violation of Section 504 or ADAAA, but results of this study found that while OA staff noted the need to educate faculty, they emphasized the importance of a support system to help students with “behavior management” so they could respond to the demands of higher education. This finding about the importance of “behavior management” is consistent with earlier research that claims for students to be academically successful, they need to develop certain habits, attitudes and perform tasks and activities competently (Nist-Olejink & Holschuh, 2007). They also need to adjust to a novel set of social and academic systems (Terenzini et al., 1994), and need organizational skills for coping with the demands of homework, studying for tests and exams, reading large amounts of content, recalling what they have read, and writing numerous papers (Getzel & Wehman, 2005).

Similarly, findings of this study confirm research that has identified the need for students with ASD attending IHEs to demonstrate the ability to work independently, as well as in groups, with students who had vastly different personalities, values, perspectives, and skills than themselves (Terenzini et al., 1994).

Results of this study found the “social” aspect of college cut across all domains and was often embedded in the information shared by the participants when discussing the needs of students with ASD at IHEs. All three groups believed that “social involvement” or finding a niche through participation in campus organizations, clubs,
and activities was an essential component to successful social navigation of IHEs. They agreed that students with ASD needed friends and social opportunities for them to be more satisfied with their IHE and to lessen the chances of feeling lonely and isolated. This finding was supported throughout numerous studies. Prior research has indicated that one of the many challenges confronted by all students during their first year of college was finding a social niche within the campus community (Oswald & Clark, 2003; Pascarella & Terenzini, 1991; Tinto, 1987). It was further recognized that students who participated in social affairs and who formed relationships with faculty and other students had a greater chance of persisting to complete their college education and obtain a college degree (Anderson, 1988; Astin, 1984; Benson, 2007; Berger & Milem, 1999; Oswald & Clark, 2003; Pascarella & Terenzini, 1991; Tinto, 1987). In addition, Clark (2005) found a student’s perceived social integration to be the most prominent challenge in his or her transition to college. Benson (2007) confirmed that most college freshman perceived social integration as both the most challenging and most beneficial aspect of their college transition and found positive friendships, strong social networks.

Oswald and Clark (2003) and Hays and Oxley (1986) found social relationships to be a key factor in helping students successfully transition and adapt to college. Terenzini et al. (1994) agreed that social interactions are essential to college success, indicating that college students who were involved in campus organizations transitioned and adjusted to college more successfully than those who were not involved. Additional support came from Cooper, Healy, and Simpson (1994) who noted that engagement in campus activities and clubs impact student satisfaction with college and their academic achievement (Hartnett, 1965); and Day (1989) who found students to have higher self-
esteem and to be more likely to stay in school when they felt supported and connected with others on campus. Results of this study confirm all these earlier findings.

Data analysis revealed that students and OA staff believed students needed advanced preparation by high schools and their parents in order to be better prepared for the changes when transitioning from high school to college. However, while students, parents and OA staff all agreed on the importance of “advanced preparation,” there was a significant difference in how they understood the goal of this preparation. Both students and parents indicated that support from others, especially parents, was central to the successful transition to college and navigation of students with ASD in college. For parents, such support appeared to be an extension of the kind of academic and social assistance these students had received during the K-12 years.

Findings of this study are consistent with research by Palmer (2006), which supported the need for students with disabilities to be prepared to self-advocate. Furthermore, Palmer observed that in order to be successful in college, these students needed to employ a myriad of learning strategies and coping skills vastly different from those they had developed and sharpened in high school. In fact, numerous studies have suggested that students with ASD need sufficient preparation to be more successful when transitioning to higher education (Conley, 2008; Pritchard & Wilson, 2003).

Furthermore, studies by Whetstone and Browning (2002) and Kavale and Forness (1999) confirmed the need for advanced preparation and the need for students to be more independent, stating that students needed to be prepared to successfully assume adult roles and responsibilities and acquire skills and knowledge to increase personal independence, and social responsibility in college. Unfortunately, some studies revealed
findings that the K-12 system had not adequately prepared students with disabilities to
traverse school to college, which resulted in a college dropout rate that was twice as high
for SWDs when compared to students without disabilities (OLTS, 2006; NLTS2, 2005;
Pritchard & Wilson, 2003).

OA staff noted that students needed “advanced preparation” and to be involved
in their educational planning and decision-making, starting in high school, so that they
develop greater self confidence in their skills, greater awareness of their needs, and
greater self-advocacy skills essential to college success. They also noted the need to
learn to organize and manage their time and balance demands through use of personal
resources of people, technology, and visuals.

OA staff believed that students needed to be prepared to understand both the
legal transfer of rights upon entry to college, and the increased independence required of
college students. OA staff noted, for example, that IEPs do not exist in college, and that
students would enjoy less flexibility in terms of course requirements. It is documented
that IDEA applies only to grades K-12, and once a student graduates he or she is no
longer entitled to a mandatory Individualized Education Program to identify and provide
supports for postsecondary success (U.S. Department of Education, Office of Civil
Rights, 2006).

Moreover, prior research has identified that a need exists for students with ASD
to have an understanding of special education laws and understanding of the significance
of self-advocacy in order to receive desired accommodations, auxiliary aids or services
Gilson (1996), and Shaw et al. (2010) provided additional support of the need for
students with ASD to have “advanced preparation” and to be involved in their educational planning and decision-making. They observed that students need to understand their disability, when to disclose it, and to understand that IHEs are not legally required to provide the best or most desirable accommodations. Rather, accommodations only need be sufficient to enable equal access and “reasonable accommodations” for students with ASD in the form of academic adjustments, auxiliary aids, or program modifications. Findings of this study, then, confirmed the need for in-depth advanced preparation so that students with ASD can anticipate and meet the complex academic, social and personal skill demands required for success in higher education.

Ultimately, findings of this study suggested that while students, parents and OA staff perceived similar factors as central to the successful navigation of higher education, they viewed the factors differently. Parents and students believed the main purpose of advanced preparation and campus supports was to arbitrate or mitigate academic and social impediments faced by students with ASD. OA staff, however, believed the main purpose of advanced preparation and campus supports was to scaffold the academic and social demands of higher education required of all students.

Either way, it could be inferred that all participants believed students with ASD require a variety of supports and prior training to help them transition to college and remain in college. Moreover, several studies point out that the transition from high school to college is one of the most difficult transitions that individuals experience during their lifetime Conley (2008), that college is dramatically different from high school, and often the first place where young people are expected to be adults (Wells et
al., 2003). All of this happens when, for the first time, many young people are experiencing significant independence, parting from their families in order to become independent adults (Clark, 2005).

This study found that while parents and students appeared to believe success was primarily the result of shared responsibility in which students, parents and higher education each had a role, OA staff appeared to believe the primary locus of responsibility for success in higher education was in the students themselves. Studies supported the belief of the OA staff that students with autism needed to demonstrate self-determination and self-advocacy skills in college (McCarthy, 2007; Wehman & Yasuda, as cited in Getzel & Wehman, 2005). Others (Burgstahler, as cited in Getzel & Wehman, 2005) found these two skills to be essential for success in higher education as well as employment and noted that college students are expected to be independent, self-reliant learners who recognize when they were having problems and when and how to ask for help from their instructors, peers or other support staff.

An early study by deFur, Getzel, and Trossi (1996), for example, supported the need for students to assume greater responsibility, noting that students are expected to take responsibility to manage the variety of demands placed upon them to control their own learning and participation. Furthermore, studies by Conley (2008) and Terenzini et al (1994) provided additional support to the need for greater student accountability indicating that academic behaviors such as self-awareness, self-monitoring, and self-management are essential to academic success.
Implications

This study offered insights into critical factors for the successful navigation of the academic, social, and independent living demands of IHEs for students with ASD based on the perceptions of students with ASD, their parents, and OA staff from the IHE attended by the student. Although in recent years, many more students with disabilities are entering college (Baer, Daviso, Queen, Dennis, Flexer, & Izzo, 2010; NLTS-2, 2009), a review of scholarly literature found a paucity of information about the unique and critical needs of students with ASD who attend institutions of higher education, particularly as they are viewed from the perspectives of students, parents and higher education personnel.

Moreover, a sizeable amount of evidence indicates that if the transition to college is negotiated successfully, the likelihood of student persistence is significantly increased (Attwood, 2000; Eckes & Ochoa, 2005; Terenzini et al., 1994; Wolf et al., 2009). Since all students with ASD, their parents and OA staff with whom they interact regularly have deep personal or professional experience about college transition, soliciting and comparing those perspectives provides unique insights for other stakeholders. The critical factors identified in this study then have a number of implications for students with ASD, parents of students with ASD, K-12 teachers and administrators, higher education faculty and staff, and teacher preparation programs.

Implications for Students

The findings revealed how crucial it is for students with ASD to have advanced preparation by teachers and parents during middle and secondary school in order to
lessen stress and ambivalence associated with leaving a familiar, supportive home environment and going to college and learning a new set of skills that affect all aspects of daily living (Clark, 2005). This study found that to be successful in higher education, it is essential for students with ASD to become self-advocates. To that end, results of this study recommend that students become involved in their Individualized Education Program (IEP) process and in transition planning during high school, so that they fully understand their disability and resulting educational needs (Alberto et al., 1997). This study specified the need for students to be aware that upon entry to a postsecondary setting, the burden of responsibility shifts from parents to them to be proactive in getting support and accommodations, by disclosing their disability and effectively articulating the services and supports they need for successful navigation of the academic demands of college (Getzel & Thoma, 2008).

This study found that parents of students with ASD maintain an important role in the lives of their children by encouraging, supporting, and understanding them and the issues they face in college (Getzel & Thoma, 2008); however, findings revealed that for students to adjust and adapt to the newness of college and the changes that occur, they need to separate from their parents and become more independent and less reliant on them for ongoing support and advocacy (Palmer, 2006).

Moreover this study found that students need to adapt to the implicit curriculum: “the variety of demands placed upon college students to control their own learning and participation” (deFur et al., 1996, p. 233); therefore, there is a need for students to learn to manage and demonstrate behavior management skills conducive to classroom expectations and other campus environments for successful navigation of the academic,
social and independent living demands of IHEs was repeatedly noted throughout this study.

Social involvement and developing social networks provide important buffers against stress, loneliness and depression was supported in the study. One implication of this study then is that students need to become more independent, establish relationships with peers, seek out campus support, and join groups or activities to create their own support system.

Additionally, this study revealed that students with ASD need individualized housing accommodations. It seems from the results of this study that for students with ASD, having a roommate can be highly stressful; therefore it may be preferable for them to have a single room that provides a “safe place” where they can retreat when feeling over-stimulated, where they can control their environment, focus on their work and daily activities without distractions, and not be forced to engage in social interaction when preferring to be alone. It was revealed in this study that while the student participants had adequate basic independent living skills such as personal care, cleaning, and cooking skills; they need to utilize technology to be more independent with everyday activities such as organizing their time and assignments, and managing their medications.

Lastly, this study suggests that it is imperative that students with ASD anticipate and prepare for the myriad of novel and unique experiences they will encounter as they navigate the academic, social and independent living demands of IHEs.
Implications for Parents

Results of this study revealed that parents of students with disabilities in higher education tend to be more involved than other parents in their child’s education (Madaus, 2005). Ironically, however, one implication of this study is the need for parents to take a less active “managerial” role in order to help foster greater independence and self-reliance in their child. Since university life requires students to be self-reliant, parents need to provide their child with opportunities for independent decision-making, and self-advocacy prior to the transition to college. In fact, earlier research similarly found that planning well in advance for this greater independence is essential to college success for students with ASD (Getzel & Wehman, 2005; Palmer, 2006; Shaw et al., 2010).

This study then confirmed the need for parents to prepare students to problem-solve situations, seek help from campus supports, and talk with professors about their disability and academic needs. Throughout this study, it was found that while beneficial, parental involvement had a tendency to limit a student’s ability to practice and fully develop self-advocacy skills (Eckes & Ochoa, 2005). As such, findings of this study confirm the need for parents to encourage students to begin to become less reliant on them for support and advocacy.

As the study revealed, parents play a key role in the support of students with ASD. Consequently, parents themselves need help understanding the academic and time demands that will be placed on students, what supports will be available to students at IHEs, how to deal with the stresses that students will be experiencing, and how to direct them to seek campus supports. In this study, it was repeatedly emphasized that students
with ASD need to learn and demonstrate self-management of behaviors and that training and practice for this should be initiated by middle and high school teachers as well as by parents.

Moreover, because of the legal transfer of rights from parents to students upon entry to college, this study recommends that parents partner with middle and high schools to involve students in their educational planning. Parents need to be aware of the provisions of special education laws and need to understand the differences between high school and college, particularly that educational entitlement in high school cannot be assumed available in college. Likewise, they need to assure that their child is also cognizant of the changes in roles and responsibilities between high schools and IHEs.

Last, one major implication of this study is that parents must work with students from an early age, to learn and practice daily living and independence skills while at home and in high school.

*Implications for Faculty, Staff and Administrators at IHEs*

This study found that students with disabilities who have become accustomed to receiving social or other supportive services are beginning to pursue higher education in greater number, and their success or failure may be dependent on the degree to which they can be identified and helped by college communities (Conley, 2008; Szafran, 2001; Wells et al., 2003); consequently, one implication of this study is that faculty, staff and administrators at IHEs must be prepared to meet the influx of students with disabilities such as ASD.
This study brought to light that successful transition is a cooperative activity, involving multiple individuals willing to make success for that student possible. A variety of campus personnel are needed to help students with ASD navigate the academic, social and independent living needs demands of IHEs. Although this study found that faculty and staff as well as others on campus (e.g.: administrators, residence assistants, and security) are, in many cases, interested in learning more about how to help students with ASD, they themselves need additional information and training, so that they are aware of the varying behaviors and characteristics associated with ASD. They need information in order to recognize the corresponding variations in the academic, social and independent living needs of students with ASD in order to provide academic and/or behavioral support when needed across the various campus settings.

This study found that students with ASD have social difficulty when navigating IHEs, and earlier research revealed that challenges with reciprocal social interaction are part common to this disorder (APA, 1980; DSM-IV, 1994). It was also revealed in this that social relationships are critical to successful transitions to college (Oswald, & Clark, 2003); positive friendships and a strong social network are key to helping students adapt to college (Hays, & Oxley, 1986); and a student’s perceived social integration is the most prominent challenge in the transition to college (Clark, 2005). As a result, an implication of this study is that there exists a need for the campus community (e.g., faculty, staff, administrators) to recognize the critical need for social involvement for students with ASDs, and thus to develop increased opportunities for student involvement and participation.
Implications for High School Personnel

This study revealed that postsecondary success requires careful planning and preparation at the high school level (Kregel, 1996). Because of this, high schools need to prepare students for the transition to college. As noted earlier, high schools need to prepare students with ASD for college by involving them in their transition plans, and helping them understand how their disability affects their learning (Getzel & Thoma, 2008). Moreover, high schools need to prepare students for the changes in provision of services from high school to college so that the students do not feel overwhelmed and unable to complete their postsecondary education program (deFur et al, 1996).

In addition, information from this study revealed that there is a need for high schools to improve transition efforts with IHEs by increasing their awareness of the expectations of IHEs for students with ASD. One recommendation is that high schools involve colleges in the transition process by inviting IHE staff to meet the student who plans to attend their college. In addition, this study found that high schools need to prepare students to expect fewer educational services in college and to use self-advocacy skills to disclose their special education needs and tell their instructors specific accommodations they will need in each of their courses.

Findings from this study clearly indicated the need for students with ASD to be socially involved. It was implied that this could be initiated beginning in intermediate or middle school with activities such as choir, band, theatre, and sports participation. As it was noted in the study, it is sometimes necessary to purposely arrange social opportunities; hence school personnel could find positive peer models or peers mentors
who understand their behaviors and would be willing to work with the student with ASD.

As noted in this study and earlier research, students with ASD do not understand social interactions nor demonstrate reciprocal social exchanges. Because of this, school personnel need to help students with ASD develop their social skills through direct teaching of desired behaviors using strategies such as modeling, role play, social stories, cartoon characters, scripts, etc. with the hope of generalizing learned behaviors to settings beyond the teaching environment.

Furthermore, findings indicated that it takes a team of individuals to help students with ASD successfully transition to college. As an example, in addition to teachers, students with ASD need career/school counselors in high school to guide them as they move through the transition planning process to assess postsecondary opportunities. One implication of this study is that high schools need to enlist parental involvement because such involvement is a significant predictor of school success.

This study found that successful transition planning for postsecondary education for students with disabilities extends beyond meeting admissions requirements, and includes instruction in self-advocacy, independent living, decision making, and learning from positive and negative consequences (deFur et al., 1996); therefore high schools need to help prepare students with disabilities for the multitude of changes that they may encounter in order for them to be successful navigating the academic, social and independent living demands of IHEs.
Implications for Teacher Preparation Programs

Findings of this study reveal a need for teacher preparation programs to include more courses on ASD so that preservice teachers graduate with a better understanding of this disorder and the needs of this growing population of students who are exiting school and entering postsecondary settings (Bertrand et al., 2001; VanBergeijk et al., 2008). Teacher preparation programs should provide students with both instruction and field experiences that involve engaging with this population of students.

In addition, an implication of this study is that high schools need to do much more to prepare students with ASD for college. Therefore, this study would suggest that there is a need for teacher preparation programs to reinforce to preservice teachers the importance of involving students with ASD in their IEPs and transition planning. In order for teachers to have an understanding of how to write a transition plan that incorporates the students’ strengths, needs, interests and their postsecondary education plan, they needed adequate preparation.

In general, results of this study could be used to help prepare future teachers to understand critical factors essential to navigate the academic, social and independent living demands of IHEs.

Recommendations for Future Research

The present study identified critical factors for successful navigation of the academic, social and independent living demands of IHEs for students with ASD. This study also provides direction for future research on students with ASD, both those who were successful as well as those who were unsuccessful and did not graduate from their
IHE. Future research could include an comparison of students with ASD who were successful to those who were unsuccessful, thus did not graduate with a degree from their IHE.

Recommendations for Additional Research on Students with ASD

This study utilized a convenience sample that included three student participants who were from similar socioeconomic backgrounds, of the same race and same gender and from the same demographic area; thus this study did not reflect the full ethnic, socioeconomic and demographic diversity of college students with ASD in the United States. Research is needed that includes a larger, cross-sectional sample of students, including females with ASD, and fathers of students with ASD, in order for it to be generalizable to a wider population of individuals.

Recommendations for Research on Higher Education Faculty and Staff Beliefs

This study included only three OA staff members from the three IHEs attended by the student participants. Although their information can contribute to the database of information regarding critical factors for successful navigation of the academic, social and independent living needs of IHEs for students with ASD, more studies are needed that include a broader range of individuals at IHEs.

As this study identified the need for a variety of campus supports, it could be assumed that the perspectives of faculty and staff from IHEs who are in contact with students with ASD would provide additional and rich information to this high interest topic. Future studies should examine beliefs of higher education faculty about students with ASD and how those beliefs impact their instruction. Additionally, it would be
beneficial to understand what faculty and staff identify as their role in supporting students with ASD as well as the amount and type of training that has been offered to them as well as that which they utilized.

Recommendations for Research on the Topic of Social Involvement at IHEs for Students with ASD

This study examined the academic, social and independent living demands for students with ASD from the perspectives of the students with ASD, their parents, and OA staff from the IHE attended by the students. Upon closer examination of data provided by the participants and from the literature review, there is great interest in the social aspect as it pertains to students with ASD.

In the present study, all nine participants presented social needs as the most critical to successful navigation of IHEs for students with ASD. Although this area of deficit is common to this disorder; it would be interesting to delve further into specific social needs that students with ASD, parents, and IHE personnel identify as needing support and then take it one step further to determine how to intervene to meet those needs at IHEs. Future research should examine the complex factors that affect social involvement at IHEs for students with ASD, with particular emphasis on differences in social opportunities among IHEs and the impact of those on students with ASD.
REFERENCES


Americans with Disabilities Act (ADA) of 1990, PL 101-336, 42 U.S.C.


Individuals with Disabilities Education Improvement Act (IDEIA) of 2004, P.L. 108-446, 20 U.S.C.


Merriam-Webster online dictionary: www.merriam-webster.com/dictionary


APPENDIX A

UNIVERSITY OF AKRON IRB APPROVAL

NOTICE OF APPROVAL

April 23, 2010
Lynn Cicciarelli
3029 Preakness Drive
Stow, Ohio 44224

From: Sharon McWhorter, IRB Administrator


Thank you for submitting your IRB Application for Review of Research Involving Human Subjects for the referenced project. Your application was approved on April 22, 2010. Your protocol represents minimal risk to subjects and matches the following federal category for exemption:

- Exemption 1 - Research conducted in established or commonly accepted educational settings, involving normal educational practices.
- Exemption 2 - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior.
- Exemption 3 - Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior not exempt under category 2, but subjects are elected or appointed public officials or candidates for public office.
- Exemption 4 - Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens.
- Exemption 5 - Research and demonstration projects conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine public programs or benefits.
- Exemption 6 - Taste and food-quality evaluation and consumer acceptance studies.

Annual continuation applications are not required for exempt projects. If you make changes to the study's design or procedures that increase the risk to subjects or include activities that do not fall within the approved exemption category, please contact me to discuss whether or not a new application must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to implementation.

Please retain this letter for your files. If the research is being conducted for a master's thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

Cc: Shernavaz Valii - Advisor
Cc: Stephanie Woods - IRB Chair

Approved consent form/s enclosed

Office of Research Services and Sponsored Programs
Akron, OH 44325-0128
330-972-7065 • 330-972-8281 Fax
The University of Akron is an Equal Opportunity and Employment Institution.
APPENDIX B

CONSENT FORMS

The University of Akron
Institutional Review Board

Informed Consent Document
Student Participant

Title of Study: Critical factors in successful navigation of higher education for students with Autism Spectrum Disorder: A qualitative case study

Introduction:
You are being invited to participate in a research study conducted by Lynn Ciccia, a student in the Department of Curricular and Instructional Studies, at The University of Akron. This consent form will provide you with information on the research, what you will need to do, and the associated risks/benefits of the research project. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

Purpose:
The purpose of this study is to identify your perception of what is required to be successful in meeting the academic, social, and independent living demands for students with an Autism Spectrum Disorder (ASD) attending institutions of higher education (IHEs). Participants will include students with ASD, their parent(s), and administrators at the institutions of higher education attended by the students. An estimated 9-12 individuals will participate.

Procedures:
For the student participants, the researcher will use the following sources of data collection including:
- Data gathered through electronic journal entries/surveys.

Once I have received your signed consent you will be sent two surveys. Specific directions will be provided with the surveys and the due dates for when they need to be returned. The first survey will be sent within 5 days of my receiving your consent. After I receive your first survey, a second survey will be sent to you within 5 days. You may select your preferred method to respond to the survey questions: electronically or handwritten. If you provide an email address in the space below, then I will send you the surveys via email. If you do not provide an email address in the space below, I will mail you the surveys and provide you a

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IRB

Date 4/20/15
The University of Akron

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self-addressed, stamped envelope for you to use to return the surveys. If you prefer to email your surveys, please return them in an attachment to me at: pclecanteii@neo.hr.com. Questions will appear in several formats. For some questions you will select a response, some will require you will give a short answer, and some questions will involve lengthier answers that may be several paragraphs in length. I refer to these as journal entries. The initial survey will ask more general questions. The second survey will ask more specific questions in order to clarify and/or gather additional information specific to the research questions.

Risks and Discomforts:
There are no anticipated risks and discomforts for participating in this study beyond those encountered in everyday life. However, some of the questions asked for journal entries/surveys are of a personal nature and ask you to identify areas in your life where you feel you may need additional help. If you do not wish to answer a question, you may skip it and go onto to the next question.

Benefits:
You will receive no direct benefit from your participation in this study, but your participation may help us better understand how we can enhance services available at institutions of higher education to better meet the needs of students with ASD.

Payments to Participants:
Within 30 days and upon completion of all procedures, you will receive a gift card to Subway worth 10 dollars.

Right to refuse or withdraw:
Taking part in this research study is entirely up to you. You may choose not to participate or you may discontinue your participation at any time.

Anonymous and Confidential Data Collection:
Any identifying information collected will be kept in a secure location and only the researcher will have access to the data. Participants will not be individually identified in any publication or presentation of the research results. Only aggregate data will be used. Your signed consent form will be kept separate from your data, and nobody will be able to link your responses to you.

Confidentiality of records:
In order to maintain anonymity and/or confidentiality of data and records, coding of data will be used and pseudonyms will be applied to identify the participants.

The results of this study will be publicly disseminated through a doctoral dissertation, and may possibly be disseminated through potential publication in a professional journal, presentation at professional meetings, or presentation at professional conferences.

APPROVED

Date 4/22/19

The University of Akron
Who to contact with questions:
If you have any questions about this study, you may contact Lynn Ciccantelli at (330) 571-4102 or Dr. Shernavaz Vakil at (330) 972-7447. This project has been reviewed and approved by The University of Akron Institutional Review Board (IRB). If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance & signature:
I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. Please sign and return one copy of this consent and keep a copy for future reference.

Participant Signature _____________________________ Date ______________

I prefer to receive and submit my surveys electronically. Please send the surveys to my email as listed below:

Email address _____________________________

APPROVED
IRB
Date 4/22/10
The University of Akron
Informed Consent Document
Parent Participant

Title of Study: Critical factors in successful navigation of higher education for students with Autism Spectrum Disorder: A qualitative case study

Introduction:
You are being invited to participate in a research study conducted by Lynn Ciccarelli, a student in the Department of Curricular and Instructional Studies, at The University of Akron. This consent form will provide you with information on the research, what you will need to do, and the associated risks/benefits of the research project. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

Purpose:
The purpose of this study is to identify your perception of what is required to be successful in meeting the academic, social, and independent living demands for students with an Autism Spectrum Disorder (ASD) attending institutions of higher education (IHEs). Participants will include students with ASD, their parent(s), and administrators at the institutions of higher education attended by the students. An estimated 9-12 individuals will participate.

Procedures:
For the parent participants, the researcher will use the following data collection sources including:

- Survey
- Focus group discussion (audiotaped)
- Individual interview (audiotaped)

All data will be specific to the needs of the students with ASD as they relate to the research questions. You will be asked to complete one survey and to participate in one audiotaped individual interview and one audiotaped focus group with other parents of students with an ASD.

Once I have received your signed consent you will be sent a survey within 5 days. Specific directions will be provided with the survey and the due date for completing the survey will be provided. The researcher may remind you once if the survey is not returned by the due date. The researchers cannot guarantee any specific outcome from participating in this research.

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IRB

Date 4/26/18
The University of Akron
when it needs to be returned. You may select your preferred method to respond
to the survey questions: electronically or handwritten. If you provide an email
address in the space below, then I will send you the survey via email. If you do
not provide an email address in the space below, I will mail you the survey and
provide you a self-addressed, stamped envelope for you to use to return the
survey. If you prefer to email your survey, please return it in an attachment to me
at: pocicantelli@neo.rr.com. Questions will appear in several formats. For some
questions you may be required to select a response, others will involve a short
response and others will require lengthier responses.

The focus group and interview will be arranged at a mutually agreed upon time
and date. The focus group will be limited to a one hour session. Informal, formal,
and semi-structured interview questions will be used in the focus group and in
the individual interviews, with questions specific to the research questions. The
interview and focus group will be conducted to clarify and/or gather additional
information specific to the student’s disability and research questions.

Risks and Discomforts:
There are no anticipated risks and discomforts for participating in this study
beyond those encountered in everyday life. However, some of the questions
asked are of a personal nature and if you do not wish to answer a question, you
may skip it.

Benefits:
You will receive no direct benefit from your participation in this study, but your
participation may help us better understand how we can enhance services
available at institutions of higher education to better meet the needs of students
with ASD.

Payments to Participants:
Within 30 days and upon completion of all procedures, you will receive a gift card
to Subway worth 10 dollars.

Right to refuse or withdraw:
Taking part in this research study is entirely up to you. You may choose not to
participate or you may discontinue your participation at any time.

Anonymous and Confidential Data Collection:
Any identifying information collected will be kept in a secure location and only the
researchers will have access to the data. Participants will not be individually
identified in any publication or presentation of the research results. Only
aggregate data will be used. Your signed consent form will be kept separate
from your data, and nobody will be able to link your responses to you.

Prior to beginning the focus group, which will include one or two parents per
student participant, I will ask that all participants keep any information discussed

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IRB

Date 4/25/10

The University of Akron
confidential and that they do not discuss what was said outside of the focus group/research project.

Confidentiality of records:
In order to maintain anonymity and/or confidentiality of data and records, coding of data will be used and pseudonyms will be applied to identify the participants.

The results of this study will be publicly disseminated through a doctoral dissertation, and may possibly be disseminated through potential publication in a professional journal, presentation at professional meetings, or presentation at professional conferences. With signed consent (see attached Audiotape consent document) the original tapes or copies may be used for the same purposes.

Who to contact with questions:
If you have any questions about this study, you may contact Lynn Ciccentelli at (330) 571-4102 or Dr. Shemavaz Vakil at (330) 972-7447. This project has been reviewed and approved by The University of Akron Institutional Review Board (IRB). If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance & signature:
I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. I also confirm that my son or daughter, who will be a participant in this study, has been medically diagnosed with an Autism Spectrum Disorder and has an intelligence quotient measured to be at least average. Please sign and return one copy of this consent and keep a copy for future reference.

Participant Signature ___________________________ Date ____________

I prefer to receive and submit my surveys electronically. Please send the survey to my email as listed below:

Email address ________________________________

APPROVED
IRB
Date 4/26/12
The University of Akron
The University of Akron
Institutional Review Board

Audiotape Consent Document

Title of Study:
Critical factors in successful navigation of higher education for students with Autism Spectrum Disorder: A qualitative case study

I agree to participate in an audiotaped interview and focus group about what is required to be successful in meeting the academic, social, and independent living demands for students with Autism Spectrum Disorder (ASD) attending institutions of higher education. As part of this project and for the purposes of data analysis, I agree that Lynn Cicciante may audiotape this individual interview and focus group discussion. The date, time, and place of the interview will be mutually agreed upon. I understand that the tapes will be kept in a secure location and only the researcher will have access to the data.

I understand that I will be assigned a pseudonym to be used during the focus group, however if another participant uses my actual name during discussions, it will be replaced with the assigned pseudonym during transcription of the tapes, which will be completed by the researcher within 2 weeks of the audiotaping. I understand that the tapes will be kept in a secure location for three years after the research is complete, and only the researcher will have access to the data.

I agree to allow the researcher to share information taken from the tapes for the following purposes:

[ ] this research project
[ ] publication in a professional journal
[ ] presentation at professional meetings

______________________________  ________________
Participant Signature               Date

APPROVED

IRB 4/5/12

Date 4/5/12

The University of Akron
The University of Akron
Institutional Review Board

Informed Consent Document

Higher Education Faculty/Administration Participant

Title of Study: Critical factors in successful navigation of higher education for students with Autism Spectrum Disorder: A qualitative case study

Introduction:
You are being invited to participate in a research study conducted by Lynn Ciccianteelli, a student in the Department of Curricular and Instructional Studies, at The University of Akron. This consent form will provide you with information on the research, what you will need to do, and the associated risks/benefits of the research project. Your participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision.

Purpose:
The purpose of this study is to identify your perception of what is required to be successful in meeting the academic, social, and independent living demands for students with Autism Spectrum Disorder (ASD) attending institutions of higher education (IHEs). Participants will include students with ASD, their parent(s), and administrators at the institutions of higher education attended by the students. An estimated 9-12 individuals will participate.

Procedures:
For higher education faculty/administrator participants, the researcher will use various sources of data collection including:
- Survey
- Interview

All data will be specific to students with ASD as they relate to the research questions. You will be asked to complete one survey and participate in one telephone interview arranged at a mutually agreed upon time and date.

Once I have received your signed consent you will be sent a survey within 5 days. Specific directions will be provided with the survey and the due date for when it needs to be returned. You may select your preferred method to respond

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Date: 10/20/20

The University of Akron

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to the survey questions: electronically or handwritten. If you provide an email 
address in the space below, then I will send you the survey via email. If you do 
not provide an email address in the space below, I will mail you the survey and 
provide you a self-addressed, stamped envelope for you to use to return the 
survey. If you prefer to email your survey, please return it in an attachment to me at: 
nciccantelli@neo.rr.com. Questions will appear in several formats. For some 
questions you may be required to select a response, others will involve a short 
response and others will require lengthier responses.

Informal, formal, and semi-structured interview questions will serve as a follow-up 
to gather additional information or clarify your responses from the written 
survey/questionnaire specific to the research questions. Handwritten notes will 
be taken by the researcher during the telephone conversation.

Risks and Discomforts: 
There are no anticipated risks and discomforts for participating in this study 
beyond those encountered in everyday life. However, if you do not wish to 
answer a question, you may skip it.

Benefits: 
You will receive no direct benefit from your participation in this study, but your 
participation may help us better understand how we can enhance services 
available at institutions of higher education to better meet the needs of students 
with ASD.

Payments to Participants: 
Within 30 days and upon completion of all procedures, you will receive a gift card 
to Subway worth 10 dollars.

Right to refuse or withdraw: 
Taking part in this research study is entirely up to you. You may choose not to 
participate or you may discontinue your participation at any time.

Anonymous and Confidential Data Collection: 
Any identifying information collected will be kept in a secure location and only the 
researchers will have access to the data. Participants will not be individually 
identified in any publication or presentation of the research results. Only 
aggregate data will be used. Your signed consent form will be kept separate 
from your data, and nobody will be able to link your responses to you.

The results of this study will be publicly disseminated through a doctoral 
dissertation, and may possibly be disseminated through potential publication in a 
professional journal, presentation at professional meetings, or presentation at 
professional conferences.

APPROVED
IRB

Date: ________________
The University of Akron

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Confidentiality of records:
In order to maintain anonymity and/or confidentiality of data and records, coding of data will be used and pseudonyms will be applied to identify the participants. The participating institutions of higher education will be reported using a letter (e.g.: IHE 1, IHE 2, IHE 3) and only the broad demographic region, Midwest, will be used to denote the area of the institution of higher education.

The results of this study will be publicly disseminated through a doctoral dissertation, and may possibly be disseminated through potential publication in a professional journal, presentation at professional meetings, or presentation at professional conferences.

Who to contact with questions:
If you have any questions about this study, you may contact Lynn Cicantelli at (330) 571-4102 or Dr. Shemavaz Vakil at (330) 972-7447. This project has been reviewed and approved by The University of Akron Institutional Review Board (IRB). If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7860.

Acceptance & signature:
I have read the information provided above and all of my questions have been answered. I voluntarily agree to participate in this study. Please sign and return one copy of this consent and keep a copy for future reference.

Participant Signature Date

I prefer to receive and submit my survey electronically. Please send the survey to my email as listed below:

Email address

APPROVED
IRB

Date [Signature]
The University of Akron
The University of Akron
Institutional Review Board

Audiotape Consent Document

Title of Study:
Critical factors in successful navigation of higher education for students with Autism Spectrum Disorder: A qualitative case study

I agree to participate in an audiotaped interview and focus group about what is required to be successful in meeting the academic, social, and independent living demands for students with Autism Spectrum Disorder (ASD) attending institutions of higher education. As part of this project and for the purposes of data analysis, I agree that Lynn Ciccianteili may audiotape this individual interview and focus group discussion. The date, time, and place of the interview will be mutually agreed upon. I understand that the tapes will be kept in a secure location and only the researcher will have access to the data.

I understand that I will be assigned a pseudonym to be used during the focus group, however if another participant uses my actual name during discussions, it will be replaced with the assigned pseudonym during transcription of the tapes, which will be completed by the researcher within 2 weeks of the audiotappings. I understand that the tapes will be kept in a secure location for three years after the research is complete, and only the researcher will have access to the data.

I agree to allow the researcher to share information taken from the tapes for the following purposes:

______ this research project
______ publication in a professional journal
______ presentation at professional meetings

Participant Signature ___________________________ Date ________________

APPROVED
IRB 4/26/13
Date ____________________
The University of Akron
APPENDIX C

PARTICIPANTS

<table>
<thead>
<tr>
<th>Students</th>
<th>Parents</th>
<th>OA Staff/IHE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al</td>
<td>Ann</td>
<td>Sally/IHE1</td>
</tr>
<tr>
<td>Rob</td>
<td>Dawn</td>
<td>Lee/IHE2</td>
</tr>
<tr>
<td>Louis</td>
<td>Joy</td>
<td>Jean/IHE3</td>
</tr>
</tbody>
</table>
## APPENDIX D

### MATRIX OF CRITICAL FACTORS

<table>
<thead>
<tr>
<th></th>
<th><strong>Students</strong></th>
<th><strong>Parents</strong></th>
<th><strong>OA staff</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic</strong></td>
<td>1. Proximity to home</td>
<td>1. Intellectual aptitude</td>
<td>1. Advanced Preparation</td>
</tr>
<tr>
<td></td>
<td>2. Campus support services</td>
<td>2. Parental involvement</td>
<td>2. Student adaptability</td>
</tr>
<tr>
<td></td>
<td>3. Faculty and staff understand ASD</td>
<td>3. Advanced preparation</td>
<td>3. Behavior management skills</td>
</tr>
<tr>
<td></td>
<td>4. Advanced Preparation</td>
<td>4. Campus support services</td>
<td>4. Campus support services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Technology skills</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td>1. Support system</td>
<td>1. Support system</td>
<td>1. Behavior management skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Social involvement</td>
</tr>
<tr>
<td><strong>Independent Living</strong></td>
<td>1. Advanced Preparation</td>
<td>1. Daily living skills</td>
<td>1. Advanced Preparation</td>
</tr>
<tr>
<td></td>
<td>2. Daily living skills</td>
<td>2. Possessions to engage others</td>
<td>2. Behavior management skills</td>
</tr>
<tr>
<td></td>
<td>3. Individualized housing accommodations</td>
<td>3. Individualized housing accommodations</td>
<td>3. Individualized housing accommodations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX E

MAJOR FINDINGS FOR QUESTION 1

What do students with Autism Spectrum Disorder (ASD) identify as critical factors for the successful navigation of the academic, social and independent living demands of institutions of higher education for students with ASD?

<table>
<thead>
<tr>
<th>Category</th>
<th>Students</th>
</tr>
</thead>
</table>
| Academic            | 1. Proximity to home  
                      2. Campus support services  
                      3. Faculty and staff understand ASD  
                      4. Advanced Preparation                                                                 |
| Social              | 1. Support system  
                      2. Advanced Preparation  
                      3. Social involvement                                                                 |
| Independent Living  | 1. Advanced Preparation  
                      2. Daily living skills  
                      3. Individualized housing accommodations |
APPENDIX F

MAJOR FINDINGS FOR QUESTION 2

What do parents of students with ASD identify as critical factors for the successful navigation of the academic, social and independent living demands of IHEs for students with ASD?

<table>
<thead>
<tr>
<th></th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>1. Intellectual aptitude</td>
</tr>
<tr>
<td></td>
<td>2. Parental involvement</td>
</tr>
<tr>
<td></td>
<td>3. Advanced preparation</td>
</tr>
<tr>
<td></td>
<td>4. Campus support services</td>
</tr>
<tr>
<td>Social</td>
<td>1. Support system</td>
</tr>
<tr>
<td></td>
<td>2. Social involvement</td>
</tr>
<tr>
<td></td>
<td>3. Advanced preparation</td>
</tr>
<tr>
<td>Independent Living</td>
<td>1. Daily living skills</td>
</tr>
<tr>
<td></td>
<td>2. Possessions to engage others</td>
</tr>
<tr>
<td></td>
<td>3. Individualized housing accommodations</td>
</tr>
</tbody>
</table>
APPENDIX G

MAJOR FINDINGS FOR QUESTION 3

What do OA staff at IHEs identify as critical factors for the successful navigation of the academic, social and independent living demands of IHEs for students with ASD?

<table>
<thead>
<tr>
<th>OA staff</th>
<th>Academic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Advanced Preparation</td>
</tr>
<tr>
<td></td>
<td>2. Student adaptability</td>
</tr>
<tr>
<td></td>
<td>3. Behavior management skills</td>
</tr>
<tr>
<td></td>
<td>4. Campus support services</td>
</tr>
<tr>
<td></td>
<td>5. Technology skills</td>
</tr>
</tbody>
</table>

|                       | Social                                                                   |
|                       | 1. Behavior management skills                                            |
|                       | 2. Support system                                                        |
|                       | 3. Advanced Preparation                                                  |
|                       | 4. Social involvement                                                    |

|                       | Independent Living                                                       |
|                       | 1. Advanced Preparation                                                  |
|                       | 2. Behavior management skills                                            |
|                       | 3. Individualized housing accommodations                                  |
APPENDIX H

MAJOR FINDINGS FOR QUESTION 4

What *similarities* and/or *differences* emerge in the perception of critical factors identified by students with ASD, their parents, and OA staff?"

<table>
<thead>
<tr>
<th></th>
<th>Students</th>
<th>Parents</th>
<th>OA staff</th>
</tr>
</thead>
</table>
| **Academic**| 1. Proximity to home  
2. Campus support services  
3. Faculty and staff understand ASD  
4. Advanced Preparation | 1. Intellectual aptitude  
2. Parental involvement  
3. Advanced preparation  
4. Campus support services | 1. Advanced Preparation  
2. Student adaptability  
3. Behavior management skills  
4. Campus support services  
5. Technology skills |
| **Social**  | 1. Support system  
2. Advanced preparation  
3. Social involvement | 1. Support system  
2. Social involvement  
3. Advanced preparation | 1. Behavior management skills  
2. Support system  
3. Advanced Preparation  
4. Social involvement |
| **Independent Living** | 1. Advanced preparation  
2. Daily living skills  
3. Individualized housing accommodations | 1. Daily living skills  
2. Possessions to engage others  
3. Individualized housing accommodations | 1. Advanced preparation  
2. Behavior management skills  
3. Individualized housing accommodations |